

**SPEEDWAY SEDANS AUSTRALIA INC**

# **PRODUCTION SEDAN SPECIFICATION MANUAL**

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Rules and Regulations



**ASCF SPEEDWAY SEDANS  
AUSTRALIA INC.**

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The content of this manual is to be read in conjunction with the SSA Class Technical Manual available as a separate download.

# CLASS SPECIFICATION: PRODUCTION SEDAN

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**PLEASE NOTE:** Where possible the data in the Class Specification Manual has been taken from [www.automobile-catalog.com](http://www.automobile-catalog.com) which is the main reference book used by the SSA Inc. Information that is not available at [www.automobile-catalog.com](http://www.automobile-catalog.com) is taken from the Manufacturers Workshop Manuals. We have checked and cross checked the information in this Manual. If you do find something that does not seem right, anywhere in this Specification Manual, please let us know immediately, so that we can check it out and if it is incorrect, we can change it. (01/07/17)

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# SPEEDWAY SEDAN AUSTRALIA INC. SPECIFICATIONS

## Production Sedan CLASS SPECIFICATION

The content of this manual is to be read in conjunction with the SSA Class Technical Manual available as a separate download.

**Note** – All new and existing cars must comply with all specifications as detailed. If “IT” is not in the book, it will be considered illegal until written approval for use is issued by SSA Inc after approval through the CTAC and Technical Committee and ratified by the SSA Inc Board. (01/07/17)

Prior to constructing cars of an unusual or unconventional design, or one not listed in the tables at the rear of the class specification manual full details will be submitted to the Class CTAC Representative who will forward to Class CTAC Chairperson. Submissions will be handled in a confidential manner. Approval, or required modification before approval, will be given in writing to the applicant. An administration fee may apply. (01/07/17)

Once approved the approved vehicle will be included in the Class Specification Manual and the opportunity will be available for any competitor to build the same vehicle. (01/07/17)

A **Production Sedan** class race car is built from a hard-top road car seating a minimum of four persons as per the compliance plate and catalogued for sale in Australia, i.e. available new to the general public through authorised Dealer Sales and Service Networks throughout Australia.

Base model body is used for measurements and specifications. Forced induction models not permitted in that form.

Four wheel drive, all wheel drive and/or four wheel steer models not permitted.

Passengers optional, but all bar work to be mirrored from right hand side. Passengers must face forward.

Age limit on Production Sedan eligibility – 5 years. For 2015 – competitor can only build up to 2010 model car. The use of a VF Commodore is not allowed until 1<sup>st</sup> July 2018. (01/07/17)

### 1. BODY/ROLLING SHELL:

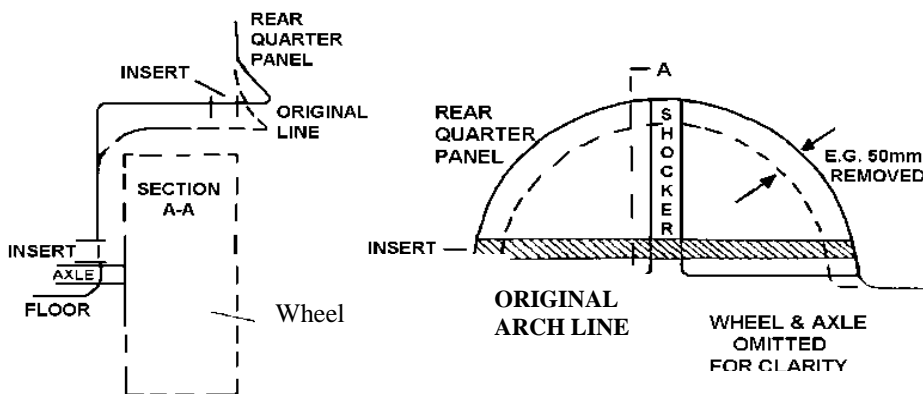
- a) Race car is to use an original, complete, metal body with the suspension mounting points in original position and being used.
- b) Cars may be upgraded by using later panels in same series. Example VN - VS Commodore or EA - EL Falcon. AU Falcon can NOT use BA Body Panels. The updated panel must be attached over the complete original panel, but must be registered as the original model. VF Commodore panels cannot be used until after 1<sup>st</sup> July 2018 on earlier model Commodores. (01/07/17)
- c) All fittings such as door handles, visors, ornamental mouldings, body trim strips; wheel trims etc. must be removed.
- d) All unnecessary flammable material must be removed, e.g. door trims, floor coverings; attached sound deadening material permitted except near exhaust system.
- e) All window glass and lights must be removed. Window Glass apertures must not be covered with fibreglass or other material.

- f) Instrument glass permitted.
- g) The only panels which may be replaced with fibreglass/ metal / aluminium / alucabest replica: max 2mm thick, doors, bonnet, boot, front guards, nose, rear quarter panel. Under panel reinforcement plate not permitted.  
If original roof is damaged, you may fit a fibreglass roof skin overlay, only if original roof remains intact.
- h) Replacement panels must be securely fastened.
  - Panels to be attached using rivets or bolts. No cable ties or race tape, unless race nights repairs.
  - The only panels which may be removed: Radiator support panel front inner guard panels provided that they do not constitute suspension mounting points e.g. McPherson strut, rear quarter panels and all inner panels in boot area.
  - In boot area, quarter panels may be cut off at rear window base line and replaced with replica panel.
  - Rear silhouette to be maintained with plastic O.E.M. bumper over top of pipe bumper bar work.
- i) The door pillars may be notched for bar work but otherwise must remain intact and in the original position, roof inner panels ONLY at the points where interference with the roll cage occurs, dash panel, boot inner panels, boot floor, and/or rear wheel arch sections rearward of the rear axle centre-line provided that they do not constitute suspension mounting points. Seat mounts and other brackets in the cabin on the floor may be removed. (01/07/16)
- j) OEM metal front firewalls to remain part of body shell. Plastic coated section may be replaced with alloy or steel body material. The bottom section has got to be steel, as is part of original floor pan. Modifications to rear firewall (except for any material removed to allow the fitment of the radiator), front firewall, rear parcel shelf, floor and engine tunnel not permitted unless otherwise specified within this manual. Upper front firewall section/dash panel maybe removed and replaced with min.1mm metal, in VN to VZ Commodore, the bottom section has to be steel, as it is part of original floor pan. No extra decking or internal sheeting permitted in cabin area.
- k) If rear wheel arches need to be enlarged for tyre clearance, the original wheel arch may be split and an insert fitted, and the remainder of inner and outer arch panels must be re-welded. Fig 1.

Inner front wheel arches and fender skirts where they attach to the sub-frame and floor area may be re-positioned for wheel clearance - max. 50mm.

- l) Original front sub-frames must remain in place, except that; the sections forward of the leading edge of both front tyres may be removed, "unless" they constitute suspension mounting points; e.g. Forward caster arm (radius rod) mounting on McPherson strut. Front wheel drive cars with transverse engine may modify the engine cradle assembly to strengthen the engine mount.
- m) Front and rear under bumper stone trays must be of original shape.
- n) Wheel Arch Modification Fig. 1

**The rear axle centre line to be OEM position**



- o) Rear spoiler and/or front air dam permitted if manufacturer's option for the model. Aerofoil permitted if OEM standard fitment. A V8 Super Car type or Walkinshaw and similar derivatives are not acceptable or permitted on rear. Spoiler or Aerofoil fitment not permitted to be above half rear window height, not wider than waistline of the car at that point nor further to the rear than the back of an original rear bumper.
- p) Other aerodynamic aids NOT permitted.

Fig 2. (i)

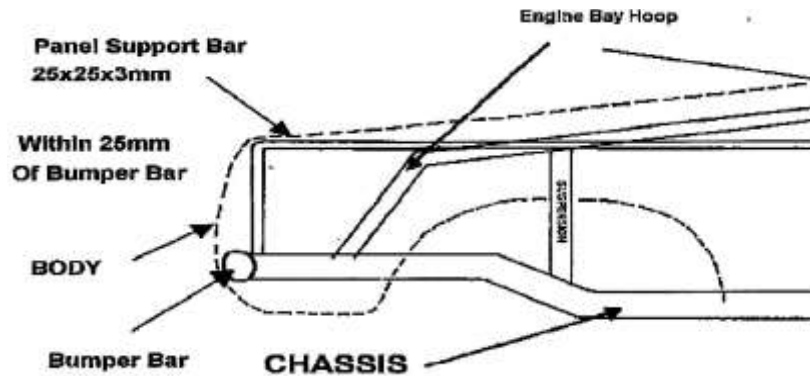


Fig.2 (ii)

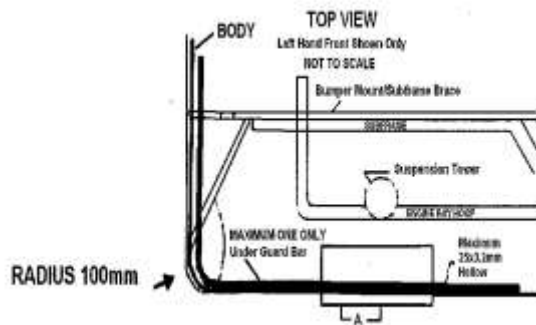
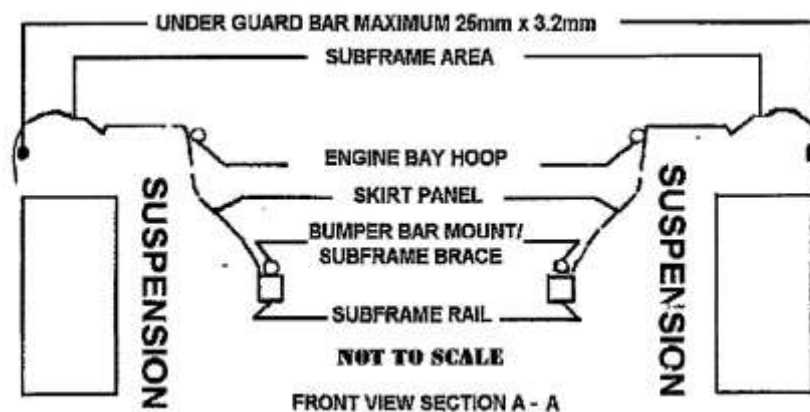


Fig 2 (iii)



- q) Except for the bumper and bumper support bars, all bar work outside the sub-frame skirts forward of the firewall, i.e. under front guards, shall be a maximum of 25x3mm CHS. Fig. 2(i) (ii) (iii). Max 3 braces per side, one may be a vertical upright attached to the bumper support. No other bar work to attach to bumper bars or supports.

