



AMCA Nationals - Technical Rules – Specifications

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In the Event of any point arising, which is not covered by these rules, the Executive Board of AMCA NATIONALS shall have the power to decide it, and any such decision shall be final.

THE OVERRIDING METHOD OF INTERPRETING ANY RULE CONTAINED IN THE TECHNICAL RULES IS THAT IF A RULE DOES NOT SAY YOU CAN THEN YOU CAN'T.

ALL OEM AND AMCA NATIONALS COMPONENTS MUST NOT BE MODIFIED IN ANY MANNER UNLESS SPECIFIED.

IMPORTANT: Competitive Motor Racing may result in injury and/or worse to participants.

These Rules are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to participants, spectators or others.

CHASSIS MATERIAL:

All components in fabricated chassis, including chassis out riggers and/or sub frames to be constructed from mild steel. Minimum specification is 1163 G.R 2.00

1. CHASSIS SPECIFICATION:

1. Minimum weight – 1066KG (2350LBS) with driver.
2. Vehicle wheelbase must be no less than 2642mm (104”) or more than 2743mm (108”).
3. Vehicle track width, front and rear, must not exceed 78”/ 1982mm as measured from right hand outside of the right tyre to left hand outside of the left tyre.
4. As a base for chassis construction there are 2 options:

OPTION 1 – GMH Holden/Kingswood/Premier/Statesman Front Chassis Stub (clip) from vehicle models HQ to WB

5. The location and design of lower control arms will remain as per OEM.
6. Upper control arms may be modified or replaced with tubular type to facilitate adjustment and replacement. Upper control arms are to be constructed from steel or aluminum.
7. Upper control arm mounting points may be removed.
8. Both top and bottom ball joints must remain as per OEM or replacement part number.
The upper ball joint must be fitted as per OEM in top arm.
9. Front springs must remain in original location, but springs length and/or rates may be altered. It is permitted to incorporate a simple spring adjustment in front spring location.
10. Shock absorber type and mount may be altered.
11. Shock absorbers to mount from lower control arm to Chassis Frame.
12. The Chassis may be modified to accommodate the fitment of the radiator.
13. No canter lever systems allowed.
14. OEM spring bucket may be altered to allow clearance for coil over unit on HQ-WB Clip. (It is recommended to reinforce chassis wherever altered to strengthen chassis with max 3mm plate.)
15. The Minimum width of HQ—WB cross member is 1320mm measured at the rear of rail.

OPTION 2 - AMCA Nationals supplied fabricated front chassis clip

16. The only fabricated front clip allowed is the AMCA Nationals front chassis clip.
17. The AMCA serial number welded on the clip must not be removed, defaced or deleted in any way.
18. The only modification permitted is to raise the right-side outrigger by up to a maximum of 50mm measured from the bottom of the main rail to the bottom of the outrigger at its highest point.
19. The fabricated front clip can be retrofitted to any existing chassis. (N.B: Although the clip is designed to be multi fit, some fabrication may be required for it to fit.)
20. Idler arm, Pitman arm, Drag Link, Stub axles, Tie rods and all ball joints are to be OEM or equivalent to GMH HQ - WB only. With the exception of converting the drag link to Left hand drive.
NOTE: Steering arms may be OEM HQ-WB or AMCA Nationals approved component marked "AMCA Not for Highway Use".
21. The only lower control arms and caster bars (radius rods) permitted are AMCA Nationals components. Male Heim joints ONLY with a maximum thread length 50mm, with an overall length of 85mm. No other lengthening of components permitted.
22. Coil over suspension allowed only. (refer to section 6 for guidelines).
23. Shock absorbers are to mount from inside lower control arm mount to the Chassis Frame.
24. No canter lever systems allowed.

REPAIRS

25. Repairs to Fabricated front Clip are classified as a minor repair or a major repair as follows:
 - a. A minor repair may be performed by the car owner or driver or at their direction.
 - b. Minor repairs are
 - c. Any repairs on AMCA front clip that requires NO cutting or replacing of side rails, front horns or cross member.
 - d. Straightening of front horns and or replacement of front spreader bar permitted.
26. Any Major repairs require approval from AMCA Nationals before being undertaken.
27. Major Repairs are any repairs requiring the side rail(s), front horn(s) or crossmember to be replaced.
28. Any replacement parts required to complete a major repair must be a control, AMCA Nationals, replacement part.
29. Fabricating a replacement part for a major repair is prohibited.
30. **Any car found to have undergone a major repair using parts other than AMCA Nationals replacement parts will be deregistered for a period of not less than twelve (12) months and the driver will be suspended for a period of not less than twelve (12) months.**

STEERING

31. Steering must remain as per OEM HQ-WB or AMCA Controlled components
32. The Steering box must be mounted in the original location and pitman arm, idler arm and drag link are to remain as OEM on both HQ-WB Front Clip (right hand drive) and AMCA Fabricated Front Clip.
33. RHD Saginaw steering boxes only permitted for right hand drive cars.
34. Vehicles may be constructed with left hand drive steering. If vehicle is constructed as a LHD vehicle, it is permitted to use a LHD steering box ONLY. Mounting of steering box and idler arm must be a mirror image of RHD vehicle. Sweet quick ratio steering boxes are permitted
35. Power steering and steering quickeners are permitted.
36. HQ-WB front Spindles and stub axles must be used and may not be modified in any manner. No spacing or shimming permitted of third arm.
37. Aluminum steering components are not permitted.
38. Cutting, welding or Spacing of steering arms, stub axles or any other OEM steering components is not permitted, except for the purpose of installation of shock mounts or tack welding of bushes on HQ-WB OEM lower control arms.
39. AMCA tubular lower control arms may not be altered.
40. HQ – WB OEM steering arms, draglinks, tie rods (270mm) and ball joints must be used.
41. HQ-WB OEM draglink may be converted to accommodate LHD chassis.
42. Steering wheel hub bolts must be padded with dense resilient foam cover
43. Quick release steering wheels are mandatory

