

SPEEDWAY SEDANS AUSTRALIA INC

JUNIOR SEDAN SPECIFICATION MANUAL

Rules and Regulations



**ASCF SPEEDWAY SEDANS
AUSTRALIA INC.**

ABN 14 329 758 680

Speedway Sedans Australia Inc
P.O. Box 163
HOLDEN HILL SA 5088

Enquiries to State Technical Representative or
Email: technical@speedwaysedans.com

Website - <http://www.speedwaysedans.com>

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

CLASS SPECIFICATION: JUNIOR SEDAN

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PLEASE NOTE: Where possible the data in the Specification Manual has been taken from 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 is taken from Manufacturers Workshop Manuals. We have checked and cross checked the information in this Manual. If you do find something that does not seem to be right, anywhere in this Specification Manual, please let us know immediately, so that we can check it out and if it is wrong, we can change it. (01/07/17)

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JUNIOR 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)

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

- a. **Drivers Age** - An SSA Inc. Junior Licence and Junior Infringement Card are issued to a Driver aged over 10 years of age, and under 17 years of age, at the time of applying for their licence, subject to State Government requirements. Reference - Rule 2.2.5 September 2015 Racing Rule Book.
- b. All new drivers must display a “P”, a minimum size of 150mm on the rear of the car for the first 12 months.
- c. No Junior competitor, whilst competing in a Junior event will receive prize money.
- d. **Direction of racing** - The direction of racing will be only in an anti-clockwise direction.

Base model is used for silhouette, all measurements and specifications. If unsure of base model options refer to www.automobile-catalog.com (01/07/17)

JUNIOR SEDAN DERIVATION

- a. The term “Stock” in Sedan Car Racing means precisely what it says, “STOCK STANDARD” as per Manufacture for the year, make, model and body type, so unless the specifications say otherwise, nothing is to be altered.
- b. O.E.M. Original Equipment Manufacturer – means for make and model unless otherwise stated.
- c. Cars must be at least 8 years old. No G.T. Models, Coopers, or Cooper “S” etc. Base models only.

1. BODY/ROLLING SHELL

KE55 Corolla body may be used on a KE30, and Ford Escort MK1 may change to MK 11 body – for Carburetted models only. All other specifications as per this manual.

- a) Mono-construction sedan, coupe or hatchback vehicle only. Full chassis cars or convertibles not permitted.

- b) Parts to be removed: All glass, interior trims, grille, door handles, ornamentation, bull bar, tow-bar and helper springs. (Glass apertures must not be covered with fibreglass or other material). Instrument glass permitted.
- c) The only panels which may be replaced with fibreglass / aluminum / alucobest / metal / plastic replica: - max. 2mm. thick, are doors, bonnet, boot, front guards, nose, head and tail light apertures. If original roof is damaged, fiberglass overlay may be used over existing damaged roof. Under panel reinforcement plate not permitted. Replacement panels must be securely fastened, self-drilling (TEK) screws not to be used.
- d) If replica panels used: - To assist with the fitting of door panels, maximum of 25x25x3mm RHS, may be welded at window sill height from A to C pillars. Doors to be securely bolted or welded or riveted using large head blind type rivets.
- e) The door pillars may be notched for bar-work but otherwise must remain intact and in the original position. Roof inner panels may be notched but ONLY at the point where interference with roll cage occurs.
- f) Other panels that may be removed:
 - (i) Radiator support panel;
 - (ii) Front inner guard panels (provided they do not constitute suspension mounting points, e.g. McPherson strut (Double Wish-bone);
 - (iii) All other panels such as rear parcel shelf and firewalls must remain;
 - (iv) Seat mounts and other brackets in the cabin on the floor may be removed. (01/07/16)
- g) Rear firewall maybe modified to facilitate fitment of radiator. Any material removed must be a minimum amount to give clearance around radiator.
- h) Front chassis rail forward of cross member must not be removed. If damaged, maybe repaired with maximum 1.6mm steel. Tie bar between chassis rails to be 50x50x2mm RHS maximum.
- i) Front and rear stone trays must remain. A replica of same size may be fabricated using maximum 0.9mm metal or fibreglass sheeting. As of the 1st July 2016 all cars fitted with plastic style bumpers/stone trays must have either the original or replica fitted of same or similar type and profile and may be made from fibreglass.
- j) To assist with appearance of cars, the rear quarter panels may be covered with fiberglass replica panels securely attached to the steel panel. Self-drilling (TEK) screws etc. or self-tapping screws are not to be used.
- k) Only interior parts which may be removed: - Dash Panel - to assist with the roll cage installation. Replacement dash panel is not permitted to continue past the forward most point of the steering wheel across the width of the car. No extra decking or internal sheeting permitted in cabin. If the rear radiator mounts against the rear firewall, the core area of the rear firewall may be removed.
- l) The boot floor must remain, except for a hole 25mm larger than the fuel tank, directly below the tank. Cars that have cross members across the boot floor pan area; the drilling of multiple holes as large as possible that will allow spilt fuel to escape quickly is allowed. Cross member not to be cut or drilled.
- m) Rear View mirror - not permitted
- n) Ballast of any description is not to be carried. e.g. Water in tyres etc.
- o) Grille - If grille is fabricated it must be of a steel welded wire mesh, no thicker than 5mm diameter x 25mm minimum aperture or panel steel, 1.6mm maximum. Folded sections, for strength, are not permitted. Fibreglass or plastic is also acceptable.