- r) Bonnet to be securely fastened.
  - i) Four bonnet pins (5 for fibreglass) to be 12mm minimum to 15mm maximum. Mild steel or approved equivalent.
  - ii) Bonnet pins are to be in the bonnet not sides of mudguards. No mounting pins in side of panels, ie: mud guards.
  - iii) Bonnet lock pins 3mm min to 6mm max. Heavy duty large reinforcing washers (min 30mm O.D.) to be fitted to all bonnets pin holes.
  - iv) Similarly, boot lid to be securely fitted, using pins and large washers as for bonnet. A removable boot lid to be securely mounted in four points.
  - v) Hinged bonnet and boot lid permitted, using minimum of two pins.
  - vi) Skeletonising not permitted on hinged panels within 50mm of hinges. The hinged panel is to be welded to the bonnet or boot skin.
- s) Fuel tank area must be accessible for scrutineering. A 300x300mm access panel may be in rear parcel shelf, deck panel or the boot lid.
- t) Multi-piece sheet metal, brittle plastic, or die cast grille and/or fittings not permitted.
- u) Cars may have a wheel arch flare if Manufacturer's OPTION is for the model and to be of original type and shape. Flares to be of body material only. Flare edges and/or guard edges are not to be reinforced.
- v) Light apertures and grille must be filled using max. 1.6mm metal sheet, fibreglass or plastic. Grille to be 5mm woven mesh if airflow is required.
- w) Rear vision mirror not permitted.
- x) Any front mud protection guards under cars to protect engine or suspension components from mud and dirt, must not be any lower than 150mm from ground level. Not to be attached to front bumper.
- y) Dash panel is not permitted to continue past the forward most point of the steering wheel across the width of the car.
- z) Metal sheeting only in the driver's foot well may be fitted under drivers feet, which is also covering the front roll cage spreader bar, so drivers feet do not get tangled in the bar work.
- aa) The rear dog leg may be removed and replaced with a metal, fibreglass or plastic replica, from the OEM rear door catch position downward to the top of the sill panel bend, and inward to the first seam on the body.

## **NON ORIGINAL BODY FIREWALL:**

Driver must be protected and isolated from mechanical, fuel, electrical including battery (marine type plastic or similar box accepted) and exhaust components by metal firewalls, min.0.9mm thick. (See Exhaust also).

## **PRESENTATION:**

All Bodywork, including any subsequent repair of race day damage, shall be to a tradesman-like standard and must permit the vehicle to be presented in as near to original condition as possible.

Paintwork and Sign writing: All paintwork, sign writing and numbers to be neat, attractive and of professional standard.

- i) All vehicles must carry the identification number, as issued by their club. This number may be displayed on each side of car and on the roof, Club prefix, if required, to precede number. Identification number to be visible from front of car (for pit Marshall).
- ii) The name of the driver will appear on the roof over RH door or on visor strip, in letters of a minimum of 75mm high.

## **2. ROLL CAGE**

*Fig 3(i) details the minimum structural requirements. Each item number is referred to in the text below.*

The roll cage is to prevent the collapse of cabin area under impact, all bar work must be entirely inside the OEM glassed area of the cabin.

Roll cage, to enclose the driver, to be full width and full height of the cabin area. The roll bars are to constitute a cage type framework, braced fore and aft. The cage must extend from behind driver's seat forward to the windscreen area and incorporate protection for the driver's feet.

All roll bar material must be of good quality mild steel, AS1450, minimum Gr300. MINIMUM 38mm O.D. x 3.0mm w.t. CHS. (Sonic test at not less than 2.70mm ABSOLUTE). Aluminium based materials not permitted. All bends to be made using a pipe bender with the correct size former, with no evidence of crimping, wall failure, or significant weakening. Galvanised tubing or welding over threaded tubing is not permitted in any structural bar work. (01/07/16)

Water pipe fittings or malleable fittings are not permitted. Roll cages built using other than fusion welding techniques will not be accepted. Gussets on welded joints may be required at daylight inspection of weld quality.

1. **Main Hoop:** The rear main hoop will be made of one continuous length of tubing. See Fig.3 (i). Hoop to be within 50mm of sides of roof at the narrowest point, be within 50mm of the inside line of the B pillar measured at point B of Fig. 3 (i), and be completely inside the body line. The base of the hoop will be fitted square in the car.
2. **Roof Hoop:** The roof hoop will be formed from one continuous length, or alternately be replaced by using one continuous length to form the front leg A pillar bar, which then continues back to the rear hoop, with a top windscreen bar being fitted to complete the hoop. The roof hoop to be within 50mm of the roof at sides, within 50mm of windscreen opening, and be welded to the main hoop to form a halo around the drivers head – it does NOT have to follow the windscreen within 50mm of the entire opening. (01/07/16)
3. **Front Legs / A pillar:** The two front legs are to be formed each from a continuous length, and be welded to the roll cage base (bar 13) and the roof hoop (bar 2) or if using the second option for the roof hoop, welded to the main hoop (bar. 1).  
A third option is: The top Nascar bar, lower windscreen bar and passenger's top Nascar bar may be formed in one continuous bar. This entails the front leg to be formed in 2 pieces. One from the roll cage base to this hoop with the upper section from this hoop upwards to the roof hoop.

The top part of all options must join the roof hoop at a point no further than 50mm from the windscreen opening, and follow downwards to point A of Fig. 3 (i) at an angle of 45 degrees downward from the horizontal.

**Newly constructed cars**, as at 22<sup>nd</sup> August 2014 the front leg will be no further than 300mm behind, and 50mm inwards of the OEM door opening at points A & C of Fig 3 (i).

**Cars previously registered** prior to the 22<sup>nd</sup> August 2014 will fully comply with the relevant Specification Book, with that being the last printed version of the Production Sedan Class Specification Book.

4. **Centre Roof Bar:** Centre roof bar to be minimum of 32x3mm CHS, and shall be welded between the main hoop and the roof hoop, in the centre line of the roll cage.
5. **Rear Diagonal:** A one piece diagonal brace, minimum 38x3mm CHS, will be fitted in the roll cage hoop, behind the driver's head, within 250mm of the bend, and down to the point where the hoop joins the L/H cage base as per Fig 3 (i). A second brace may be fitted in cruciform. If cruciform type bracing is used, a minimum of 32x3mm CHS, may be used.
6. **Seat Back/Shoulder belt Bar:** A 38x3mm CHS, mounting bar to be fitted to mount the seat back and seat belts, to be positioned so that the belts are anchored a maximum of 300mm from the point at which the shoulder belts come through the back of the seat. Top seat mount to be no further than 75mm lower than this bar.

7. **NASCAR Bars:** On the driver's side, three horizontal bars that will resemble the drawings provided. They are to have a deflection/bend at either end of the bar which allows the Nascar bars to be positioned towards the door skin and placed between front and rear cage legs, evenly spaced between window sill and roll cage sub-frame. Top NASCAR door bar to be within 50mm of the window opening for all cars built after 1<sup>st</sup> July 2015. The centre **or bottom** horizontal bar may run straight through, from front wheel arch to rear wheel arch, and then have two separate pieces of 38x3mm CHS, **turning to the NASCAR bar connecting to the roll cage main hoop**, and to the front leg. There will be a minimum of two vertical bars evenly spaced between the front leg, and the rear hoop for each of the openings created by the Nascar bars, making a minimum of six bars to be fitted. Refer to Fig 3 (i). Door pillar to be notched, NOT removed, to accommodate bar work. (01/07/17)
8. **Door Bars:** Passenger side will have a minimum of two bars fitted between the front leg and the main hoop. One of these must be horizontal at window sill height.
9. **Lower Windscreen/dash bar:** A 38x3mm CHS, bar between the front legs must be fitted at top Nascar bar height. Refer also to front leg options (3). As an option a bar (16.) can be fitted between lower windscreen/dash bar and the front spreader bar.
10. **Centre Windscreen Bar:** A 25x3mm CHS, minimum bar, to be fitted at centreline of cage, between to roof hoop, and the lower windscreen bar.
11. **Rearward Brace Bars:** Two rearward brace bars minimum 34mm CHS, to extend from top rear of main hoop down onto the rear sub frame ( approx.. 45 degrees). They may form a crucifix and must be attached to the rearward side of the main hoop within 100mm of the centre of the bend.
12. **Foot Protection Bar:** Foot protection bar 38x3mm CHS, shall be required if any part of the driver's feet or legs, are in front of the front leg ( bar 3 ) whilst the driver is seated in the car in race position. A bar (17) minimum 25x3mm CHS will attach from the foot protection bar at one end, and the other end to bar work to the left. If the front leg is more than 100mm behind the OEM door opening, a plate of 3mm steel or 5mm alloy, must be fitted to the foot protection bar hole **and be completely filled**. The foot protection bar must mount to the front leg/A pillar bar no lower than 300mm from the roll cage base. (01/07/17)
13. **Sub Frame:** Roll cage legs shall be welded to the top of a sub-frame of 38x3mm CHS, or 50x50x5mm angle or 50x50x3mm RHS section running fore and aft. Sub-frame to be securely welded, or bolted to the floor pan/sills using at least four 12mm steel bolts through the sub-frame and using 100x100mm plates under the floor.
14. **Spreader Bars:** A minimum of two sub frame spreader bars at roll cage legs, either 38x3 CHS. or 35x35x3mm RHS to be fitted. 200mm is the maximum distance forward or back, from the front leg of roll cage, for fitment of the spreader bar, before a brace may be required.
15. **Quarter Window Bar:** A quarter window bar (bar.15) if required because of excessive rake or a long roll cage, where the "A" pillar bar (bar. 3) is less than 45 degrees from the horizontal must be fitted to both sides and installed from the top nascar bar to top one third section of the "A" pillar bar, using a minimum of 25x3mm CHS.  
The lower mount point must be aligned with or be within 50mm of the first dropper bar. On the passenger side this will require an additional dropper bar between the top nascar bar (bar.7) or the door bar (bar.8) and the base bar (bar.13) to support the quarter window bar.
16. **Lower Windscreen/ Dash Bar Support:** As an option a bar (16.) can be fitted between lower windscreen/dash bar and the front spreader bar.
17. **Foot Protection Support Bar:** A bar (17) minimum 25x3mm CHS, will attach from the foot protection bar at one end, and the other end to bar work to the left.
18. **Dropper Bar:** On the passenger side **a 38x3mm CHS bar** will be required between the top nascar bar (bar.7) or the door bar (bar.8) and the base bar (bar.13) if the quarter window bar is fitted. (01/07/17)



**Windscreen Mesh:** Mesh screen to cover entire area from “A” pillar to centre bar and from dash to roof bar.

- i) Maximum effective mesh size 50x50mm. Mesh gauge 3mm.
- ii) Windscreen mesh to be welded, or clamped with metal clamps to the roll cage “A” pillar and centre windscreen bar.
- iii) Minimum of four clamps.
- iv) Mono cars may be welded to body.