CHASSIS CONSTRUCTION

44. Roll cage will be constructed from mild steel tubing spec 1163GE 200 minimum, 38mm OD x 3mm WTCHS or alternatively minimum 42mm OD x 2.4mm WTCHS GR 350.
45. Roll Cage must be frame mounted in at least six places.
46. Brace bars forward of roll cage may not be higher than bonnet height and remain under bonnet line The Roll cage may be no further forward than rear face of engine block. The Front & rear brace bars are to be 34mm OD min.
47. High Bars are not permitted.
48. The Roll cage must have a diagonal brace from the chassis to the top of roll cage hoop above driver's head.
49. The roll cage must be fitted with driver protection bars (NASCAR Type) and be manufactured from the same tubing used for the roll cage.
 - a. The roll cage must be welded securely to the main 50mm x 50mm x 3mm or 75mm x 50mm x 2.5mm RHS chassis rails (min size).
 - b. No CHS pipe chassis rails in rear bay section – 50x50x3mm RHS or 75x50x2.5mm RHS only.
 - c. All CHS joints must be correctly notched and welded securely.
 - d. Incomplete welds, slag inclusion and /or poor workmanship will not be permitted under any circumstances.
50. A wire mesh screen must be fitted to the roll cage in front of driver. The mesh must be secured by a minimum of four (4) steel hose clamp or bolted to welded tabs. The maximum permitted mesh size is 50mm and the minimum mesh max 25mm. The minimum permitted wire size is 2mm.
51. A ¼ window bar must be fitted on the driver side. The minimum tubing spec is 25mm OD x 2mm. The ¼ window bar is to be mounted in line with the first NASCAR bar vertical or minimum 150mm from front leg of roll cage.
52. Foot protection bars are to be included in chassis.
53. Chassis to utilize a fuel tank protection bar 50mm past the maximum width of fuel tank and to give protection 25mm below the fuel tank for under slung tanks and 25mm above the fuel tank for top mounted tanks and must be suitably braced to prevent rear intrusion. Fuel protection bars to also incorporate a vertical bar in the middle of bar. (refer diagram)

ROOF PLATE

54. A roof Plate or Diagonal bar is to be incorporated into the roll cage above the driver.
55. The roof plate is to be constructed of either a minimum of 3mm thick steel or 5mm minimum Aluminum and is to be 400 mm wide mounted by 10 x 50mm x 50mm 3mm mild steel tabs or 25mm x 3mm mild steel, strip welded all around.
56. The roof plate is to be mounted using 10 x 5/16 or 8mm high tensile bolts. Head of bolts downside - 3 each side - 2 front - 2 rear.
57. The roof plate may be replaced with diagonal bar, 32mm x 3mm minimum welded in place from the right front to left rear of roll cage above driver's head for RHD cars and the opposite for left hand drive cars.

BATTERY

58. The battery must be mounted in a cradle (min 25x25mm angle) and located inside the chassis rail.
59. It is permitted to use one 12-volt battery.
60. The maximum battery voltage must not, at any time, measure more than 14.4 Volts.
61. Step up transformers or any other device designed to increase voltage are not permitted

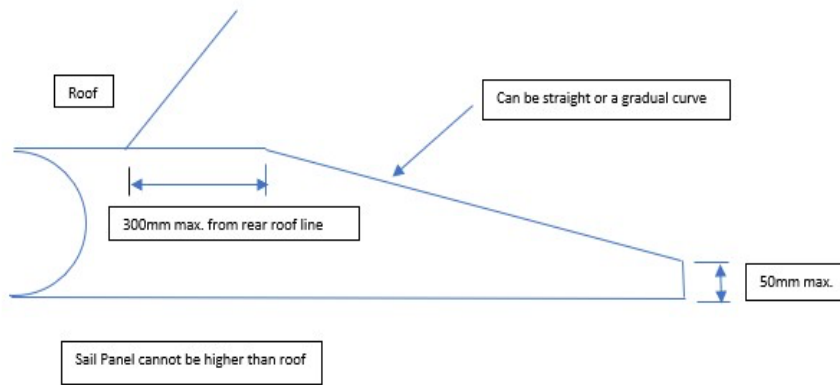
2. PROTECTIVE BAR WORK

1. The front bumper bars are to be parallel with each other and not set back.
2. The front bumper to be no wider than 50mm from the outside of the chassis rails.
3. The front bumper not to exceed 875mm measured from the centre of the stub axle to the furthest point of the bumper.
4. External protective bar work must not exceed the following dimensions:
 - a. Front Bumper Bars - 34mm CHS Maximum x 2mm wall thickness (minimum)
 - b. Side Nerf Bars - 34mm CHS Maximum x 2mm wall thickness (minimum)
 - c. Rear Bumper Bars - 42mm CHS Maximum x 2mm wall thickness (minimum)
 - d. Rear Quarter Nerf Bar - 34mm CHS Maximum x 2 mm wall thickness (minimum)

5. Side nerf bars must not extend outside the tyres at any point of car set up (eg: wheel offset)
6. Parallel side nerf bars are not permitted.
7. Rear bumper maxim height is 620mm from ground level and must have a maxim of 4 mounting points inclusive of rear nerf bars
8. Rear protection at 520mm from ground level within a maxim of 250mm forward of rear bumper
9. All Vehicles are to run Side nerf bars, Rear and Front bumper bars.
10. Side nerf bars may be mounted on the inside or outside of the body.
11. No bar work is to extend past the front of the chassis rails except for the front bumper.
12. Welded bends or joined tube are not permitted on any bars