- p) Light apertures must be filled using max. 1.6mm metal sheet, fibreglass or plastic
- q) Daihatsu Charade rear wheel arch may be cut away to a maximum of 50mm clearance around the rear wheels and replaced with a fibreglass copy of original silhouette rear wheel arch. Original metal inner and outer edges to be re-welded together if cut back. This rule is for cars with flat top wheel arches, the same rule will apply for any other new models introduced if they have a flat top wheel arch.
- r) Bonnet and boot lid to be securely fastened.
 - (i) Four bonnet pins (five for fibreglass) to be 12mm minimum to 15mm maximum mild steel or approved equivalent.
 - (ii) Bonnet pins to be in the bonnet not sides of mudguards. No mounting pins in side of panels, i.e., 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 bonnet pin holes on fibreglass bonnet.
 - (iv) Similarly, boot lid to be securely fitted, using pins and large washers as for bonnet. The removable boot lid to be securely mounted in four points.
- s) Hinged bonnet and boot lid permitted, using minimum of two pins. Skeletonising not permitted on hinged panels within 50mm of hinges. The hinged panel is to be welded to the bonnet or boot skin.
- t) Towing attachments 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 vehicle.
- u) Except for the bumper and bumper support bars, all barwork outside the sub-frame rails, skirts and also forward of the OEM radiator support panel i.e. under front guards, shall be a maximum 25x1.6mm O.D. CHS Fig. 2(i) (ii) (iii). Max 3 braces per side, one may be a vertical upright attached to the bumper support. No other barwork to attach to bumper bars or supports.

Fig 2. (i)

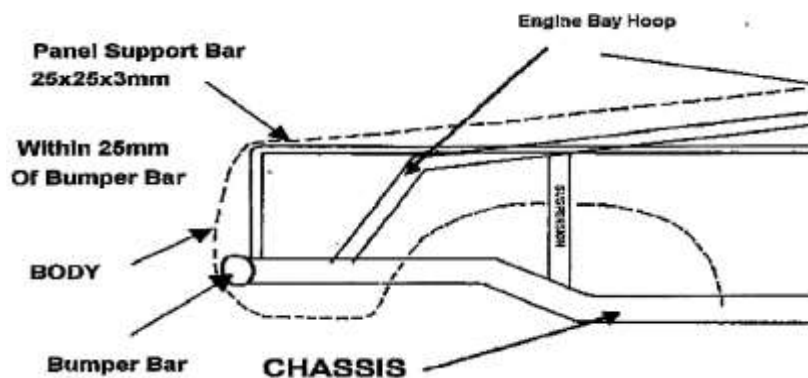


Fig.2 (ii)

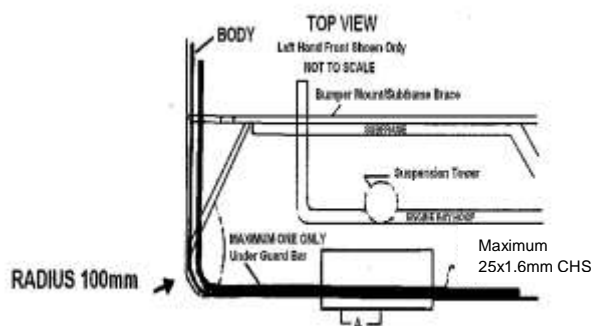
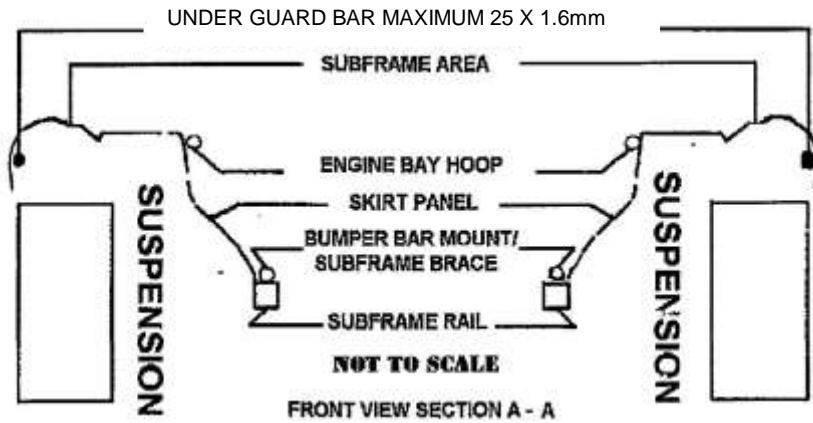


Fig.2 (iii)



NON ORIGINAL BODY FIREWALLS:

The driver must be protected and isolated from mechanical, fuel, electrical and exhaust components by metal firewalls, min 0.9mm thick.

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.

- 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 is to be visible from front of car (for pit marshal)
- 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. (01/07/16)

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.

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 22nd August 2014 the front leg will be no further than 250mm behind, and 50mm inwards of the OEM door opening at points A & C of Fig 3 (i).

Cars previously registered prior to the 22nd August 2014 will fully comply with the relevant Specification Book, with that being the last printed version of the Junior Sedan Specification Manual - 2011.

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 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 registered after 1st 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 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 minimum bar, to be fitted at centreline of cage, between 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, 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 38x3mm 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 is 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 50x50 mm. 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 fitted 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) MS tags and bolted with either 8mm or 5/16th high tensile bolts with no protrusions.

- (iv) If individual pieces are used then a minimum of 4 – 50x50x3mm (square) or 55x40x6mm (rectangular) MS tags and bolted to either 8mm or 5/16th 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)