**Anti Spear Plates:** 3mm steel or 5mm alloy, (NOT to be lightened by drilling).

- i) The anti spear plates to be mounted to the outside of the NASCAR bars and overlap the edge of the NASCAR bar work. (01/07/17)
- ii) Recommended 1/3 length between roll cage legs, to be fitted on the driver’s side, from base of roll cage to top Nascar bar, forward of the first vertical door dropper bar to the front leg of the roll cage.
- iii) If not welded, three external door plates to be bolted on, using a minimum of 6 – 50x50x3mm (square) or 55x40x6mm (rectangular) mild steel plate tags and bolted to either 8mm or 5/16<sup>th</sup> high tensile bolts with no protrusions.
- iv) If individual pieces are used then a minimum of 4 – 50x50x3mm (square) or 55x40x6mm (rectangular) mild steel plate tags and bolted to either 8mm or 5/16<sup>th</sup> high tensile bolts to each piece with no protrusions.
- v) Plates/tags to be solid square or rectangular with one only hole for the mounting bolt. (01/10/16)

**Passenger Option:** Roll cage left side must mirror right hand side and have full cruciform. Passenger handle for support, optional.

### Typical Roll Cage

Fig 3. (i)

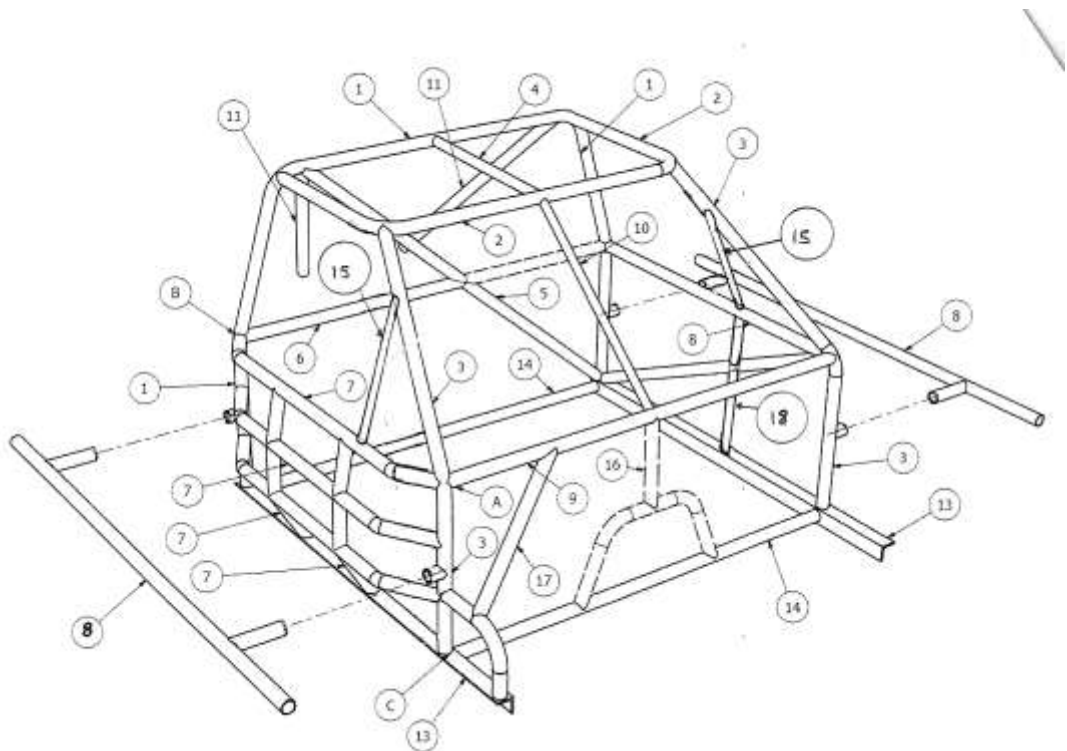


Fig 3 (ii)

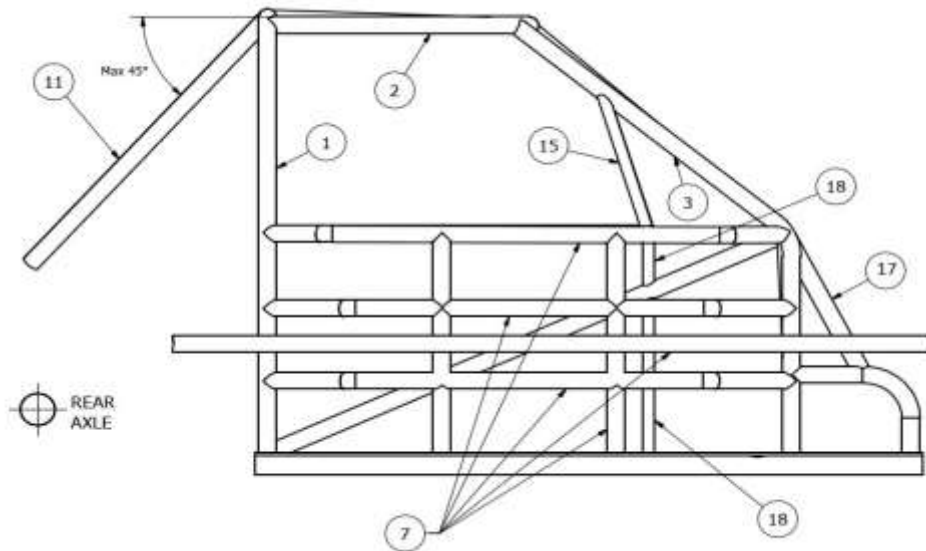


Fig 3 (iii)

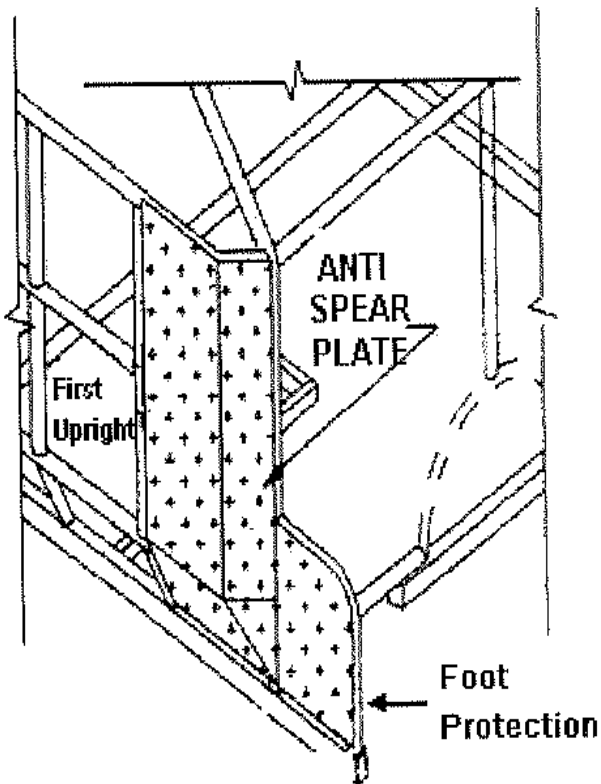
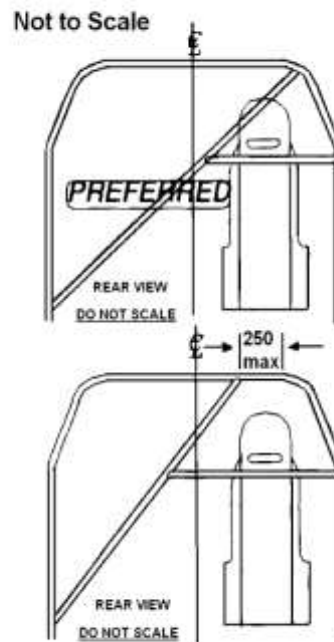


Fig 3 (iv)



## BALLAST

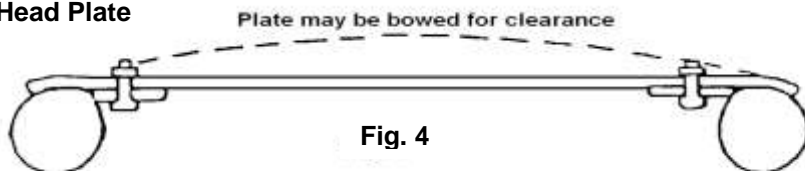
- a. Ballast should be no greater than 610mm long x 100mm wide x 50mm high.
- b. Each piece of ballast to be painted white with registered car number for identification.
- c. Ballast must be attached to either roll cage or chassis and mounted below door height.
  - i) If attached to chassis, must be attached directly to chassis by utilizing half inch high tensile bolts and Nylock nuts. Bolts to go through chassis rail using proper engineering practice. (sleeves)
  - iii) If attached to roll cage tubing, correct mounting brackets to be used, e.g. AFCO.
  - iv) Maximum Bolt On ballast allowed 40kg.
  - v) Each single piece maximum 10kg.
  - vi) Ballast up to 305mm requires minimum one mounting bolt.
  - vii) Ballast up to 610mm requires minimum two mounting bolts.
  - viii) Bolts must pass through ballasts.
- d. Ballast be mounted no higher than top NASCAR bar.
- e. If ballast is dislodged from a race car during an event a penalty could apply.

## HEAD PLATE:

To simplify the removal of an injured driver it is highly recommended that a removable full size head plate be used: Fig. 4.

Head plate to be of 5mm ALUMINIUM ALLOY or 3mm STEEL. 25x3mm FMS strips full length to be welded to main hoop, top windscreen bar, centre roof bar and side roof bar. The use of 10 mild steel plate tabs measuring 50x50x3mm (square) or 55x40x6mm (rectangular) will be required when using a removable Head Plate. Plate to be mounted, from above, with 10 x 8mm dia. High Tensile bolts, 3 each side, 2 front, 2 rear. Heads of bolts to be downwards and spot welded e.g. no protrusions. (01/07/17)  
Plates/tags to be solid square or rectangular with one only hole for the mounting bolt. (01/10/16)

Fig 4. Head Plate



## ALTERNATIVELY

A head plate min. 3mm steel must extend from rear roll bar to top windscreen bar and from driver's side outer roof bar to centre roof bar. This plate must be securely welded to these bars with intermittent welding procedure.

Helmet clearance between roll cage roof/hoop bars for existing vehicles, may raise head plate as per drawing below, to obtain 50mm clearance. A minimum of 50mm clearance is required between the helmet and any part of the rollcage and headplate when driver is seated.