3. VEHICLE BODY

1. Vehicle body is to be constructed from aluminum, plastic or fibreglass and must be made to resemble a sedan or hatchback type of vehicle. Not a Station Wagon.
2. Body must be mounted using rivets bolts or dzus fasteners only.
3. Steel sheeting is not permitted for vehicle bodies
4. Side panels may be constructed from high density polyurethane.
5. Plastic door skirts/rocker panels are:
 - a. permitted along bottom edges of doors and rear quarter panels;
 - b. not to protrude any more than 75mm from door.
 - c. NOT to measure greater than 1750mm total width measured from side to side at any point, TOP or BOTTOM
6. The roof:
 - a. is to be constructed from to be aluminum, fiberglass or plastic;
 - b. The roof may be flat;
 - c. Fiberglass Late Model style, off the shelf roof permitted
 - d. Must not have a wicker bill or Gurney flap.
7. Painted roll bars are not permitted to substitute for roof pillars.
8. OEM factory manufactured fiberglass body shells are not permitted.
9. The interior panelling and decking are to be to window height.
10. The engine compartment will remain open with no side panels.
11. The bonnet may have a maximum drop of 100mm at sides.
12. The rake on bonnet must not exceed 50mm.
13. The break in bonnet to be not less than 440mm forward of centre of carburetor and behind the centre line of front axles.
14. A bonnet scoop and or Mud Sheild with a maximum height of 125mm measured from the bonnet to the highest point of the bonnet scoop may be fitted. The remainder of bonnet surface is to remain flat.
15. Chassis bar work is to remain under bonnet line.
16. The side body panels may not extend further forward than 150mm past rear of engine block.
17. The maximum body rake 75mm measured from ground to deck height front and rear, in race trim.
18. IMCA / MD3 style nose cones are not permitted in any form or made from any material.
19. The nose cone must:
 - a. must not extend past the front bumper;
 - b. must be completely inside of the line of the front wheels.
 - c. must be constructed so that the tyres are fully visible at all times when the steering turned from lock to lock.
 - d. may have side fin/tip extend which extends to a height not greater than 25mm above nose cone surface at any point.
 - e. May have a plastic, lower valance
 - f. must be mounted in a secure manner
 - g. must not extend to a height above the height of the surface of the bonnet.
20. Sail panels must:
 - h. extend to within 75mm of external panel;
 - i. extend beyond the rear of the rear wheel arch;
 - j. be a mirror of each other;
 - k. not have a drop at the rear which exceeds 50mm;
 - l. not extend to a height above the line of the roof;
 - m. not to be secured to rear wing end plates.



2. The front or "A" pillar must extend to within 50mm of front edge of side door panel and to within 75mm of external side door panel.
3. The maximum body height at any point along the deck is to be 1080mm, measured from the ground to the line of the deck, with all four tyres inflated to 15psi.
4. The maximum car height is 1500mm measured from the ground to highest point of the roof, with all four tyres inflated to 15psi.
5. Right-hand side tyres must protrude outside the bodyline by not less than 100mm.
6. Left-hand side tyres must be visible when sighting from the front to the rear and protrude past side nerf bars.

4. FIREWALL & FLOOR

1. Firewalls:
 - a. must protect driver from fire, and components that may enter the cockpit;
 - b. may be constructed from: aluminium or steel;
2. The cockpit floor:
 - a. must be constructed of either aluminium of not less than 3mm or steel of not less than 1.6mm;
 - b. must cover the entire floor area.
 - c. may have openings of not more than 50mm to all for drainage.

5. AERODYNAMICS

1. The only aerodynamic aid or device permitted anywhere outside or inside the vehicle is a rear spoiler which may be fitted.
2. The rear spoiler and blade must within the box measurement at the rear of this rule book i.e.: 400mm x 250mm and no wider than the body.
3. The rear spoiler not to extend beyond rear bumper bar.
4. Air is not permitted to pass under the rear spoiler.

6. REAR SUSPENSION

The rear suspension will consist of 2 options:

OPTION 1 - MULTI LEAF SPRING REAR SUSPENSION

1. Multi leaf springs must be steel.
2. Only one shock absorber per wheel is permitted.
3. Coil over units are not permitted.
4. Traction Control devices such as third arm/fifth arm torque control units are not permitted.
5. The leaf spring mount behind driver must be enclosed at top of mount and between the spring and rear firewall.
6. The diff housing must be solidly and securely mounted to the rear leaf springs with the use of U bolts.
7. The only items permitted between diff tube spring pad and leaf spring is a standard or adjustable lowering block/s in steel or aluminium

OPTION 2 - MONO LEAF COIL OVER REAR SUSPENSION

1. Mono leaf springs must be steel.
2. Parabolic or Fiberglass Springs are not permitted.
3. One (1) coil over unit per rear wheel is permitted.
4. One (1) linear rate coil over spring per coil over unit is permitted.
5. A single Pull Bar (Torque Absorber):
 - a. Part # Speedway Motors 910-45509 is permitted;
 - b. Must be of a length not less than 20 inches and not more than 30 inches measured from the centre of one rod end to centre of the other rod end
 - c. extension tubes/bar to must be steel.
6. A single dampening shock absorber may be used. The shock absorber is to comply with rule 7.
7. Pull bar and Dampening Shock:
 - a. must be mounted forward of rear axle;
 - b. must be mounted in between diff mounting plates.
8. Pull bar Brackets
 - a. Front pull bar mount, must be solidly mounted (welded) to chassis and or cage, pull bar must be solidly mounted to bracket using high tensile bolts through Heim Diff mounting brackets:
 - b. must be double shear with a minimum of 5/8" high tensile mounting bolts.
 - c. Must be AMCA Nationals controlled brackets ON DIFF.
9. The leaf spring mount behind driver must be enclosed at top and between the spring and rear firewall.
10. The only items permitted between diff tube spring pad and leaf spring is a standard or adjustable lowering block/s in steel or aluminum

7. SHOCK ABSORBERS

1. One non-adjustable, shock absorber per wheel only. All shocks must completely compress at all times.
2. 1 x 25mm external bump rubber or plastic spacer permitted per shock inclusive of any shims and spacer.
3. Coil over spring and shock units must be used with the AMCA fabricated front clip and may be used with the HQ-WB front clip.
4. Coil over spring and units are permitted on Mono Leaf Spring Rear Suspension only.
5. Coil spring rubbers are permitted at a maximum of 2 per coil unit only.

7.1 GAS SHOCK ABSORBERS

The below shocks are the only monotube gas shock absorbers approved and permitted for use in AMCA Nationals Racing

1. Super Shox – "A Series Super Shox" (non schrader valve type only)
2. Bilstein - Steel body "Z Series" (non schrader valve type only)
3. Fox Shocks – Part #98399034 & Part #98399035 (non schrader valve type only)
4. Penske 7150 Series Steel Body nonadjustable (non Schrader valve type only)

If using a gas monotube shock absorber listed above **it must always** comply to the following:

- a. No Schrader valves, no caps, no bungs, no plugs are permitted.
- b. Must be non-adjustable.
- c. Must be standard plain or threaded body shock absorber.
- d. No gas pressure adjustments allowed.
- e. May have oil bleed screw may only be located on the rod guide end of the shock absorber.