Fig 3. (i) Typical Roll Cage

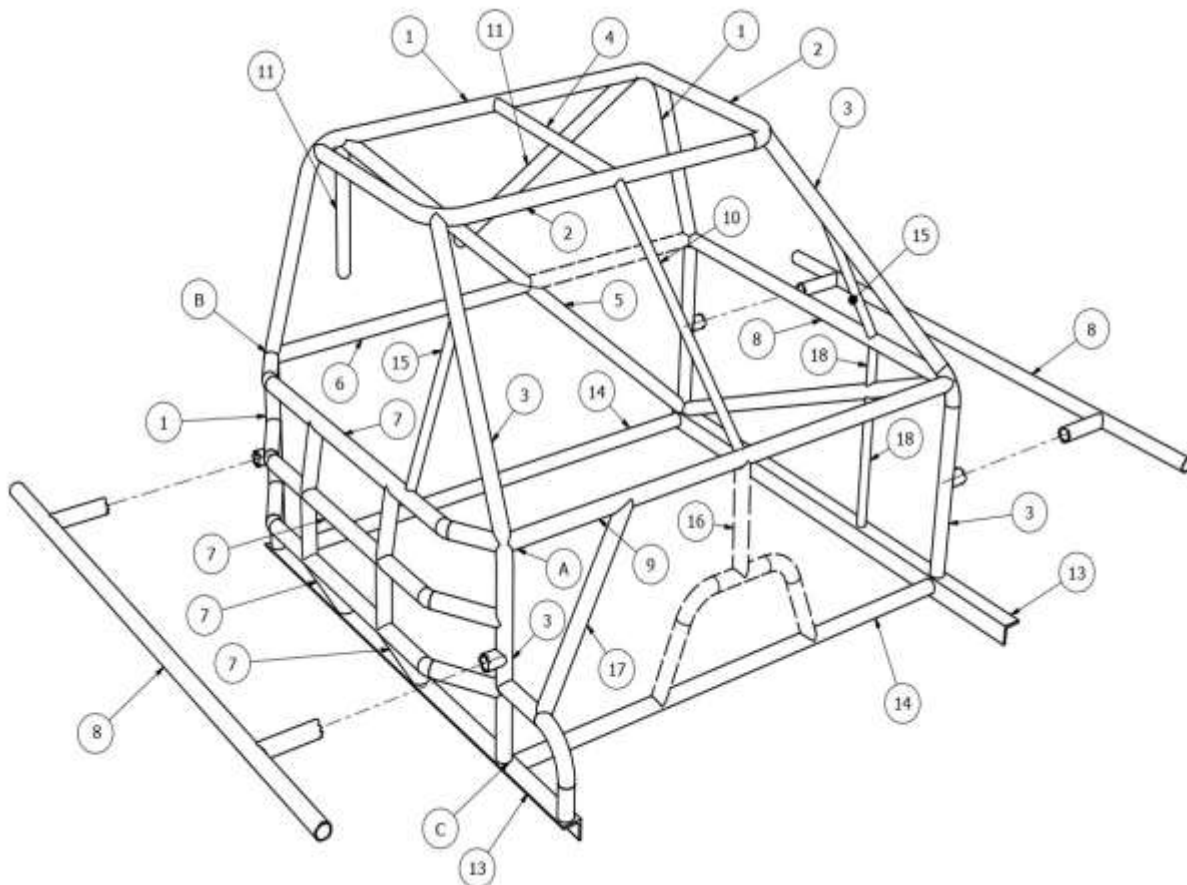


Fig 3 (ii)

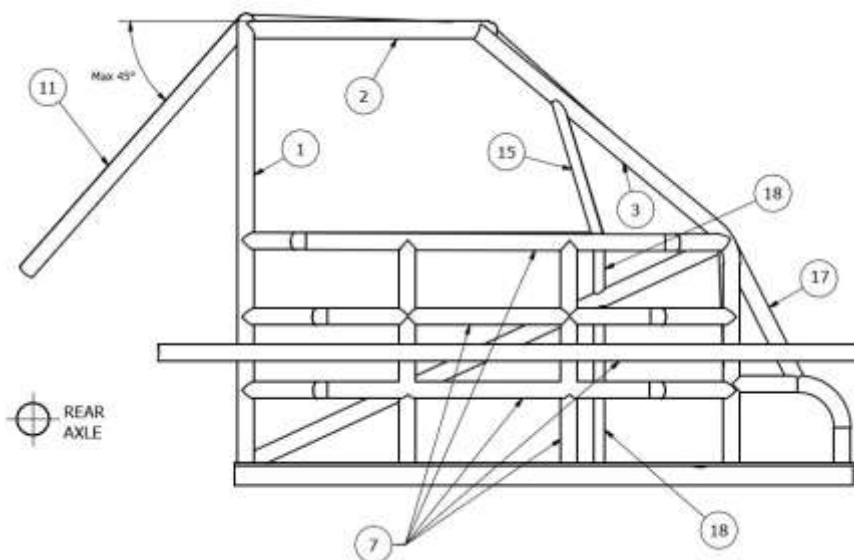


Fig. 3 (iii)

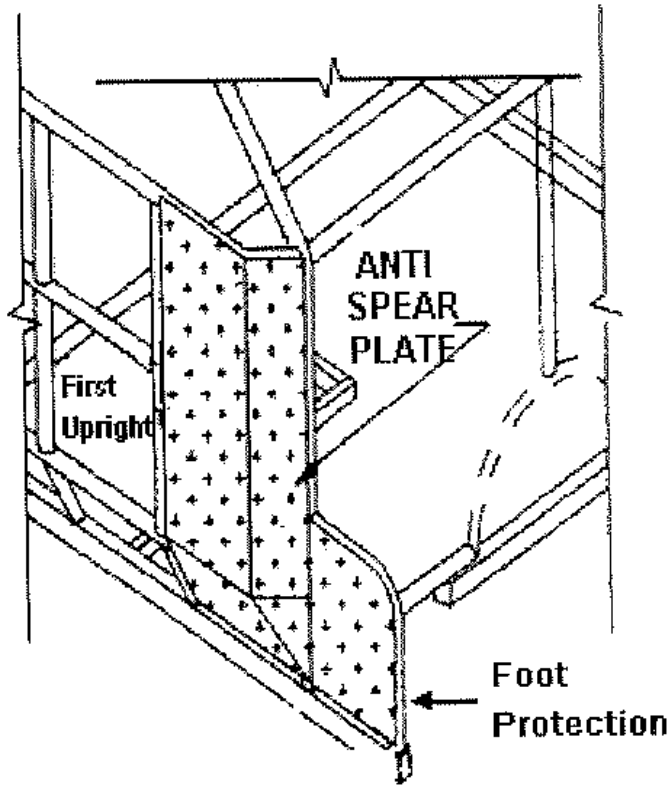


Fig. 3 (iv)



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 strip full length to be welded to main hoop, top windscreen bar, centre roof bar and side roof bar or 10 of 50x50x3mm (square) or 55x40x6mm (rectangular) MS tags will be required when using a removable Head Plate. (01/07/17)

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.