Fig 4 (i)

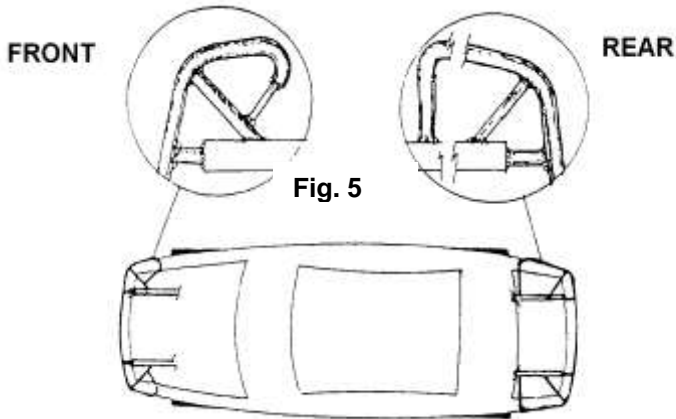


Mounting procedure for raising of head plate (existing cars). 10 stubs 38x3mm tube – stub length is determined by height required to gain 50mm clearance.

Stubs to be end capped and threaded for mounting purposes.

### 3. BUMPER BARS & OPTIONAL EXTERNAL BARWORK:

OEM type Steel bumper bars **NOT** permitted but may be replaced with max. 42x3mm CHS.

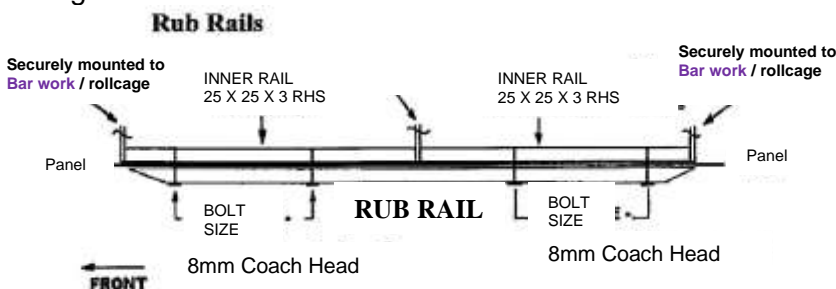


- a) Front and Rear Bumper Bar: Pipe Bumper Bars to be covered with a plastic road car bumper or exact OEM fibreglass copy. Front road car plastic bumpers must NOT have non-genuine skirts fitted to bottom of bumpers.

Bumper/s to be securely mounted in original position using supports of a minimum of 100mm from rear of bumper tube. Maximum support size, 42x3mm CHS, 40x40x3mm RHS, or 50x25x3mm RHS only, i.e. gussets are not to be used. Bumpers are not to tie to under-guard bar work. (fig.5)

- b) Front &/or Rear: Original plastic bumper bar can be reinforced.
- c) FRONT bumper Maximum return 300mm, Minimum 100mm by max. 42x3mm CHS.
- Bumpers are to remain hollow.
  - Corners and the ends of front and rear bumpers to be radius formed, 100mm minimum.
  - A maximum of four mounting points on each bumper bar.
  - Fuel tank protector brace bars do not constitute Bumper mountings.
  - Returns and bumpers to be flush fitting with the body, within 25mm.
  - Anti-hook-up bars from returns of Front and Rear bumpers to be extended onto the stay bars.
- d) REAR only: Returns of rear bumper may be extended as a skid rail against outside of body between bumper and wheel arch, and then extend inward to the "chassis rails".
- e) Corner plates on top edges of either bumper not permitted.
- f) Plastic bumpers must be fitted with round head bolts. Aluminum rubbing strips optional. 40x3mm max. aluminum strip may be fitted between bolts to support bumper cover.

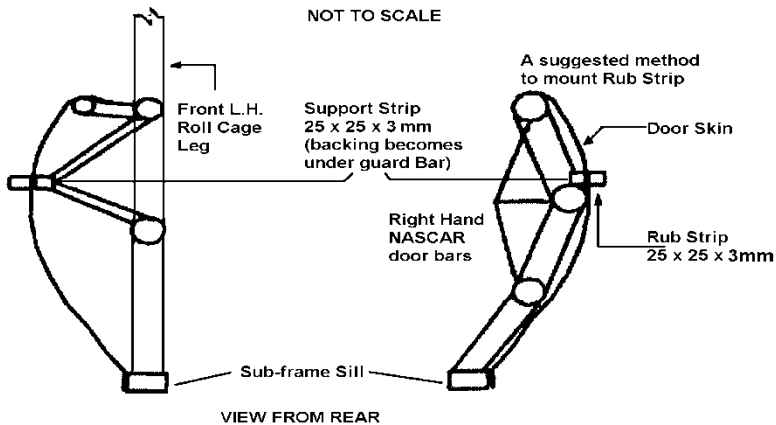
Fig. 6



- g) Rubbing Strip: Mild steel rubbing strip between wheel arches to be 25x25x3mm RHS minimum or alternately, nylon (urethane, nolathane) 50x12mm thick.
- Be securely mounted against body at a minimum of four points.
  - Bolts must be minimum of 8mm coach-head (cuphead) bolts and be bolted horizontally to barwork.
  - Bolts at each end must be no more than 50mm from the end of rub rail.
  - Inner mounting bar, 25x25x3mm MS RHS minimum, to be returned to roll cage / bar work at each end. (01/07/17)
  - Rubbing rail ends to be closed and taper to 45 degrees as not to become a “spear”. Fig 6.
  - Rub strips not to be used on quarter panel behind rear wheel.
  - Rub rail mounting bolts to be evenly spaced with a minimum of 4 bolts.

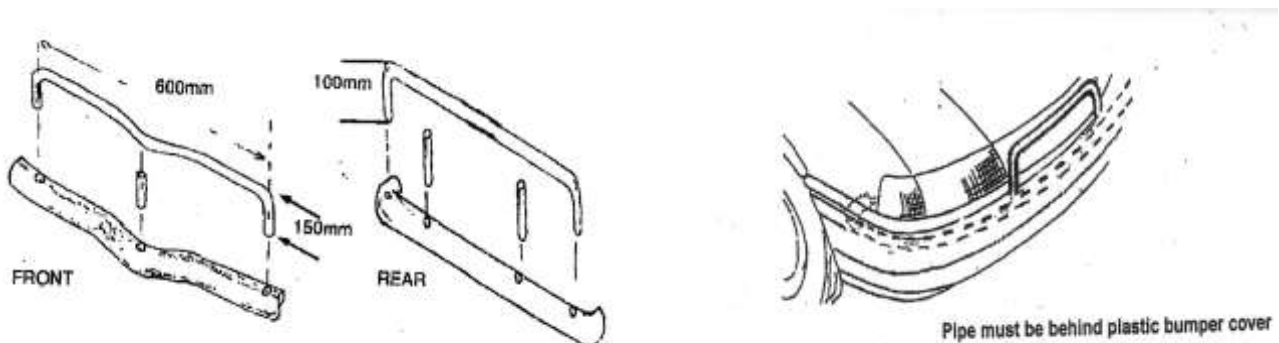
## Rub Strip Mounting

Fig. 6 (i)



- h) **REAR OVERRIDE BAR:** An override bar may be used. Constructed of maximum 25x3mm CHS it shall be no wider than the boot panel and shall be mounted centrally on the bumper bar at no more than four points, be VERTICAL and be max 100mm high. Brace bars are not to be used.
- i) **FRONT OVERRIDE BAR:** An override bar may be used. Constructed of maximum 25x3mm CHS, Maximum 600mm long x 150mm high and mounted centrally on top of bumper at three points only, i.e. it may have a centre support. Fig. 7.
- j) **TOWING ATTACHMENT:** Will be via the override bars or a hole cut in the panel under the bumper, to allow the bumper to be used to pick up the car.

Fig 7



#### 4. ENGINE:

**ENGINE** - All of the components making the engine function, meaning complete engine, including rocker covers, excluding exhaust.

##### EARLY MODEL ENGINES – LATE MODEL BODIES BE PERMITTED

- i) Engine to be mounted with rear face of engine block in the original position
  - ii) Engine offset is not permitted.
  - iii) SSA use triplicate copy engine sealing books that are numbered, top copy (white) to car/engine owner, 2<sup>nd</sup> copy (blue) to state office, 3<sup>rd</sup> copy (green) to remain in book.
  - iv) All engines are to be sealed to take part in Practice or Race Meetings and details to be entered in the Log Book.
  - v) The car owner/driver is to have copy of engine sealing and daylight forms with logbook at all times.
  - vi) Engine Sealing is Compulsory.
  - vii) Engine Identification tag is to be GREEN.
  - viii) Seals to be fitted: 1 x sump, 1 x timing cover, 1 x each Cylinder Head on EFI engines
  - ix) Engine ID tag to be attached to timing cover seal using wire looped through engine seal. (01/07/17)
  - x) Checks will be on fuel and OEM equipment.
- 
- a) Maximum 6 cylinder reciprocating engine to 4500cc absolute. No rotary engines allowed.
  - b) Maximum 2 valves per cylinder. After market roller cams and roller cranks not permitted.
  - c) Engine block to be of original type and make for model, no aftermarket alloy.
  - d) Engine changes permitted if of same make (Ford to Ford, Holden to Holden), type and configuration.
    - (i) Buick is not Holden
    - (ii) Engine to be based on passenger car engine only
    - (iii) Manufacturer markings on block to remain
    - (iv) Holden Red 202 straight 6 may be replaced with Blue/Black 3.3 straight 6 (refer to Rule 4.1 or 4.2 for listed permitted modifications, whichever configuration is applicable) (01/07/17)
  - e) Crankshaft stroke not be increased or decreased relative to the block being used.
  - f) Engine to be mounted in original position.
  - g) If resilient engine mountings are used a 6mm wire cable or 6mm chain restraint must be fitted.
  - h) Dry sump lubricant not permitted. Remote oil pump permitted. External oil feeds to bearings permitted.
  - i) Remote filters, coolers etc to be isolated from the driver by a 1mm firewall, mounted securely below door height, as to not impair vision through cabin. All connecting hoses, couplings etc to be correct class of fittings for that purpose.
  - j) Inlet manifold to be OEM option for make. Must be visually standard. Spacer/adaptor between head and inlet manifold or in any area of the inlet manifold is not permitted. Except water gallery. (01/07/17)
  - k) Return springs must be fitted to each butterfly shaft (in-built springs accepted) and one spring to accelerator pedal linkage.
  - l) Protective wire gauze or air cleaner to be fitted over air intake to prevent entry of foreign objects to the throttle body and also to act as a flame trap.
  - m) ADDITIVES: The introduction into the combustion chamber/s of additives, either in solid, liquid or gaseous form (eg nitrous oxide) by any means is expressly forbidden. Any vehicle found with these types of systems will be deemed illegal.
  - n) Engines will be inspected on the basis that all parts used in/on all engines must comply with the specifications/dimensions specified in the original (OEM) manual produced by the manufacturer for the standard engine – with the exception of the listed permitted modifications. The owner/driver is responsible to prove the above and produce information when necessary to validate the claim.