8. REAR AXLE AND DIFFERENTIAL HOUSING

OPTION 1 – GMH or Borg Warner Manufacture

1. The rear axles and housing must be of GMH or Borg Warner manufacture and removed from a sedan, station wagon or utility type vehicle only.
2. The rear axle housing:
 - a. Must not be altered, cut, modify, offset differential or change axle length;
 - b. May be adapted to relocate spring saddles and to fit shock absorber and brake mounts;
3. Diff ratios must be GMH or Borg Warner factory OEM ratios.

4. Machining of internal differential components or the interior of the diff housing is not permitted.
5. It is permitted to machine hubs for the fitment of wheel studs or for the purpose of changing wheel stud patterns.
6. The rear diff must be locked by means of either welding, mini spool or full spool, must be made of steel only.

OPTION 2 – Quick Change Rear End

1. Quick Change Rear End must use steel Tubes. (no alloy, chrome molly etc.)
2. Quick Change Rear End must use a 10" Ring Gear with a steel or Aluminium spool and must be full spool.
3. Quick Change Rear End must use minimum 1.25" wide spur gears and bolt on rear cover.
4. Lightened gears are not permitted.
5. Axles and lower pinion shaft must be steel.
6. Gun drilled axle shafts are not permitted.
7. Torque dividing differentials, scalloped or lightened ring gears and cambered rear ends are not permitted.
8. A one-inch inspection hole is required in the housing. The Oil Filler hole is acceptable for use as the inspection hole.
9. Any additional components must be steel except for lowering blocks, axle caps, universal joint caps and brake calliper bolt on mounts.
10. The hubs must be Holden or Ford stud pattern.
11. Bird cages or torque control devices are not permitted.

9. BRAKES

1. Complete brake rotors must remain in position on both front stub axles and both rear hubs.
2. The right-hand front calliper may be removed.
3. The brake rotors must be steel.
4. Willwood brake rotors and/or rotor hats are permitted.
5. The brake callipers must be operational and be able to lock the wheels at time of inspection.
6. A brake tap may be fitted to delete operation of the right-hand front brake if fitted.
7. The only brake calliper permitted is a Willwood 3.5-inch lug mount Brake Calliper.
8. Willwood brake calliper must bolt directly to the OEM HQ - WB front stub axle.
9. Flat washers or spacers are permitted to be used to aid in centralising the calliper to the OEM HQ - WB front brake rotor if required. Adaptor plates or extra brackets are not permitted.
10. Sports car, exotic or special vehicle callipers and discs are not permitted.
11. Drilled, cross drilled, scalloped or slotted rotors are not permitted.

10. WHEELS AND TYRES

1. Wheels, including bead lock rims, must be 15" x 8" and of steel construction.
2. Wheel centres must be welded to the rim. "Bolt in" centres are not permitted.
3. Wheel nuts must be steel.
4. The only type of tyre permitted is the 84" x 8" x 15" diameter hard compound tyre approved for use by AMCA Nationals. The tyre will bear the moulded AMCA Nationals logo on the tyre sidewall.
5. Recapping, grooving or cutting of tyre tread is not permitted.
6. 1/2" wheel studs to be fitted to all axles and hubs as a minimum. 5/8" Wheel Studs are permitted.
7. It is permitted to weld an 8mm diameter steel rod, forming a ring, to the outside edge of the rim.
8. All rim outer edges to be kept free from sharp edges.
9. When using mud covers, a supporting ring type cover or a minimum 3 mounting plates are to be welded to the rim. Self- tappers / tech screws not permitted.
10. Mud Covers may be:
 - a. Alloy; or
 - b. plastic only and a maximum of 2mm thickness; or
 - c. steel of formed as a part of the bead lock.
 - d. The bead lock may only be on the outside of the rim.
11. The maximum rim width for bead lock rims is 8 inches including the bead lock

12. Weld on steel bead lock kits are permitted, however maximum rim size is 8 inches including bead lock i.e.: If using a bead lock kit, the outer edge of the rim will need to be machined or cut down so that the wheel does not exceed 8 inches in width.
13. Tyres may only be inflated with the use of compressed air.
14. The buffing of tyres is allowed. Tyres may only be buffed with the use of a tyre grinding or sanding disc
15. The use of any form of tyre softening agents is not permitted.

11. FUEL AND FUEL TANK.

1. The only fuels permitted are Pump Petrol (Including E85 available at pump only), or Methanol fuel. Exotic unleaded and race blend fuels are not permitted.
2. Performance fuel additives of any kind are not permitted.
3. Approved race fuel cells permitted and recommended. The maximum capacity is 120 litres.
4. Fuels Tank may be constructed from 3mm aluminium or 2mm steel, limited to 70 litres capacity.
5. Fuel cells and fuel tanks must be mounted securely in the rear of the vehicle, behind the roll cage and the rear fire wall.
6. The fuel cell or fuel tank must be mounted not less than 250mm distance from the inside of the rear bumper bar. For Cars built after 1/7/2014 the measurement must be 330mm. All Cars must comply with the 330mm required measurement by the start of season 27/28
7. Electric fuel pumps must have an automatic shut off safety switch if the engine stops.
8. The fuel pick-ups not to be mounted in bottom of tank.
9. Fuel cells and fuel tanks must have a one-way valve in the vent line.
10. All plastic fuel cells must have an earth wire from the filler neck to the chassis.

12 ENGINE SPECIFICATIONS

The only 2 x engine options that can be fitted to this class of vehicle are:

OPTION 1 - General Motors Holden cast iron V8 known as the "253".

The engine must remain as per General Motors Holden Specifications.