Plates/tags to be solid square or rectangular with one only hole for the mounting bolt. (01/10/16)

Fig 4. Head Plate

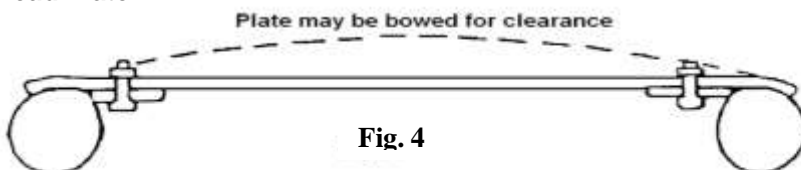


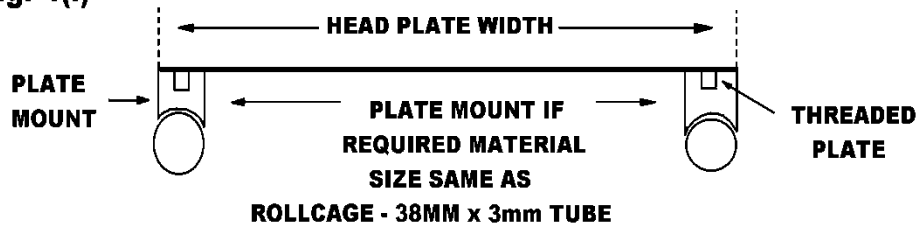
Fig. 4

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 head plate 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

- a) From 1st July 2016 all Junior Sedans produced with plastic bumper/stone trays will be required to have the original fitted or as per subsection c).
- b) OEM type steel bumper bars NOT permitted, must be replaced with maximum 38x3mm CHS. Vehicles with plastic bumpers must have the barwork behind the bumper.
- c) Plastic bumpers can either be original for vehicle or one of similar size and profile made from the original materials or a fibreglass replica
- d) As of the 1st July 2016 section d) is relevant for Datsuns & Toyotas only. Original or replica stone tray must be fitted, may be of original material (metal), fibreglass or race car plastic replica only.
- e) Bumper covers must be fitted with round head bolts aluminium rubbing strip 40x3mm may be fitted between bolts to support bumper cover.
- f) Any front mud protection guards under cars to protect engine or suspension components from mud and dirt must not be lower than 150mm from ground level. Not to attach to front bumper.
- g) Bumpers to be securely mounted in original position using supports of a minimum size, 100mm from rear of bumper tube. The maximum gap between rear of boot panel and rear bumper is 100mm Maximum, support size, 38x3mm CHS. i.e. Gussets are not to be used.
- h) Bumper or supports are not to tie to under-guard bar work.
- i) No Non-OEM skirts to be fitted to bottom of bumpers.
- j) FRONT bumper maximum return 300mm, minimum 100mm, by max. 38x3mm CHS.
 - (i) Bumpers are to remain hollow.
 - (ii) Corners and ends of front and rear bumpers to be radius formed, 100mm minimum.
 - (iii) Maximum of four mounting points on each bumper bar.
 - (iv) Returns and bumpers to be flush fitting with the body, within 25mm.
 - (v) Anti hook-up bars from returns of front and rear bumpers to be extended into the stay bars.
- k) REAR only: Returns of rear bumper may be extended as a skid rail against outside of the body between the bumper and wheel arch, and then extend inward to the 'chassis rails'.

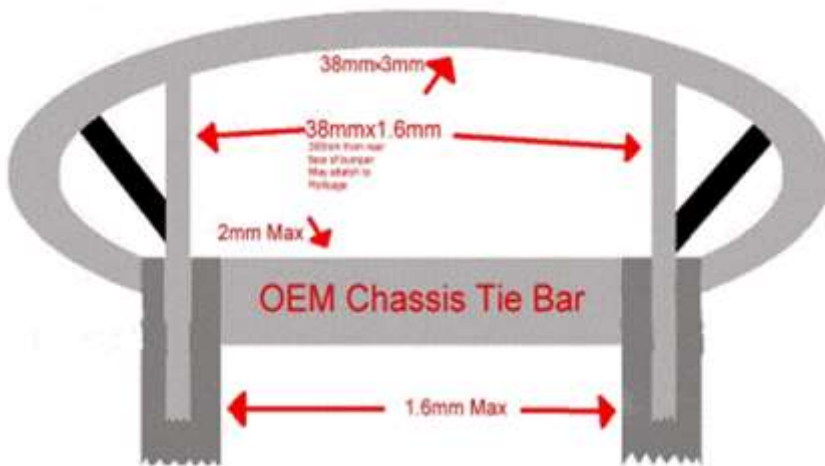


Fig. 10—Option 1

Bumper supports forward of the OEM radiator support panel position to be maximum of 1.6mm x 38mm max.