- o) Fuel to be used. Refer to Fuel Section 16.

#### 4.1 ENGINE: EFI CONFIGURATION (ELECTRONIC FUEL INJECTION)

The following are specific items relating ONLY to models produced with OEM Fuel Injection.

- a) Open computers and ignitions allowed.
- b) Computer Control Units are not restricted. If OEM unit includes ignition, the modified or replacement CCU must also perform this function.
- c) OEM injectors to be used e.g. Bosch to Bosch
- d) Size of Throttle Body: Throttle Body to be OEM type and size for model engine being used and to be standard in Internal and External appearance. (No machining or alteration permitted Intake manifold/plenum chamber to remain OEM standard. This means no machining, no welding, no extra vacuum ports, or drilling for sensors. (01/07/17)
- e) Any modification to throttle body or butterfly is not permitted. Multi throttle body for EFI not allowed.
- f) Non OEM Fuel injection NOT permitted; forced induction NOT permitted.
- g) EFI cars to use engine for OEM model or may use earlier model engine (e.g. AU can use EB engine)
- h) Engines limited to VY Commodore Ecotec - and AU Falcon (e.g. VE Commodore can use up to VY Ecotec, FG Falcon can use up to an AU engine). EL Falcon is not to use AU engine.
- i) No variable cam timing.
- j) No high output or Tickford cylinder heads allowed. Original casting number on front of head must remain. Port sizes and casting finish as for base model. (01/07/17)
- k) Ford replacement head HTP brand aftermarket 4 litre or Falcon head allowed. All 4 litre Falcon engines may use any OEM Ford or HTP head. Valve size to be correct for model of engine.
- l) All standard sensors must be fitted and be operating, including fuel pressure regulator except oxygen sensor and coolant sensor. The use of knock sensors is optional. No adjustable fuel pressure regulators. (01/07/17)
- m) All air intake and air filters are not restricted.
- n) Air filter and air flow meter may be used in the cabin or moved under the bonnet. Air filter inlet to be shrouded from the driver. Must be under the bonnet if a passenger in the car.
- o) Harmonic balancer is not restricted.
- p) Flywheel and clutch assembly not restricted.
- q) Camshaft and camshaft timing parts are not restricted. Camshaft lifters and rocker to be for make and model of engine being used. Lifters can be solid or hydraulic, the use of aftermarket performance parts e.g. roller rockers, cam followers etc in the valve train is prohibited. The use of adjustable lifters is permitted. Standard replacement push rods, standard length and 5/16" in diameter permitted. (01/07/17) The use of titanium engine parts prohibited.
- r) A standard engine is allowed no more than 0.060" overbore and 0.060" for head facing. (01/07/16) Offset boring of bearings and/or cylinders, offset grinding of crankshaft or angled facing of head to block surfaces are not permitted. Engine to be of standard stroke, con-rods and crankshaft to remain as OEM parts for the engine model; the fitting of other model, make or specially built cranks and/or con-rods not permitted. Standard replacement ARP con-rod bolts are acceptable. (01/07/17)

- s) To fit Ecotec engine into a VE Commodore the sump will need to be modified. Sump modification: VE Commodore and FG Falcon are able to use a fabricated sump of same capacity and function as OEM sump for engine. **Engine sump to be visually standard externally. (01/07/17)**
- t) Engine balancing – the balancing of any engine componentry or removal of any balance shaft is strictly prohibited. The only tolerances allowed are the drill holes on the crank shaft as done by the manufacturer (OEM). The conrods cannot have any metal removed or be polished. The pistons cannot be machined or lightened. **No forged pistons allowed. No flat top pistons permitted unless OEM in base model. E.g. Magna. No copper head gaskets permitted unless OEM. (01/07/17)**  
 Engine balancing = the balancing of any engine component or removal or disconnection of any balance shaft in this class is strictly prohibited.

Refer: Australian Standards “AS4182-1994 Code of Practice for Engine Reconditioning Standards”

THE ABOVE ITEMS ARE SUBJECT TO REVIEW

## 4.2 ENGINE: CARBURETTOR CONFIGURATION

The following are specific items relating ONLY to models produced with OEM Carburetted Engines.

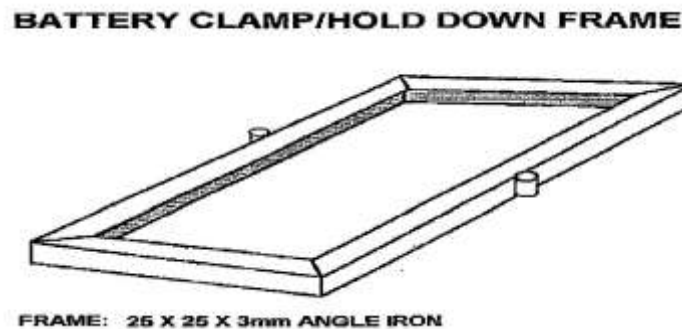
- a) Forced induction NOT permitted.
- b) Single carburettor to be type and make for the model.
- c) A carburettor with more than two throttle butterflies or throats not permitted.
- d) Additional adaptor/spacer block under carburettor not permitted.
- e) Additional gaskets or thicker than standard gaskets not permitted in the carburettor, on spacer/adaptor or on manifold.
- f) Additional fuel capacity for float chamber not permitted.
- g) Cars produced only in OEM multiple carburettor or OEM 4bbl carburettor form must use a “HOLLEY 350cfm” 2 barrel carburettor maximum venturi I.D. 1.203 (30.56mm) and a suitable “bolt-on” adaptor block (maximum 25mm thick).
- h) Persons wishing to build any late model car supplied in multiple carburettor or 4 barrel form only, must apply in writing to the SSA National Office for approval before it will be considered for registration.
- i) Application is to include full details of parent manufacturer manifold (not SPORTS option ) to be used with a 350cfm. 2bbl Holley carburettor and a 25mm maximum “bolt-on” adaptor block.
- j) Any adaptor block for Holley 350cfm carby, must be bolted to the manifold not welded and when removed a standard carburettor for that manifold must still fill the manifold and the engine be able to run in that form.
- k) All cars fitted OEM with single carburettor may use Holley 350cfm two barrel on original manifold or an OEM manifold for the engine NOT a SPORTS OPTION. Holley copies i.e. Demon not to be used.
- l) All Holley 350cfm carbys maximum venturi internal diameter of 30.56mm. Venturi will be checked using GO/NOGO guage. Venturi is to be symmetrical and be affixed in position.
- m) Cylinder Head to be of original material type make and configuration.
- n) That any use of upper Cylinder lubricant via carburettor or vaccuum system is illegal.



## 5. BATTERY AND ELECTRICAL SYSTEM:

- a) Battery to be securely mounted in a box or steel frame secured to the roll cage or bar work.
- b) All batteries and terminals to be covered with non-conductive cover if battery is in cabin area to prevent spillage.
- c) Batteries mounted within the cabin are to be held down by an angle iron/steel/aluminium frame (ie 25mm x 25mm x 3mm) both top and bottom. All batteries to use a minimum 8mm bolts or rods.
- d) Maximum size battery permitted is N70ZZ and one only permitted. (01/07/16)
- e) Suitable grommets must be fitted where battery cable pass through metal firewalls.
- f) At the commencement of a meeting, car must be capable of starting with starter motor.
- g) Switches: Ignition switch and electric fuel pump switch, if fitted, must be grouped together and be clearly marked.
- h) An engine 'KILL' switch, suitably marked with a contrasting colour for method of operation must be located centrally and forward of the windscreen mesh. This switch must isolate the battery, and any other electrical item.
- i) Electrical switches NOT to be mounted through the floor.
- j) Electrical wiring not to be attached to fuel lines.
- k) All electric fuel pumps to be controlled by an engine monitoring relay, to stop fuel pump running when engine stops.
- l) Data logging dashes are not permitted.

Fig. 8



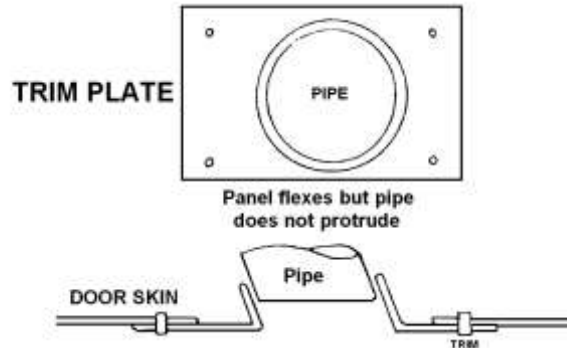
## 6. EXHAUST SYSTEM:

- a) Exhausts must be within local noise level requirements. Recommended 95.dba.
- b) All exhaust gases are to be directed away from all drivers, fuel tanks and tyres.
- c) Internally ducted exhaust system shall vent through the body not higher than 100mm above the door sill panel, using a slip joint as in Fig.9
- d) Driver is to be suitably insulated from the exhaust system. Insulation and firewall sheeting not to exceed 150mm above drive shaft tunnel. It must be within 50mm of exhaust or oil coolers, no other sheeting in cabin area is allowed.
- e) Exhaust systems to have not more than two outlet pipes, not to protrude beyond body line, and to exit rearward of the rear of the driver's seat.

- f) If exhaust system is under floor, safety chains will be fitted to front and rear of pipes and secured to floor pan or sub-frame.
- g) Pipes and mufflers must be securely attached to the vehicle.
- h) Any car exhausting excessive unburned fumes while on dummy grid or being formed up on the track, may be excluded as this constitutes a health hazard.

### Internal Exhaust Duct Body Vent

Fig 9.