The only modifications permitted to a 253 engine are the following items:

Carburetor

1. The standard 2 - barrel carburetor may be replaced with a Holley 350 or 500 cfm two-barrel carburettor.
2. The use of after-market metering blocks, e.g. those with external main jet adjusters is permitted.
3. The carburettor choke housing must remain, as cast to the carburettor body and not be removed or altered in any manner and cannot be replaced or modified with a plastic or like 3D printed version.
4. The venturis are not to be reshaped.
5. Annular dischargers are not permitted.
6. The maximum base plate opening 42.8mm.
7. The only other modifications permitted is for the tuning or conversion to methanol or E85 Fuel.
8. The carburettor must be fitted with a minimum of two external return springs, anchored in separate locations. One return spring must be anchored forward, and One return spring must be anchored backwards of the carburettor cam.
9. The carburettor adapter and spacer for OEM 253 2-barrel manifolds must not exceed a combined height of 45mm maximum including restrictor plate (if fitted) and gaskets.

Camshaft and Crankshaft

1. The camshaft grind may be modified but must remain flat tappet.
2. Lifters may be solid or hydraulic.
3. Adjustable pushrods are permitted.
4. Conrods and Crankshaft must be OEM 253
5. Lightning of Conrods and Crankshaft is not permitted other than to accommodate normal balancing procedures. Removal of material from the main journal centre line to big end crank pin is not permitted.
6. Conrods may be shot peened, resized and side clearance.
7. After-market rod bolts are permitted.

Sump

8. The sump - oil pan may be modified to accommodate baffling and oil drain backs.
9. The oil pump may be modified.
10. Dry sump systems are not permitted.
11. The sump must have a min 15mm inspection hole of not less than 15mm in the top part of the sump above any sump baffles and oil level.
12. An oil drain back fitting is acceptable as the inspection hole if located as per rule 12.20
13. The inspection hole must be in an accessible position.

Cylinder Heads

14. The only cylinder heads permitted are standard OEM 253-cylinder heads.
15. After-market heads (e.g. Yella Terra or Brock) are not permitted.
16. The ONLY modifications permissible are:
 - a. Valve springs and retainers may be replaced with stronger type. The maximum outside diameter of spring 33mm. Tapered valve springs are not permitted.
 - b. Valves may be replaced with standard after-market valves. Oversize stems are permitted. Valves may be refaced and back cut.
 - i. Inlet valve must be part no 1911 or equivalent 1.765 head size.
 - ii. Exhaust valve must be part no 1910 or equivalent 1.490 head size
 - c. Valve seat faces may be machined.
 - d. Cylinder heads may be modified to assist oil drain back but must remain visually standard.
 - e. Cylinder head maybe modified to fit ½' (.500") bronze guides and/or for the fitment of valve stem seals.
 - f. The head gasket face may be machined for compression and inlet face for inlet manifold fitment only.
17. Match porting is not permitted.
18. Machining of valve throats deeper than 11mm from the floor of the combustion chamber is not permitted.
19. The only rockers permitted are OEM 253 rockers.
20. Lash caps are permitted.

Engine Block

21. The only permitted engine block is the Holden 253ci or 4.2 litre block.
22. The max bore size is .060" = 3.690 oversize.
23. The cylinder block may be decked and modified in valley to assist oil drain back.
24. Head stud and main bearing stud kits are permitted. Machining or alterations to engine block or bearing caps to accommodate fitment is not permitted.
25. Pistons must be flat top and no higher than cylinder block.
26. Eye Browing of pistons is permitted.

Distributor

The standard distributor may be replaced with an aftermarket HEI type but must remain visually standard and contain the ignition module in or on the distributor housing

Fuel Pump

27. High volume mechanical fuel pumps are permitted.
28. Electric Fuel Pumps are permitted.

Flywheel and Clutch

29. The AMCA spec flywheel is permitted.
30. The AMCA controlled spec clutch is permitted. Not to be modified in any way
31. A Holden STD flywheel is permitted.
32. The Holden flywheel may not be drilled or lightened to a weight below 15KG.

Inlet Manifold Options

The following Inlet Manifold options will apply to all OEM 253 powered AMCA Nationals:

Option 1 - OEM 253 two-barrel inlet manifold. Inlet manifold throat holes to be no more than 42.80mm. AMCA restrictor plate optional.

Option 2 - Redline Performance Manifold (Part #12-114) 4bbl 253/308 manifold with Redline Performance adaptor plate (Part # 10-515AMCA). These items are not to be modified in any manner

Part #10-515AMCA is the only adaptor plate allowed with the Redline Manifold. The use of any other spacer block or adaptor plate is not permitted.

Both optional inlet manifolds are to remain as per OEM spec.

The gasket surfaces mating to cylinder head may be machined to accommodate cylinder head machining for higher compression.

No other modifications or machining is permitted.

THE FOLLOWING ITEMS ARE NOT PERMITTED.

Porting and polishing, roller rockers, roller cams, roller cranks, high compression pistons, aftermarket connecting rods, aftermarket crankshafts, stroking or de stroking, portmatching and electronic management systems of any description. CDI or DSI ignitions or similar.

Any other modifications or parts not listed as permissible under engine specifications
ARE NOT PERMITTED.

OPTION 2 - CT350 GM Crate Engine - factory sealed crate engine

The only Chevrolet 350 crate engine permitted is the Chevrolet Performance Parts (Formerly known as GM Performance Parts) Part #88869602, #19258602 or #88958602, also known as the CT350/350 Crate Engine.

1. The engine must use a maximum rev-limiting chip of 6000RPM.
2. Rebuilding, balancing, blue printing or any other alterations to the engine in an attempt to gain a performance advantage is NOT PERMITTED.
3. The engine and all its components must remain as per OEM, as manufactured by GM Performance.
4. The engine must, at all times, have intact and undamaged factory GM Performance tamper proof bolts and/or seals in the correct locations.

Distributor

5. The only distributor permitted is the HEI distributor supplied with the engine from GM Performance Part #1104067 or part # GM-93440806. No MSD type distributors or larger Coils to be fitted
6. The distributor vacuum and mechanical advance may be made inoperable if desired.
7. The distributor may be locked.