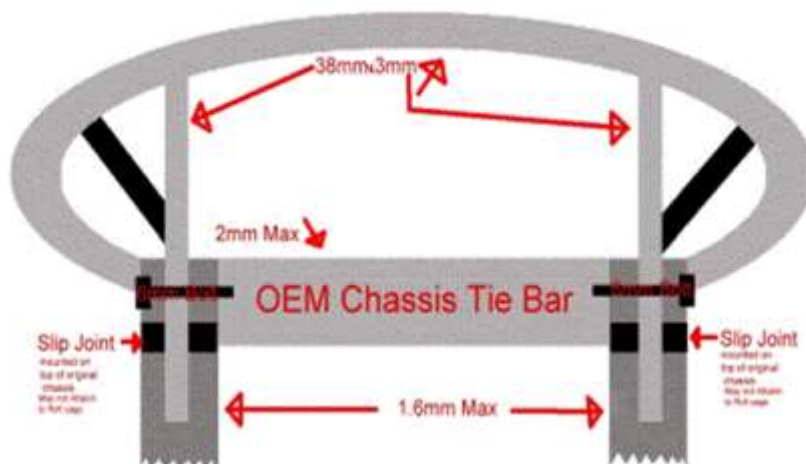
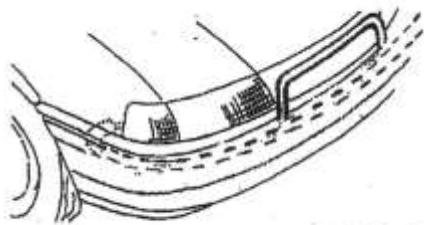
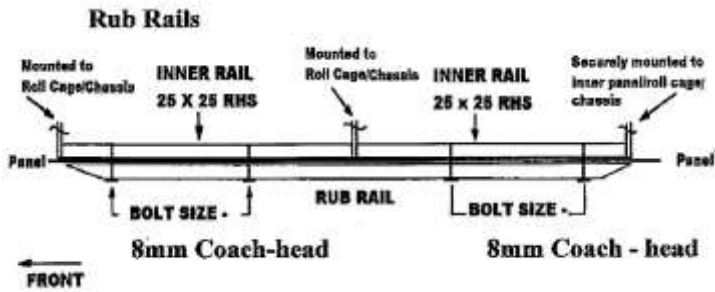
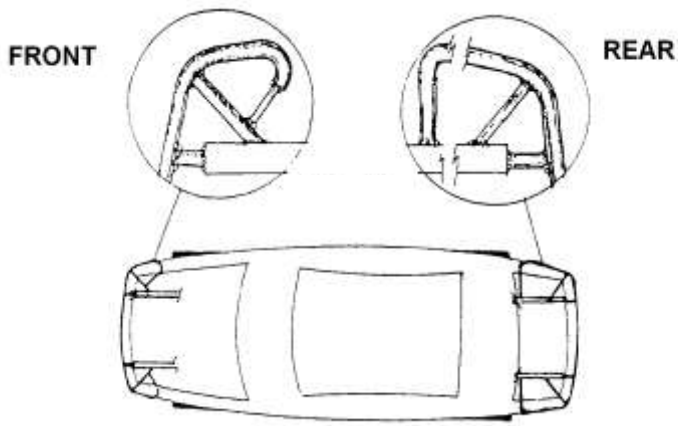


Fig. 10—Option 2

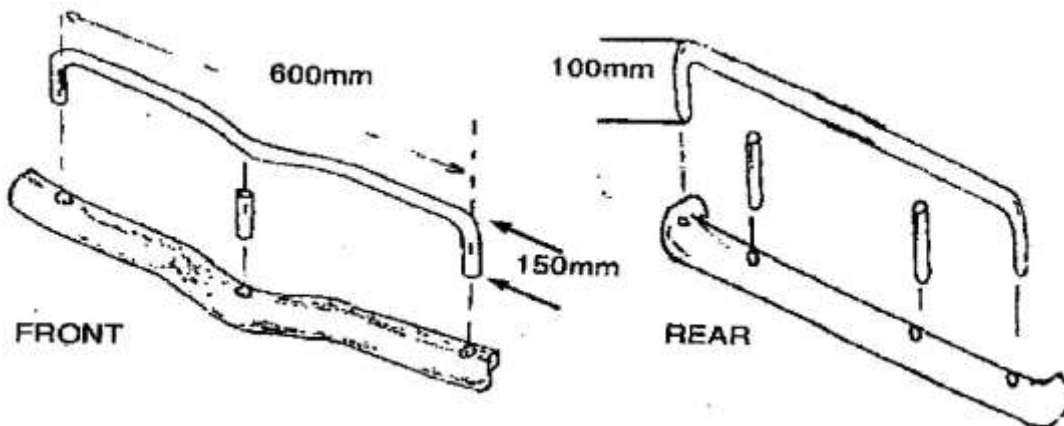
Bumper supports using 38mm x 3mm tubing maximum must use a stepped slip joint as per diagram using 1 x 5/16 or 8mm bolt each side.

- l) Corner plates on top edges of either bumper not permitted.
- m) **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. Fig 10 (i). Brace bars are not to be used. Fig 10 (i)



Pipe must be behind plastic bumper cover



- n) **FRONT OVERRIDE BAR.** An override bar may be used.

Constructed of maximum 25x3mm CHS maximum 600mm long, 150mm high and mounted centrally on top of bumper at three points only, i.e. it may have a centre support. Fig 10 (i)

- o) **Mild Steel rubbing strip** between wheel arches to be 25x25x3mm MS RHS or alternately a nylon (urethane, nolathane) 50x12mm thick. To be securely mounted against body, at a minimum of four points and evenly spaced.
- (i) Bolts must be minimum 8mm coach head (cup head) bolts and be bolted horizontally to bar work.
 - (ii) Bolts at each end must be no more than 50mm from the end of rub rail.
 - (iii) Inner mounting bar to be 25x25x3mm or roll cage material, to be returned to the roll cage / bar work at each end. (01/07/17)
 - (iv) Rubbing rail ends to be closed and taper to 45 degrees as not to become a 'spear'.
 - (v) Rub Strips not be used on quarter panel behind rear wheel.
 - (vi) Rub Rail retaining bolts must attach through rub rail from outside and be round head bolts.

4. ENGINE

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

- (i) Engine to be mounted with rear face of the engine block in the original position
- (ii) Engine offset is not permitted
- (iii) Engine Sealing is Compulsory
- (iv) SSA use triplicate copy engine sealing books that are numbered, top copy (white) to car/engine owner, 2nd copy (blue) to state office, 3rd copy (green) to remain in the book
- (v) All engines are to be sealed to take part in Practice or Race Meetings and details are to be entered in the Log Book
- (vi) The car owner is to have a copy of the engine sealing and daylight inspection forms with log book at all times
- (vii) Engine Identification tag is to be ORANGE – to be attached to timing cover seal using wire looped through engine seal (01/07/17)
- (viii) Seals to be fitted: 1 x sump, 1 x timing cover and 1 x cylinder head
- (ix) ECU must be sealed and the completed sealing form is to be kept with the Log Book at all times. See below in 4.1.1 a) for the process. (01/07/16)

4.1 – EFI CONFIGURATION

All items within this EFI section are subject to review at any time to maintain parity across the division.