## 7. COOLING SYSTEM:

- a) Cooling system may be modified.
- b) All radiator hoses to be of fabric reinforced material, plain rubber hoses not permitted.
- c) Radiators may be mounted inside cabin provided that they are mounted as low as possible in the rear of the vehicle and suitably isolated from the driver.
- d) The upper half of rear window opening MUST NOT be obscured by the rear radiator. Radiator ducting shroud if used to be maximum of 600mm forward of the radiator and must not be more than half the rear window height.
- e) Cabin mounted radiators must have both tanks and cap totally covered to protect driver in event of a cap or tank blowing.
- f) Pipes leading to the radiator to be of steel, aluminium or copper tube. All internal pipes are to be ducted or lagged with suitable material.
- g) Hoses to be as short as possible and fitted to radiator from rear side.
- h) Exposed hoses or joints not permitted in cabin area.
- i) Cabin mounted fans to have shroud or suitable guard.
- j) Cooling system to have a manual pressure relief/cap fitted. Lever vent type caps may be used. Tap to be fitted to direct steam to the ground.
- x) OEM rear firewall must not be removed or relocated, except for any material removed to allow the fitment of the radiator. Replacement of OEM firewall will be necessary prior to registration. OEM rear parcel shelf to remain as per specification book.
- y) Rear radiator to be rearward of Roll Cage main hoop – mounted in the rear cabin area. (12/10/15) If radiator is mounted in boot area outlets may come from side of radiator tank and drivers must be protected by firewall. (01/07/16)

## 8. TRANSMISSION/DRIVELINE:

### ELECTRONIC TRACTION CONTROL NOT PERMITTED.

Every race car is to be fitted with a clutch so that the engine may be started and then the vehicle be put into gear and move off in forward or reverse as required.

- a) Gearbox must have a minimum of two forward gears and reverse gear and must be derived from a mass produced passenger car and remain visually standard externally and internally. (01/07/16)
  - i) The use of purpose built racing transmissions, eg Bert, Brinn, Falcon and Racegators Transmissions are not permitted.
  - ii) The practice of locating or installing or hiding a purpose built race transmission (as listed above) inside a mass produced passenger car gearbox is NOT permitted.
  - iii) The practice of locating or installing clutch packs inside a manual gearbox case or housing is NOT permitted.
  - iv) The clutch must be attached or bolted to the flywheel in a car with a manual type gearbox.
- b) Later model bodies using early model engines must use the original diff, complete with all mountings, in the original position and being used. Ratio's are free.  
N.B. Cars from EA Falcon and VN Commodore onwards CANNOT USE a 9" diff.
- c) All drive line components must be derived from mass produced passenger cars and remain visually standard externally.
- d) Internal differential modifications are permitted except that the use of 'quick change' systems in the driveline is specifically prohibited. (01/07/16)
- e) For SAFETY "full floating" rear axle assembly recommended. Conversion to floating hubs permitted.
- f) Rear axle assembly to be of original type. i.e: IRS to remain IRS
- g) Scattershield: All cars must fit a Scattershield if not using a competition clutch or bellhousing. To be a minimum steel 3mm x 150mm wide or alloy 5mm x 150mm wide and must cover the upper 180 degrees of bell housing and be securely attached to the bell housing or fire wall in engine bay or front fire wall in cabin area to protect the drivers feet and legs from clutch explosion.
- h) Tail shaft may be of one piece or two piece types, conversion is optional.
- i) No carbon fibre tail shafts allowed.
- j) Tail shaft/s must be fitted with 360 degree hoops at front and rear.  
Tail Shaft Loops — Steel strap minimum. 40x5mm FMS or 6mm chain or 6mm wire rope to be SECURELY fitted around the front and the rear of the tail-shaft within 150mm of universal joints to prevent the tail-shaft and or shafts from dropping in an event of breakage.  
If there is a universal joint in the middle of the tailshaft a third safety chain is required.
- k) Tailshaft/s must have fully operational constant velocity / universal joints, be suitable for the application and be correctly phased.

**REAR AXLE BEARING RETAINING RINGS.** If using assembly not fitted with floating axles, a new retaining ring must be fitted at replacement of bearing or axle.

Ring must be an interference fit with the axle, when in place the retaining ring is to be tack welded using MIG or a small diameter low hydrogen rod on low amperage.

*FAILURE TO OBSERVE THIS PROCEDURE WILL INCUR A PENALTY ESPECIALLY IF AN AXLE IS DISLODGED. (SAFETY DECLARATION)*

**WHEEL STUDS.** Grade 8, 12mm minimum all vehicles.

## 9. STEERING:

- a) Original type must be used. Eg. Rack remains rack, it may be modified.
- b) Must be in sound condition. Steering joints to be split pinned as required.
- c) Wire spoke or wood rim steering wheels not permitted.
- d) Steering column to be securely mounted to the roll cage dash bar. Minimum material size for steering column tube is to be 3mm wall thickness unless OEM.
- e) Hub of steering wheel to be padded with dense resilient foam and covered.
- f) To reduce thumb and wrist injuries, the use of "PAW SAVER" type disc steering wheel is permitted.
- g) Steering quickeners may be used.
- h) Quick release steering wheels are optional.

## 10. SUSPENSION:

A Production Sedan race car must use a complete metal body with the suspension mounting points/pivots in original position and being used. **Front castor bar pivot point to be within the confines of the OEM rubber bush.** See also section 1(i). Suspension mounting points on the body must be used. Mounting suspension directly to bar work is NOT permitted. (01/07/17)

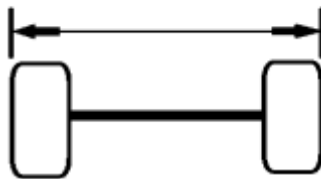
- a) Suspension mounting points are defined as:
  - (i) Mounting points of suspension arm - either end;
  - (ii) Strut - either end;
  - (iii) Shock absorber - either end. Shock absorber either end may have a tolerance of + or – 25mm maximum overall for mounting purpose.
- b) No adjustment can be carried out from cabin or from driver's seat or whilst on the dummy grid or race track.
- c) The use of Torsion Bars, unless original equipment is illegal.
- d) Front and Rear Suspension to remain of standard type except that the use and position of Panhard bars and/or sway bars is optional.
- e) Suspension arms may be fabricated must retain original designed function and must not vary in length whilst in motion. Multi hole mounting bracket/s that alters the mounting of the arm in relation to the body is unacceptable. (01/07/16)
- f) Suspension components must attach directly to original mounting points except McPherson and Chapman Strut (Double Wish-bone) type front upper strut mounting. Coil spring mounts on Falcon differential must be in original position and being used. (12/10/15)
- g) Original Front cross-member to be used, except VN-VS Commodore must use VB-VK cross member and AU Falcon are allowed to use EA/ED cross member when using early model engine.
- h) Straps for mounting shockers or suspension arms etc. are NOT permitted.
- i) Coil over unit is not equivalent of coil spring plus shock absorber.
- j) Original front stub axles must be used.
  - i) Front hubs to be of a mass produced passenger car type and mount directly to original stub axles.
  - ii) Commodore VS onwards; Stub axle bearing carrier assembly is classed as a stub axle assembly.
  - iii) Each replica hub is to be fabricated from one piece of suitable grade aluminium or steel alloy.
  - iv) Fitment of a Mitsubishi L300 front stub axle is permitted to be used on a Cortina.

- k) When McPherson or Chapman Strut (Double Wish-bone) type front strut suspension system is used, the vehicles original stub axle and OEM or OEM replacement shock absorber tube must be retained and used. To allow the fitment of a strut insert/shock absorber, the swaged section of the OEM housing or the OEM replacement may be removed leaving a minimum of 70mm of the tube, this can be replaced with a threaded mounting collar. The lower spring mounting may be adjustable. (12/10/15)
- l) When using McPherson or Chapman Strut (Double Wish-bone) front suspension, the centre of the shock absorber can be no more than 25mm from the original manufacturers McPherson or Chapman Strut (Double Wish-bone) mounting hole on the body sub frame skirt in horizontal direction only. The centre of the shock absorber mounting bolt can be no more than 25mm above or 30mm below the OEM mounting hole on the body. After market camber kits allowed. Strut brace between towers permitted. (12/10/15)
- m) Weight jacking systems incorporated into the spring mountings are permitted but are not to be adjustable from the driving seat.
- n) 5th Arm's, lift bars or any derivatives are not accepted in Production Sedan cars.
- o) Shock absorbers/strut inserts: No cabin adjustment of shock allowed. No external reservoir/cannister type shock absorber allowed.
- p) Additional shock absorber/s, strut bar/s and/or spring/s not permitted.
- q) Rear leaf springs: are to remain visually standard, fore and aft of the U bolts, including shackle plates. Lowering blocks not permitted.
- r) In AU Falcons onwards the aluminium cross members may be reinforced.
- s) Rear centre axle line to be in OEM position. In an IRS car, this relates to the outer drive axle. (01/07/16)

## 11. WHEELTRACK: Fig. 10

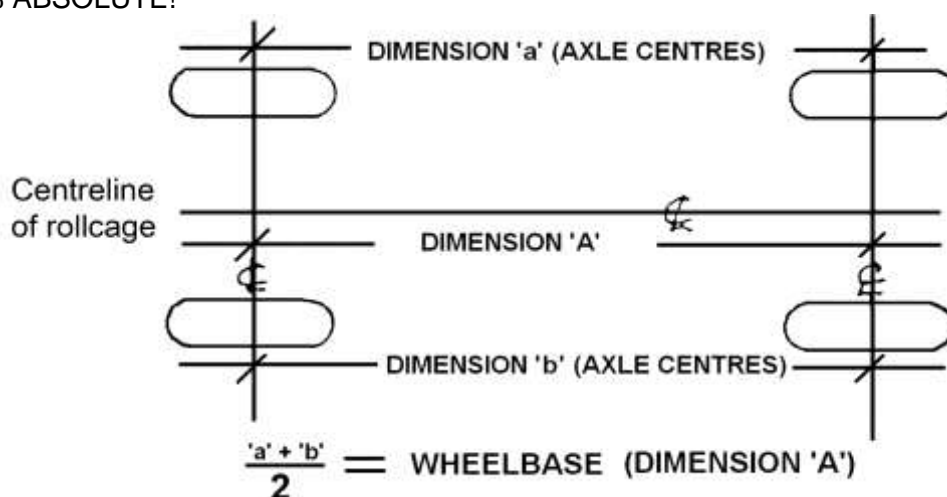
Original track plus 75mm maximum is allowed — Measured from the outside of one rim to the outside of the opposite rim. (Wheel/tyre measured at stub axle height and averaged front and back)

Measurements — Table 4 — include 190mm (180mm rim width, plus 10mm rim thickness) to accommodate SSA Wheel Track measuring tool.



## 12. WHEELBASE:

Original, within 1% ABSOLUTE!



Method of measuring wheelbase shall be; with each front wheel pointing straight ahead. Measure distance from front axle centre to rear axle centre on each side of vehicle. Add dimensions for left and right and divide by 2, allowable tolerance is +/- 1%.