MSD D.I.R.T Control Box

8. The MSD D.I.R.T Spec Soft Touch Rev Control Box must be used.
9. The MSD D.I.R.T Spec soft touch rev control box, part number #87286:
 - a. Is the only option permitted. The #87286 soft touch rev control box is specifically made for this engine and plugs directly into the distributor of the engine.
 - b. Must be always mounted under the bonnet in clear view, as well as all wiring and earths to be able to be inspected

- c. Must not be enclosed or placed behind the firewall
 - d. Must be able to be easily removed if required.
 - e. Must remain in working condition, prior to, during and after all AMCA events/races.
10. The RPM rev limiting chip:
- a. must be marked "6000"
 - b. must be capable of rev-limiting the engine to a maximum of 6000 RPM.
 - c. must face up or out to either side.
 - d. must be in clear view at all times.
 - e. must be securely fastened in position
 - f. must remain in working condition, prior to, during and after all AMCA events/races.
11. Wiring harness from the control box must be clearly visible and able to be easily traced.
12. The earth wire from control box must be visible and earthed in the engine bay or to the engine.

Water Pump

13. The only water pump permitted is a crankshaft belt driven water pump mounted in the stock location.
14. Electric or other style pumps are not permitted.

Fan

15. An engine driven fan must be used.
16. The fan must be mounted to water pump.

Fuel Pump

17. Electric fuel pumps are permitted. Pump must shut down when engine stalled
18. Manual fuel pumps:
- a. are permitted.
 - b. must be of the factory pushrod type.
19. must be mounted in the stock location.
20. Belt driven fuel pumps are not permitted.

Flywheel & Clutch

21. The only flywheel permitted is the AMCA spec flywheel.
22. The AMCA controlled spec clutch is permitted.
23. Holden heavy duty 6 Cylinder clutch kit #RPM89 or RPM89-SC:
- a. are permitted.
 - b. must remain OEM.
 - c. must not be lightened
 - d. must not be modified.
24. The AMCA flywheel may be machined to accept the permitted Holden clutch kits.

Carburetor

25. The only carburetor permitted on this engine is the Holley 2 Barrel 500CFM carburetor.
26. The use of after-market metering blocks, e.g. those with external main jet adjusters is permitted.
27. The carburetor choke housing must remain, as cast to the carburetor body and not be removed or altered in any manner and cannot be replaced or modified with a plastic or the like 3D printed version.
28. The venturis are not to be reshaped.
29. Annular dischargers are not permitted.
30. The maximum base plate opening 42.8mm.
31. The only other modifications permitted is for the tuning or conversion to methanol or E85 Fuel.
32. The carburetor must be fitted with a minimum of two external return springs, anchored in separate locations. One return spring must be anchored forward, and one return spring must be anchored backwards of the carburetor cam.
33. The carburettor adaptor plate
- a. must be a Redline 4bbl to 2bbl adaptor plate Part #10-515AMCA.

- b. must remain OEM.
- c. must not be modified.

Repairs

- 34. Repairs may only be made by an approved AMCA Nationals repairer.
- 35. The only exception is the replacement of valve springs.
- 36. Prior to delivering the engine to the repairer, AMCA must be notified in writing of the details of the repairer, the date of delivery and, where possible, the intended repair.
- 37. Engines presented for repairs must have intact and undamaged factory GM Performance tamper proof bolts and/or seals in the correct locations
- 38. Once repaired the engine must be sealed with AMCA Nationals approved seals in the same locations as the GM Performance tamper proof bolts and/or seals.
- 39. Any AMCA Nationals engine seal numbers must be recorded in the race cars logbook and notified to AMCA Nationals for identification purposes.

Exhaust

- 40. 4 into 1 header pipes (extractors) **must be used**.
- 41. The exhaust system must comply with the following:
 - a. The maximum specifications are: 1-3/4", which may be a stepped header (e.g:1-5/8" to 1-3/4");
 - b. 3-1/2" collector;
 - c. and 36 inches total length to end of collector.
- 42. OEM cast exhaust manifolds are permitted.
- 43. Block hugger type headers are permitted.
- 44. Try-Y headers are not permitted.

PROHIBITED CONDUCT

Any competitor found to have tampered with, damaged or altered in any way the following items:

- Factory sealed bolts or AMCA Nationals engine seals.
- MSD rev limiter box or chip.
- GM Performance HEI Distributor.

IN ANY MANNNER other than permitted in these rules will be subject to an instant disqualification from all events for that race season, incur a minimum 12-month suspension and a min \$2000.00 fine. Suspension will not commence until fine has been paid.

13. ENGINE SETBACK AND OFFSET

- 1. The maximum engine set back is 1700mm. (ie: no less than 1700mm).
- 2. The engine setback is to be measured from centre line of rear axle to the rear face of engine block.
- 3. It is permitted to offset the engine to the left of vehicle centre line: Measured between front clip chassis rails & centre of crankshaft pully bolt.
 - a. a maximum 75mm on right hand drive vehicles.
 - b. a maximum 50mm on left hand drive vehicles.

14. EXHAUST

The exhaust system may be modified by the use of extractors but must be able to meet 95 DBA noise limits or local EPA/COUNCIL regulations. Please check with State Rep for this information.

15. COOLING SYSTEM

- 1. The radiator must be mounted in front of the engine.
- 2. The cooling system to have a lever pressure release radiator cap fitted.
- 3. HQ - WB sub frame may be relieved to help facilitate radiator fitment.
- 4. Electric water pumps are not permitted.

16. TRANSMISSIONS

1. The only transmission permitted are OEM automatic and manual gearboxes as listed below:
 - a. Holden 6 CYL or V8, three or four speed Ford Borg Warner
 - b. Ford single rail, three and four speed.
 - c. Ford top loader, three and 4 speed
2. Manual transmissions:
 - a. must be clutch operated.
 - b. with the motor running and vehicles still in position, must be capable of engaging a gear and move forward then engaging reverse and moving backward.
 - c. must only use OEM internal gears and ratios.
3. Automatic transmissions must retain the torque converter.
4. Bypass transmissions (i.e. tap type operation) are not permitted.
5. The lightening or removal of internal components or the lightening of the housing is not permitted.

Tail Shaft

6. The tail shafts:
 - a. must be tubular steel minimum 50mm diameter
 - b. must be painted white or bright yellow
7. A tail shaft loop of not less than 50mm x 5mm steel or 25mm OD steel tube must be fitted no more than 150mm to rear of front universal joint.
8. Sprint car or torsion bar style tail shafts are not permitted.