Notification of Intent to Build an EFI car must be advised to SSA Inc – form available on <http://www.speedwaysedans.com> for download.

To enable the collection of data and ensure constant review of the transition to allow EFI cars into this division you are also required to submit EFI Race Feedback forms – form available on <http://www.speedwaysedans.com> for download.

If a restrictor plate is required they will be available through the SSA Inc National Office. It will be stamped with a specific number and identification mark. Method of fitment will be tacked or sealed in the air intake of the throttle body (so it cannot be easily removed). The throttle body/plate bolts will have a seal fitted (similar to the engine seals)

Approved Makes and Models (updated 15/06/16)

- Daihatsu Charade 1987-92 1993-96 G102 and G200 Range – 1300 OHC 4 Cylinder 16 valve SOHC
- Daihatsu Charade 1993-96-00 G200 Range as per OEM – 1500 OHC 4 Cylinder 16 valve SOHC

- Hyundai Excel 1989-95 X2 – 1500 SOHC
- Hyundai Excel 1995-97 X3 – 1500 SOHC

4.1.1 E.F.I. is permitted to use with the following restrictions. Effective 1st July 2015.

- a) SSA Inc. approved and sealed ECU. All computers are to be sealed by Cool Drive Distribution only. (see below for details for Cool Drive Distribution). SSA Inc reserves the right to exchange or swap sealed and tested computers supplied from Cool Drive Distribution at any time during a race meeting.

The only authorised branch for ECU sealing is:

Cool Drive Distribution, U5/3 Deakin Street, BRENDALE QLD 4500

Phone: 07 3481 5066 Email: paulmasterson@cooldrive.com.au Website: www.cooldrive.com.au

There is an ECU/Computer Sealing Form to be completed and forwarded along with your computer when sending for sealing – the form is able to be downloaded from

<http://speedwaysedans.com/index.php/technical-specs/42-junior-sedans-specs/325-junior-sedan-specification-manual>

The competitor is responsible for the downloading of the ECU Sealing form and forwarding along with the ECU to be sealed. It will be completed by Cool Drive Distribution and a copy returned with your ECU. Speedway Sedans Australia have introduced a Seal Sticker which will be attached to all sealed ECU's – this will be placed on the sealed unit by Cool Drive Distribution – removal or tampering of this sticker will result in the need for the unit to be resealed.

There is a 12 month phase in period (ending 30.06.17) for all ECU's to be resealed with the SSA Seal sticker and an ECU Sealing Sheet for placement in the Log Book. (01/07/16)

- b) Camshafts are to remain STD as per manufacturers base model without modification, No variable cam timing (VCT) or derivatives. The camshaft specification may be changed in the future by SSA if required to maintain parity between all cars.
- c) All approved makes & models must use original standard computer, DFI module and coil packs.
- d) Standard memcal only to be used for make / model and series of car.
- e) Standard inlet manifold and injectors for model of car. No High output or performance derivative of the make or model allowed.
- f) Heads are to remain standard with facing as per current rule book. The original casting number on the head must remain.
- g) Engine block can be bored to a maximum 40thou oversize for reconditioning purposes only. EFI engine blocks using multiple engine cylinder sleeves may use up to 4 on aluminium blocks.
- h) Standard exhaust manifold base model only remainder of exhaust as per current junior rule book.
- i) All standard sensors must be fitted and be operating including fuel pressure regulator except oxygen sensor and coolant sensor.
- j) All engine components must be fitted (air cleaners etc).
- k) All other engine specifications as per NON-EFI engines.
- l) Header tanks for fuel pumps not allowed & no surge tank or cooling chambers.
- m) No adjustable fuel pressure regulators.

- n) Rev limiter to remain OEM.
- o) If a restrictor plate is required they will be obtained through the approved SSA Inc National Office, it will be stamped with a specific number and identification mark. Method of fitment will be tacked or sealed in the air intake of the throttle body (so it cannot be easily removed). The throttle body/plate bolts will have a seal fitted (similar to the engine seals).

4.1.2 Approved EFI specific items

The following are specific items relating ONLY to models produced with OEM Fuel injection:-

- a) Standard size OEM injectors are to be used for make and model of car. Inside diameter not to be increased or decreased.
- b) Petroleum, no additives, maximum specific gravity .780, maximum octane 98. Fuel must be supplied by a commercial outlet, through a multi volume network via bowser pump. E.g: Shell, Caltex BP and must meet the fuel standard (petrol) determination act. Fuel shall be tested in accordance with SSA Inc policy and procedures.
- c) Fuel pumps specification make models and part numbers that must be used are Bosch or generic equivalent of the 044 Type. (If a different fuel pump is to be used it must be approved through a submission to the CTAC Via SSA). Fuel pump must be fitted with engine monitoring relay to stop fuel pump running when engine stops. Fuel pumps to be mounted in the boot area. Fuel pump External only.
- d) A flexible fuel line section must be fitted within 75mm of fuel tank and all fuel lines to be securely fixed in position.
- e) Barbed fitting of the correct size must be used in conjunction with screw type clamps when connecting flexible fuel line. (Genuine SAE R6 fittings and hose exempt)
- f) 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.
- g) Flexible fuel line can pass through the cabin area, must be one piece.
- h) High pressure fuel lines are to use high pressure hose and fittings.
- i) If a return line is used, it must be fitted with a one way valve, at the fuel tank.
- j) Computer control units are restricted. If OEM unit includes ignition, they must perform this function.
- k) Size of throttle body to be OEM type and size for model being used and to be standard in INTERNAL and external appearance. (No machining or alteration permitted). IF REQUIRED An SSA Inc approved restrictor to be fitted to the air intake side of the butterfly to reduce horse power of engine to maintain parity. Regular checks on correct sizing will be carried out.
- l) Checks will be on fuel and OEM equipment. Any modification to throttle body or butterfly is not permitted other than to insert restrictor/plate.
- m) Non OEM fuel injection not permitted. Forced induction not permitted.
- n) Return springs must be fitted to each butterfly shaft (inbuilt springs accepted),
- o) Protective wire gauze or air cleaner to be fitted over air intake to prevent entry of foreign objects to throttle body and also to act as a flame trap. OEM Air filter box and airflow meter may be modified to allow for bar work but must be in use and remain under the bonnet.