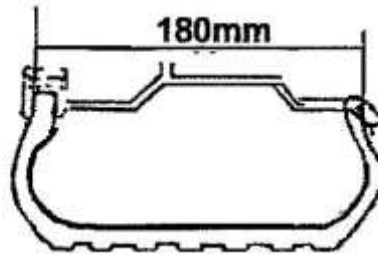
## 13. WHEELS:

- a) Seven (7") inch (180mm) rims are allowed, bead lock attachment is not permitted. Fig.11
- b) Wheels must be in good condition and free from cracks.
- c) Wide Five style wheels, hubs and adaptors NOT permitted. Dual stud pattern drilling is NOT permitted. Wire wheels and/or dual wheels NOT permitted.
- d) Balance weights to be securely fastened or taped.
- e) Rim edges to be rolled or rounded off if rim protrudes past the tyre side wall.
- f) Wheel covers are permitted
  - (i) If cover is to be used on a steel rim, attachment brackets must not be welded to outer section of rim, must have radius formed corners and must be MIG or TIG welded. Expandable attachment rings, such as Weld Wheels part number WELP650-5314 are permitted.
  - (ii) If cover is to be used on alloy or 'mag' rims, brackets must not be welded to outer section of rim, must have radius formed corners and must be TIG welded. The practice of using a Bead lock ring with cover attachment included on the outer section rim is permitted but MUST be fully TIG welded to rim edge and be free of weld protrusions.
  - (iii) Covers to be attached with Round Cap Head style bolts or 'DZUS' fasteners. (01/07/17)
- g) Wheels may be reinforced provided they meet with the approval of the Class Technical Advisory Committee and the SSA Inc.
- h) Wheel studs are not to protude further than 12mm past the outer face of the wheel nut and to be contained within the rim as to not damage another competitors tyres.
- i) **Mag Wheels –**
  - i) Composite type wheels NOT acceptable. Composite wheel means wheels made of different materials. E.g. 3 piece alloy wheels are not classed as composite wheels.
  - ii) Correct matching nuts and washers must be used.
  - iii) All welding done on aluminium rims must be tig welded and be of a professional standard.

j) **Steel Centre Wheels —**

- i) Heavy Duty “Off Road” type centres preferred to flat plate.
- ii) Wheel centre hole is to be chamfered.
- iii) Stud holes are to be chamfered to suit the nut used and to be chamfered on inner edge also to relieve guillotine action on studs.
- iv) If the right hand front wheel is made of flat steel plate, it is to be not less than 10mm in thickness; if dished centre, min. 5mm. thickness absolute.

Fig. 11



**14. TYRES:**

- a) Radials only, minimum 60 series profile. Speed rating, up to and including “V” maximum including recapped tyres.
- b) Details of original manufacturer’s markings are to be visible on tyre sidewall. (e.g. 265/60R15 V or 265/75R15 V)
- c) No performance tyres permitted – e.g. Hoosier, American Racer, McCreary etc. **No road race or targa type radials such as Yokohama Advan or equivalent are not permitted. (01/07/17)**
- d) Road legal Retread tyres permitted, Retread tyres must have the correct remoulders speed rating etc. And be legible as per AS 1973-1985.
- e) Safety inner air tubes are allowed.
- f) **Any type of lubrication (grease or oil etc) is not permitted on the tyre walls. (01/07/17)**

**15. BRAKES:**

- a) Foot operated hydraulic brakes to be fitted and be effective at race speeds.
- b) Brakes are to be fitted to a minimum of three (3) wheels. Right Hand Front brake only may be removed.
- c) Electronic ABS not permitted. Adjustable brake systems permitted.
- d) Disc rotors may not be altered by drilling of rotor surface. \*Note: some discs are supplied from the factory as drilled disc (ie: DBA, Willwood)
- e) No Carbon Fibre components to be used.

## 16. FUEL:

### THE USE OF COOLING SYSTEMS FOR FUEL IS NOT ALLOWED.

**Gas** E.g. LPG or CNG is NOT PERMITTED.

**Petroleum** Must be supplied by a commercial outlet, through a multi-volume network via Bowser Pump. e.g. Shell, BP, Caltex and must meet the fuel standard (petrol) determination act.  
*Maximum specific gravity; 0.780 Maximum Octane; 98*

The use of exotic or racing fuels and additives not permitted.

**Nitro** The introduction into the combustion chamber/s of nitro fuels and/or additives, either in solid, liquid or gaseous form (e.g., nitrous oxide) by any means is expressly forbidden.

Fuel shall be tested as per the SSA Inc. policies and procedures.

Note: Older engines in later model bodies — Pump Fuel only is allowed.

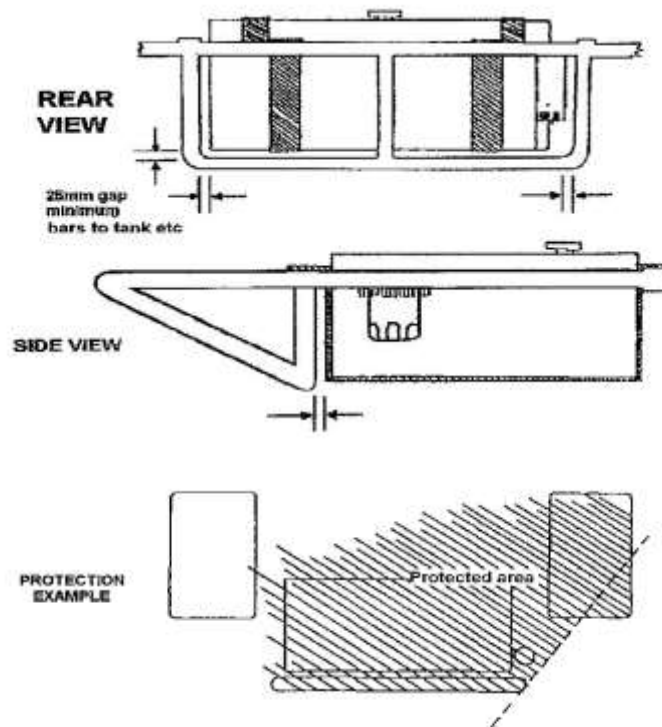
## 17. FUEL TANK AND FUEL SYSTEM:

- a) Original fuel tank must be removed and replaced by a tank/s of up to 72 litres.
- b) Pressurised fuel tank/s NOT permitted.
- c) Area beneath tank to be cut out, giving adequate ventilation and ensuring that spillage cannot remain in vehicle.
- d) Fuel tank area is to be accessible for scrutineering. A 300x300mm access panel maybe in the rear parcel shelf, deck panel or the boot lid. Fuel tank is to be isolated from the driver by a minimum 0.9mm metal firewall.
- e) Filler cap to be a positive seal, behind a firewall and inside body. Levers on cam locked caps to be clipped.
- f) Metal fuel tanks over 25 litres must be baffled. All joints are to be welded to a professional standard. Fuel tanks are to be constructed of min. 1.0mm steel or 3.0mm aluminium alloy.
- g) Competition type “plastic” tank permitted. The use of an approved type fuel cell and receptacle is recommended.
- h) All fuel tanks are to be constructed with pick-up fittings etc. coming from the top, bottom or side of tank.
- i) If pump is placed in an existing tank, then low outlets are to be blanked off and outlet moved to the top.
- j) A flexible fuel line section must be fitted within 75mm of fuel tank and all fuel lines to be securely fixed in position.
- k) Barbed fittings of the correct size must be used in conjunction with screw type clamps when connecting flexible fuel line. (Genuine SAE R6 fittings and hose exempted).
- l) Neoprene, reinforced plastic or black fuel line may be used. OEM type Bundy steel tubing may be used through the car or under the car. Flexible fuel lines can pass through the cabin area, must be one piece.
- m) High pressure lines are to use high pressure hose and fittings.
- n) **Carburettor cars only** — The fuel line to the engine MUST be fitted with a quick action NON-LEAK fuel tap or valve in working order. The fuel tap, actuator or switch is to be mounted within easy reach of driver and crash crew, and clearly marked “FUEL” and the positions ON/OFF. Solenoid valves or remote mounted fuel taps are permitted.



- o) If a return line is used, it must be fitted with a one-way valve. A fuel pressure regulator will suffice as a One Way Valve. (01/07/16)
- p) Only passenger car fuel pumps are permitted. Electric fuel pumps must be wired with an independent earth. The pump MUST be controlled by the battery isolator switch and using an engine monitoring relay.
- q) Fuel lines must be isolated from electrical wiring.

Fig. 12



- r) Tank/s to be securely mounted in the boot area of the car, in a suitable metal cradle attached to the bar work, with a minimum clearance of 150mm forward of the lower rear end of the boot panel and 300mm minimum from side of vehicle, and isolated from driver by a 0.9mm minimum firewall.
- s) Swirl pot or surge tank as part of fuel system permitted
  - (i) Must be mounted to substantial bar work, or securely mounted to body, forward of tank or cell.
  - (ii) Must be included within fuel tank protection requirements. (01/07/17)
- t) Fuel tank not to be mounted using brackets welded to tank or cell. Minimum strap size is to be 25x3mm FMS.
- u) Tank to be protected by substantial bar work on all sides.
- v) Fuel tank protection: Bar must be constructed of minimum 38x3mm CHS or 40x40x3mm RHS and be 25mm clear all around tank and filter, projecting a line from the rear wheel centre to the bar.
- w) Underslung fuel tank is a fuel tank that is below bumper or chassis rails and therefore must have a fuel tank protector bar fitted.
- x) Bar is to prevent side entry to tank by nose of another vehicle. Protector must be 25mm lower than an underslung tank and mounted as per Fig.12 (Brace bars do not constitute Bumper mountings.)
- y) Non underslung fuel tank is a fuel tank that has some portion above the bumper tube or chassis tube and therefore is to have a fuel tank protector bar fitted. Protector bar must be 25mm higher than a non-underslung tank and mounted as mirror of Fig 12. (Brace bars do not constitute Bumper mountings.)

- z) The corners of the fuel tank protection bar are to be radius corners. No straight side pipes for jacking to extend.
- aa) Tank vents to be fitted with an anti-spill device. An earth strap is to be fitted between the plastic fuel filler neck to rollcage or body as an earth to prevent buildup of static electricity.