Clutch & Pressure Plate

9. The clutch pressure plate must remain OEM for 6CYL or V8.
10. The clutch plate (disc) open and may be modified to suit gearbox input shaft.
11. A scatter shield of minimum 3mm steel or 5mm aluminum must be fitted. The scatter shield must extend from the floor to 50mm above the top of the bellhousing and from 50mm forward of bellhousing or front edge of firewall and extend 50mm past back edge of bellhousing. The scatter shield may form the firewall itself or be securely bolted to the firewall in at least four (4) places.

17. SAFETY/SEAT/SEAT BELTS

1. All safety gear is to meet current SFI or FIA minimum standards as set out in the Speedway Australia rules.
 - a. An approved 1piece race suit is compulsory.
 - b. Approved fireproof underwear is compulsory.
 - c. An approved balaclava is compulsory. An approved helmet skirt is permitted in addition to the balaclava.
 - d. Approved gloves, socks and race boots are compulsory.
 - e. An approved full-face helmet is compulsory.
 - f. An approved neck brace or an approved helmet restraint is compulsory.
2. A full window net is mandatory and.
 - a. Must be quick release and detachable from the top.
 - b. must comply with Speedway Australia Rules and
 - c. must be in date.
3. A 5- or 6-point racing harness or restrain system
 - a. is compulsory.
 - b. must comply with the current SFI or FIA minimum standards as set out in the Speedway Australia rules
 - c. must comply with the Speedway two (2) year replacement rule.
 - d. must use a lever/ latch style buckle and cannot be the plastic camlock buckle.
 - e. must have mounting points constructed of a minimum 3.2mm steel plate; and
 - f. mounting points must be gusseted where required.
4. High back aluminum racing seats:
 - a. are compulsory.
 - b. Must be mounted at a minimum of four mounting points.
 - c. the rear of seat must be mounted at a minimum of two point.

- d. Must be mounted using a Minimum 3/8 high tensile steel bolts and
- e. Seat mount washers with a minimum OD 32mm must be use.
- 5. Each Race team shall have in its possession, in working order, in its pit during a race meeting a fire extinguisher with a minimum capacity of 2KG. Dry chemical is the most effective.
- 6. Roll cage padding must be installed to cover the roll cage bar work within 300mm of drivers head forward of the seat.
- 7. Receiver one-way communicators are mandatory.

18. IGNITION, SWITCHES AND FUEL TAP

- 1. All vehicles must be fitted with a battery isolation switch which:
 - a. must be located on the vehicle decking;
 - b. is located within reach of the driver and track officials;
 - c. must be painted in a contrasting colour to vehicle; and
 - d. must be clearly marked on/off.
 - e. Must kill ALL power and isolate battery when turned off
- 2. The battery location must be marked on external body work with solid blue triangle with sides of a length not less than 75mm and must be blue or a contrasting colour to the bodywork.
- 3. All interior cockpit switches are to be clearly marked as to their purpose and their on/off positions.
- 4. The fuel supply tap will be painted in a contrasting colour and be clearly marked on/off.

19. BALLAST

- 1. All lead ballast must be painted white and be marked with the state prefix and racing number.
- 2. Maximum singular ballast pieces to weigh no more than 11.5Kg ABSOLUT.
- 3. Ballast 5kg and under can be mounted using 1 only ballast clamp
- 4. Ballast to be mounted below deck height ONLY (no bumper or nerf bars).
- 5. Ballast must be attached using a minimum of TWO ballast type clamps ONLY.

20. SIGN WRITING

- 1. The State Prefix on the car is to be as follows:
 - a. Victoria – V or Vic
 - b. New South Wales – N or NSW
 - c. Tasmania – T or Tas,
 - d. Queensland – Q or Qld,
 - e. Northern Territory – NT,
 - f. South Australia – S or SA,
 - g. Western Australia – W or WA.
- 2. The prefix must be no smaller than 75mm x 75mm high.
- 3. The use of the prefix “Aus” or a number containing “Australia” is reserved for the current Australian Champion.
- 4. The number “1” is reserved for the current Australian Champion. A State Champion may use the number “1”, in which case the State Prefix corresponding to the Title held must be used.
- 5. The minimum racing number size is 450mm high x 400mm wide. The racing number must be displayed and clearly visible on both sides of vehicle and on the roof.
- 6. The racing number must be displayed and clearly visible on the rear of each vehicle, with a minimum size of 150mm x 150mm and must include the state prefix.
- 7. The drivers name must be clearly visible on the roof and be a minimum height of 80mm.
- 8. Roof plate numbers:
 - a. are not required when using transponders;
 - b. must be available for use as directed by officials;
 - c. must have a white number on a black background;
 - d. must measure 300 x 250 mm; and
 - e. must include the state prefix.
- 9. **All cars must be presented in a clean and professional manner.**
- 10. Any car not presented clean and with clear professional signwriting may be removed from the event.

11. All sign writing should be a contrasting colour to the general paint scheme of the car so that it is readable under all conditions.

21. AMCA NATIONALS reserves the right to inspect any engine at any time.

22. ENGINE PROTEST

1. Within 5 minutes after a feature/final has been completed a driver can pay \$500.00 to protest any 253 engine that finishes in the top four positions.
2. The protesting driver will be subject to an additional fee of \$100.00 per hour per person to cover the costs of the AMCA Official and required expert person to be present for inspection.
3. Under this protest the following may occur:
 - a. The inlet manifold and cylinder heads removed;
 - b. The valve sizes, combustion chambers and inlet & exhaust parts may be inspected and measured;
 - c. The bore and stroke may be inspected and measured.
4. If the engine is found to be illegal in any aspect:
 - a. the \$500.00 protest fee will be returned to the protesting driver; and
 - b. the driver of the car with the illegal engine will be suspended for not less than six (6) months and the car will be deregistered for a period of not less than six months.
5. If the engine is found to be legal, then the \$500.00 protest fee will be paid to the driver of the car being protested.