- p) ADDITIVES – the introduction into the combustion chamber/s of additives, either in solid, liquid or gaseous form, (e.g. nitrous oxide) by any means is expressly forbidden.

4.2 - ENGINE: CARBURETOR CONFIGURATION

- a) In the engine bay one should see the basic items as in the road car, e.g. ignition, coil and distributor, fuel pump, air cleaner and charging system, all in use on the engine.

If a standard unmodified cylinder head fits the engine block without modification it can be used. Inlet manifold and exhaust manifold must bolt on without any modification to either head or manifold. Your original carburettor must also fit without modification to manifold or carburettor

- b) Engine to be maximum 4 cylinders reciprocating ONLY. Maximum capacity 1200cc rear wheel drive, 1100cc front wheel drive and 1000cc OHC. Rotary, turbo or supercharged engines are NOT permitted. Mechanical fuel injection systems are not permitted.

Other, not included above, must be approved by the National Technical Committee prior to construction.

- c) Engine to be the type and size for the model.
Any doubts about engine sizes etc., will revert back to Manufacturer's 'base model' of the registered series.
- d) 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 (O.E.M.) 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.

- e) Refer, Australian Standards 'AS 4182 – 1994 Code of Practice for Engine Reconditioning Standards'.
ENGINE BALANCING: The balancing of any engine componentry or removal of any balance shaft in this class is STRICTLY PROHIBITED. The only tolerances allowed are the drill holes in the crankshaft as done by the manufacturer (O.E.M.). The Conrods cannot have any metal removed or polished. The pistons cannot be machined or lightened. Copper head gaskets are not permitted. Head gaskets to be standard replacement parts.
- f) A standard engine is allowed not more than .060" overbore and .060" for head facing.
- g) Engine Block: The maximum allowable cylinder sleeves to be fitted to an engine block are two in total.
- h) OFFSET boring of bearings and/or cylinders, offset grinding of crankshaft or angled facing of head to block surfaces is prohibited.
- i) ENGINE to be of standard stroke, con-rods and crankshaft to remain OEM parts for the engine model; the fitting of other model, make or specially built cranks and/or rods not permitted; port sizes and casting finish as for base model; standard flywheel (not lightened). Flat top pistons allowed. No forged or racing pistons. Some Charade pistons will protrude above engine block.
- j) CAMSHAFT is not restricted. The use of multi key way timing gears or recut of OEM keyway or dowel is allowed. Offset key may be used. No other gears or modification allowed. Camshaft followers to remain hydraulic if as per base model.

The use of performance parts in the valve train is PROHIBITED, e.g. Roller rockers, cam followers. Adjustable or variable cam timing gears are not permitted and can only be standard O.E.M equipment gears. No variable adjustable cam gears allowed.

- k) Engine sump to be visually standard externally.
- l) Distributor must be OEM for make and model, both internally and externally and have all original function. Advanced weights must be OEM. Advance weights and vacuum advance unit must be OEM, vacuum

hoses are optional. Upon removal of the distributor cap, by holding and moving the rotor button it must have advance and retard movement.

- m) Daihatsu Charade G100/102 3 Cylinder series must use the point's distributors for the make and model. No electronic distributors (or pointless distributors) are allowed. Note: G200 series Daihatsu Charade can use electronic distributor.
- n) No double valve springs.
- o) No cabin mounted engine breathers.
- p) If resilient engine mountings are used, a 6mm wire cable or 6mm chain restraint must be fitted.
- q) Twin outlet exhaust manifolds for Datsun 1200 permitted.

4.2.1 – CARBURETOR

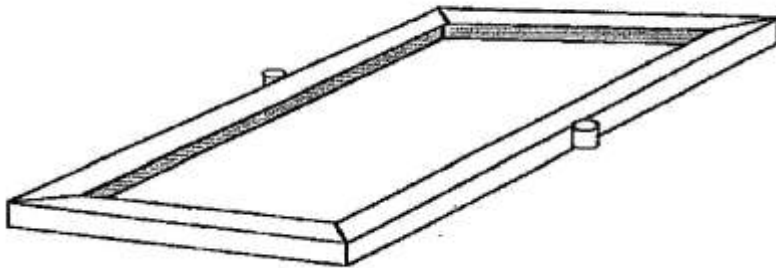
- a) DEFINITELY not more than one carburettor as originally fitted.
- b) For all cars, the carburettor is to be OEM standard, including venturi size, except that an adjustable main jet may be used; float bowl position relative to engine, as in original vehicle.
- c) The choke butterfly and shaft may be removed.
- d) A return spring MUST be fitted to each throttle shaft of the carburettor (in-built springs acceptable).
- e) That any type air cleaner may be used. No ducting to air filter or carburettor unless O.E.M.
- f) That any use of upper Cylinder lubricant via carburetor or vacuum system is illegal. Any vehicle found with these types of systems will be deemed illegal.
- g) Vacuum hoses to carburettor fitment not restricted.
- h) The use of OEM carburettor to manifold heatshield only is permitted.