## 18.TABLES

**TABLE 1. ENGINE LIST FOR VEHICLE MODEL**

MODEL	STANDARD BORE	STROKE	ENGINE
<b>HOLDEN</b>			
UC, LH-LX Torana	3.625 (92.075mm)	3.25 (82.55mm)	202 in-line 6
VB-VK Commodore	3.625 (92.075mm)	3.25 (82.55mm)	202(later3300)
VL Commodore	3.3858 (86mm)	3.3465 (85mm)	NISSRB30 OHC6
VN Commodore	3.8 (96.507mm)	3.4 (86mm)	3800 V6
VP-VR-VS Commodore	3.8 (96.507mm)	3.4 (86mm)	3800 V6
VT-VX-VY Commodore	3.8 (96.507mm)	3.4 (86mm)	3800 V6
Monaro (V6)			

*Note: VZ Commodore onwards only to use Ecotec engine – refer to Section 4.1 (h)*

MODEL	STANDARD BORE	STROKE	ENGINE
<b>FORD</b>			
TD-TE-TF Cortina	3.6811 (93.5mm)	3.9093 (99.3mm)	4.1 L in-line 6
XD-XE-XF Falcon	3.6811 (93.5mm)	3.9093 (99.3mm)	4.1 L in-line 6
EA Falcon	91.86mm	79.4mm	3.2L OHC 6
EA Falcon	91.86mm	99.31 mm	3.9L OHC 6
EB-ED-EF-EL Falcon	3.63 (92.25mm)	3.90 (99.31mm)	4.0L OHC 6
AU Falcon	3.63 (92.25mm)	3.90 (99.31mm)	4.0L OHC 6
Ford Telstar	84.5mm	74.2mm	KL 2.5L OHC V6

*Note: BA Falcon onwards only to use AU Engine – refer to Section 4.1 (h)*

MODEL	STANDARD BORE	STROKE	ENGINE
<b>CHRYSLER-MITSUBISHI</b>			
Centura	3.76 (89.4mm)	3.68 (93.5mm)	245 Hemi in-line 6
Charger	3.91 (95.5mm)	3.68 (93.5mm)	265 Hemi in-line 6
Sigma	9 1.1 mm	98.0mm	2.6L Astron II
Magna TJ	93mm	85.8mm	6G74 24valve 3.5l V6
Magna TH	91.1mm	76mm	6G72 24valve 3.0l V6

MODEL	STANDARD BORE	STROKE	ENGINE
<b>NISSAN</b>			
Skyline RB30	3.3858	3.3464	RB30E

**TABLE 2. CARBURETTOR LIST**

### Carburetted Cars

MODEL OF CAR	CARBURETTOR PERMITTED
EH-HZ All engines inc 3.3 "Red"	Single Throat Stromberg
Torana (except HB) mcl 3.3 "Red"	Single Throat Stromberg
Commodore mcl 3.3 "Red"	Single Throat Stromberg
Commodore 3.3 "Blue" Engine	Varijet 11
Monaro	
Cortina TC & TD 6cyl NOT CROSS FLOW	Single Throat Stromberg
Cortina TD-TE-TF CROSS FLOW	Single Throat Stromberg
Falcon XC-XD CROSS FLOW	Single Throat Stromberg

Falcon XE 3.3 or 4.1	Weber 34ADM
Centura All models all "Hemi" engines	Dual throat Carter Email.
Sigma All engines	Solex Down Draught 2BBL
Toyota all engines	Aisan Down Draught 2BBL

**NOTE:** All cars fitted OEM with single carburettor may use "Holley 350 CFM 2BBL on original manifold or an OEM manifold option for the engine, not a sports option. Carburettor cars are only permitted to use Holley 350 CFM 2BBL Carburettor, copies are not permitted Eg; Demon.

The original carburettor bolt pattern and position must be used and, if required, an adaptor plate maximum 25mm thick may be used.

All Holley 350 CFM 2BBL Carburettor - Maximum Venturi internal diameter or 30.56mm.

Venturi will be checked using a GO/NOGO gauge. Venturi's are to be symmetrical and be affixed in position.

**TABLE 3. THROTTLE BODY**

MAKE	THROTTLE BODY OUTER SECTION I.D.	BUTTERFLY SECTION I.D.
<b>HOLDEN</b>		
VK Commodore	68mm	65mm
VL Commodore	64mm	54mm
VN Commodore	72mm	60mm
VP Commodore	72mm	60mm
VR Commodore	72mm	60mm
VS-VY Commodore	72mm	64mm
Monaro	72mm	64mm

MAKE	THROTTLE BODY OUTER SECTION I.D.	BUTTERFLY SECTION I.D.
<b>FORD</b>		
XF Falcon	70mm	64mm
EA Falcon	64mm	64mm

MAKE	THROTTLE BODY OUTER SECTION I.D.	BUTTERFLY SECTION I.D.
<b>FORD continued</b>		
EB Falcon	64mm	64mm
ED Falcon	64mm	64mm
EF Falcon	70mm	64mm
EL Falcon	70mm	64mm
AU Falcon	70mm	64mm
BA Falcon	70mm	64mm
FG Falcon	70mm	64mm

MAKE	THROTTLE BODY OUTER SECTION I.D.	BUTTERFLY SECTION I.D.
<b>MITSUBISHI</b>		
Magna TJ	66mm	65mm
Magna TH	66mm	65mm

MAKE	THROTTLE BODY OUTER SECTION I.D.	BUTTERFLY SECTION I.D.
<b>NISSAN</b>		
Skyline RB30	64mm	54mm

**TABLE 4 VALVE SIZES**

MAKE	ENGINE	INTAKE VALVE	EXHAUST VALVE SIZE
<b>HOLDEN</b>			
VL Commodore	RB30 3.0 litre	42.10	35.10
VN-VR Commodore	V6 3.8 litre	43.40	37.80
VS Commodore	Ecotec 3.8 litre	45.50	38.50
VT-VY Commodore	Ecotec 3.8 litre	46.63	38.74

MAKE	ENGINE	INTAKE VALVE	EXHAUST VALVE SIZE
<b>FORD</b>			
EA Falcon	3.9 litre	47.00	39.00
EB-EL Falcon	4.0 litre	47.00	39.00
AU Falcon	4.0 litre	47.00	41.00

MAKE	ENGINE	INTAKE VALVE	EXHAUST VALVE SIZE
<b>NISSAN</b>			
Skyline RB30	3.0 litre	42.10	35.10

**TABLE 5. DIMENSIONS**

**Note:** Listed measurements for the track includes the 75mm max. allowance and 190mm rim measurement. (Std + 75mm + 190mm) – to accommodate SSA Wheel Track measuring tool.

If using wheel covers, listed track measurements do not include additional cover width. (01/07/17)

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM
<b>HOLDEN</b>		Updated 01/07/17	Updated 01/07/17
LJ Torana	2540	1581	1555
LH/LX Torana	2586	1665	1637
UC Torana	2586	1680	1647
VB-VK Commodore	2668	1716	1682
VL Commodore	2668	1716	1698
VN Commodore	2731	1716	1743
VP Commodore	2730	1716	1743
VR-VS Commodore	2731	1756	1756
VT-VY Comm & Monaro	2788	1834	1852
VZ Commodore	2789	1834	1842
VE Commodore	2915	1867	1883

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM
<b>FORD</b>		Updated 01/07/17	Updated 01/07/17
TD Cortina	2578	1687	1687
TE Cortina	2578	1691	1691
TF Cortina	2578	1691	1691
XD-XE Falcon	2818	1824	1792
XF Falcon	2829	1815	1790
EA Falcon	2794	1811	1798
EB-ED Falcon	2794	1819	1798
EF-EL Falcon	2791	1831	1812
AU Falcon	2793	1831	1812
BA-BF Falcon	2829	1818	1838
FG Falcon	2838	1848	1863
Telstar AX	2610	1765	1765

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM
<b>Chrysler-Mitsubishi</b>		Updated 01/07/17	Updated 01/07/17
KB/KC Centura	2667	1665	1662
CL Valiant	2819	1746	1756
GE/GH Sigma	2515	1635	1613
GJ/GN Sigma	2530	1645	1615
Magna TH-TJ	2722	1810	1800

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM
<b>TOYOTA</b>		Updated 01/07/17	Updated 01/07/17
Celica 82 onwards	2500	1660	1650
Celica TA22	2425	1545	1550

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM
<b>NISSAN</b>			
Nissan 300ZX	2570	1760	1800
Skyline RB30	2615	1690	1685

## TABLE 6 TYRE SPEED RATINGS

Up to and including V rated tyres are permitted

<u>SPEED SYMBOL</u>	<u>SPEED RATING</u>
S	180 Kmh
T	190 kmh
U	200 kmh
H	210 kmh
V	240 kmh

### Summary of Updates

12/10/15

Page 17 – Section 7 Cooling System

Page 19 – Section 10 Suspension

01/07/16

Page 2 – Section 1 – Body/Rolling Shell Item i)

Page 5 – Section 2 – Roll Cage – updating AS number

Page 5 – Section 2 – Roll Cage – Item 2 Roof Hoop clarification

Page 14 – Section 4 – Engine – 4.1 r) – correction of typo 0.060

Page 15 – Section 5 – Battery and Electrical System Item d)

Page 17 – Section 7 – Cooling System Item m)

Page 18 – Section 8 – Transmission/Driveline Item a)

Page 18 – Section 8 – Transmission/Driveline Item c)

Page 19 – Section 10 – Suspension Item e)

Page 19 – Section 10 – Suspension Item s)

Page 22 – Section 17 – Fuel Tank and Fuel System Item o)

Page 25 – Section 18 – Tables – addition of Magna TH specifications

Effective 01/10/16

Page 7 – Section 2 – Roll Cage – mounting tabs on anti spear plates

Page 9 – Section 2 – Roll Cage – mounting tabs on head plates

Effective 01/07/17

Page 1 – Reference changed to [www.automobile-catalog.com](http://www.automobile-catalog.com)

Page 2 – Introduction date for VF Commodore – 01/07/18

Page 2 – Section 1 Body/Rolling Shell Item b)

Page 7 – Section 2 Roll Cage - #7 NASCAR Bars

Page 7 – Section 2 Roll Cage - #12 Foot Protection Bar

Page 7 – Section 2 Roll Cage - #18 Dropper Bar

Page 8 – Section 2 Roll Cage – Anti Spear Plates  
Page 10 – Section 2 Roll Cage – Head Plate  
Page 13 – Section 4 – Engine – attachment of engine sealing ID tags  
Page 13 – Section 4 – Engine – Item d) and Item j)  
Page 14 – Section 4 – Engine 4.1 – Item d), j), l), q), r)  
Page 15 – Section 4 – Engine 4.1 – Item s), t)  
Page 19 – Section 10 – Suspension - Front Castor Bar mounting point  
Page 21 – Section 13 – Wheels – Item f)  
Page 22 – Section 14 – Tyres – Item c), f)  
Page 24 – Section 17 – Fuel Tank and Fuel System – Item s)  
Page 27 – Table 5 – Dimensions - updated