23. RULE CHANGES

1. AMCA Nationals reserves the right to change these Technical Rules - Specifications from time to time.
2. Rule changes will be notified by the publication of a new version of the Technical Rules – Specifications.
3. AMCA Nationals reserves the right to permit “trial vehicles” which do not comply with these Technical Rules – Specifications to participate in AMCA Nationals events for the purpose of evaluating potential changes to the Technical Rules – Specifications.
4. For the purposes of this rule a “trial vehicle” is any vehicle registered with AMCA Nationals, and which is approved in advance by AMCA Nationals be presented at an AMCA Nationals event which does not comply with these rules.
5. For the avoidance of doubt, a “trial vehicle” may be fitted with parts outside these rules prior to any amendment of the rules at the absolute discretion of AMCA Nationals.

AMCA Nationals - Technical Rules - Specifications

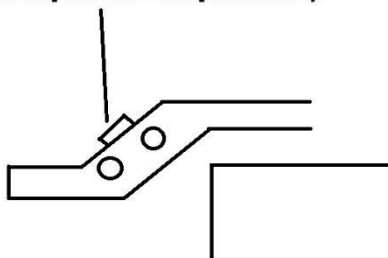


All transponders must be fitted in the designated area shown below.

Transponder Location:

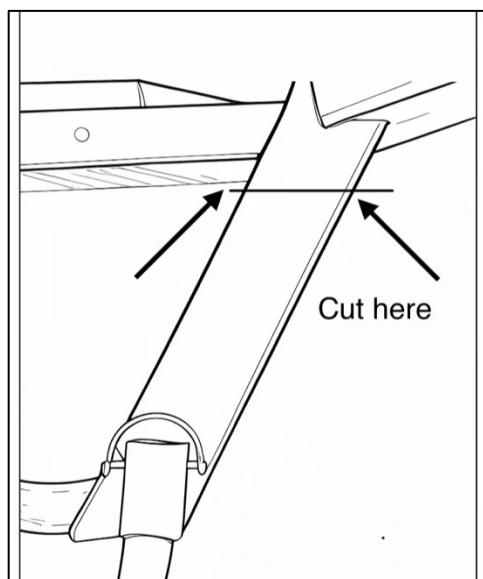
- (a) 160mm from short fold in clip.
- (b) 565mm measured from centre of front axle to transponder.

Transponder to be mounted to the rear of the chassis clip or inline to this position only.



Vertical bar on fuel protection bar.
Top and or Bottom Bars.

RH AMCA CLIP OUTRIGGER MODIFICATION



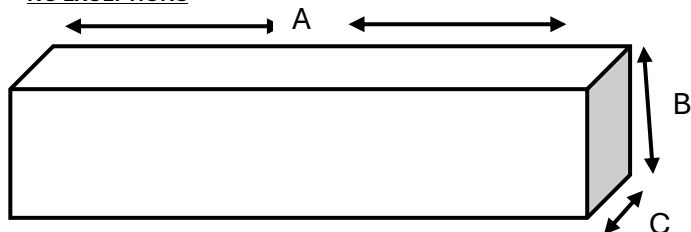
REAR SPOILER SPECIFICATIONS

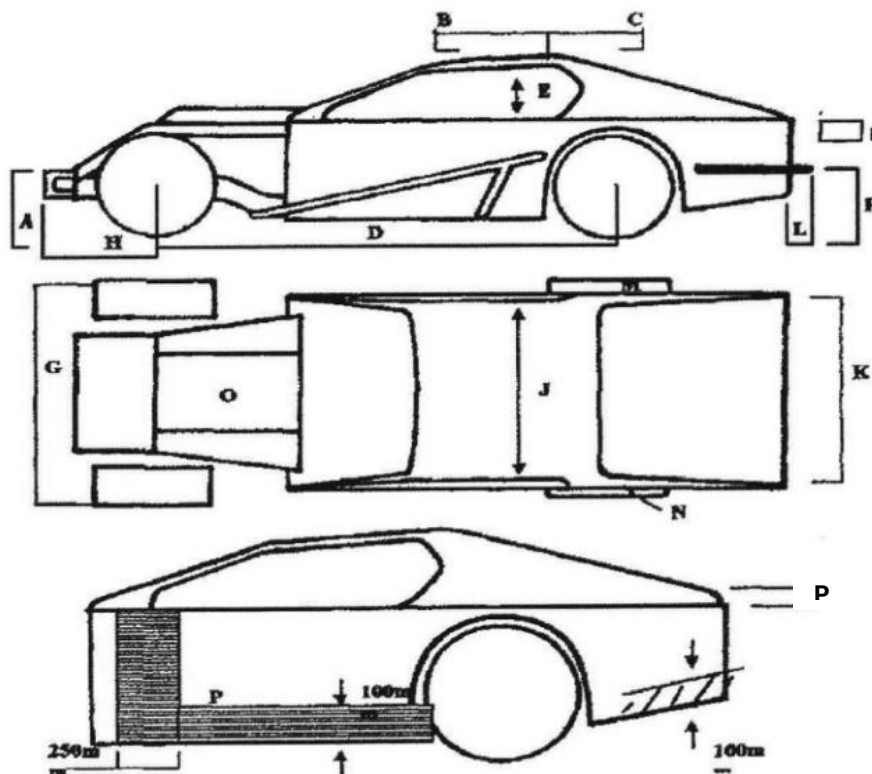
- A. No wider than body
- B. Max height 250mm
- C. Max length 400mm

NOTE – Rear spoiler not to extend past the nerf bar. Air not permitted to pass under spoiler

REAR SPOILER TO FIT INSIDE DIMENSIONS SHOWN

NO EXCEPTIONS





A. Max height 720mm

B. Max rake 100mm

C. Max 50mm

D. Max wheelbase 2743mm (108") Min 2642mm (104")

E. Min window height 300mm

F. Max height 620mm to give protection from 250mm

G. Max track 1982mm

H. Max length 875mm

I. Max body rake 75mm

J. Max width 1250mm Min width 1100mm

K. Max body width 1630mm Min width 1500mm

L. Max length 220mm (measured from rear of decking to outside of rear bar)

M. Min tyre 100mm outside of body

N. Left tyre outside of body and side nerf bar

O. Shaded area no longer applicable for AMCA sponsors decals

P. Max drop of 50mm at rear of sail panel