5. BATTERY AND ELECTRICAL SYSTEM

- a) Battery to be securely mounted in a box or steel frame secured to 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 area to be held down by an angle iron/steel/aluminum frame (i.e. 25x25x3mm) both top and bottom. All batteries to use a minimum 8mm bolts or rods.
- d) The use of any battery over the size of N70ZZ is not allowed.
- e) Suitable grommets must be fitted where electrical cables pass through metal fire-walls.
- f) At the commencement of a meeting car must be capable of starting with starter motor.
- g) Switches: Ignition switch and electrical 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 also 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. (EFI models only).
- l) Data logging dashes are not permitted.

BATTERY CLAMP/HOLD DOWN FRAME



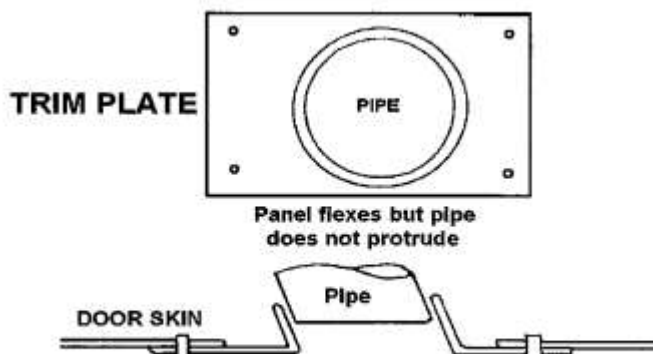
FRAME: 25 X 25 X 3mm ANGLE IRON

FIG. 8

6. EXHAUST SYSTEM

- a) Exhausts must be within local noise level requirements. Recommended 95 dba.
- b) Exhaust manifold to be OEM standard. Original casting marks must be visible. No modification to any part of the OEM standard manifold is allowed.
- c) Remainder of the exhaust system is free, provided that it has not more than one outlet pipe, it is vented to the side or the rear of the vehicle behind the driver and does not protrude beyond the body line. Fig. 9
- d) Internally ducted exhaust system, if used, shall vent through the body, no higher than 100mm above the door sill panel, and to finish flush with the door panel.
- e) Driver to be suitably insulated from exhaust system.
- f) Insulation and firewall sheeting not to exceed 150mm above the drive shaft tunnel. Sheeting to cover exhaust within 50mm of exhaust, or oil cooler hoses. No other extra sheeting allowed in cabin area.
- g) If exhaust system is under floor, safety chains will be fitted to the front and the rear of the exhaust pipes and attached securely to the floor pan or sub-frame.
- h) The muffler/s must be securely attached to the vehicle.

Fig. 9



7. COOLING SYSTEM:

- a) Radiator may be changed and/or relocated.
- b) All radiator hoses to be of fabric reinforced material, plain molded rubber hoses not permitted.
- c) Cooling system to have a manual pressure relief tap/cap fitted to the top tank of the radiator to release pressure before loosening or removing radiator cap. Tap to be fitted with hose to direct steam to ground. Push button pressure relief cap not permitted. Lever vent type may be used.
- d) Radiator may be mounted inside the cabin, provided that it is mounted as low as possible in the rear of the vehicle, and suitably isolated from the driver. The upper half of the rear window opening **MUST NOT** be obscured by the radiator.
- e) Radiator ducting shroud, if used, to be a maximum of 600mm forward of the radiator and must not obstruct more than half the rear window height.
- f) Cabin mounted radiators must have **BOTH** tanks totally covered to protect the driver in the event of a cap or tank blowing.
- g) Pipes leading to the radiator to be of steel, aluminium or copper tube.
- h) Pipe to be securely mounted on the inside of the roll cage.
- i) All internal pipes to be ducted or lagged with suitable material.
- j) Hoses to be as short as possible and fitted to the radiator from the rear side.
- k) Exposed hoses or joints not permitted in cabin area.
- l) Cabin mounted fans to have a shroud or suitable guard.
- m) All header tanks, hoses and caps in cabin area to be covered as per radiator tanks and hoses. Must be mounted below half window height.
- n) Radiator water spray systems are not allowed.
- o) No electric water pumps permitted.
- p) Rear radiator to be rearward of Roll Cage main hoop mounted in the rear cabin area.

8. TRANSMISSION/DRIVELINE:

- a) Gearbox and diff housing to remain standard OEM for make and model. Not Borg Warner to Borg Warner i.e. Corolla must use Corolla diff housing. Ratios are free as long as it fits in correct housings. All OEM gears must be operational. Rear axle centre line to be in OEM position.
- d) **REAR WHEEL DRIVE CARS** must be fitted with a 360 degree hoop around the front and rear of the tail shaft, to prevent the shaft from dropping, in event of breakage. To be steel strap, minimum 40x5mm FMS or 6mm chain or 6mm wire rope. It must be securely mounted within 150mm of the universal joints.
- c) Scatter shield: A scatter shield must also be fitted: minimum 3mm steel or 5mm alloy minimum 150mm wide. It must cover the upper 180 degree of the bell housing and be securely attached to protect the drivers feet and legs from a clutch explosion. Front wheel drive cars must cover 180 degrees to the rear side of the bell housing, or attached to the front firewall immediately behind the flywheel.

- e) The differential **MUST** be locked. Differential pinion angle to remain O.E.M. standard for make and model.
- f) **REAR AXLE BEARING RETAINING RINGS:** 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 to the axle 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)

9. STEERING:

Original for year, make, model and body type, must be used.

- a) Must be in sound condition. Steering joints to be split pinned as required.
- b) Wire spoke or wood rim steering wheels not permitted.
- c) Steering column to be securely mounted to the roll cage dash bar.
- d) Hub of steering wheel to be padded with dense resilient foam, and covered.
- e) To reduce thumb and wrist injuries, the use of "PAW SAVER" type disc steering wheel is permitted.
- f) Removable steering wheels may be used, as an option.
- g) Modifications to Steering: No quick steer or reduction units allowed. O.E.M. only.
- h) Steering, from lock to lock to remain O.E.M for make and model.
- i) Pedal position must remain in original position. Except Accelerator pedal.
- j) Pedals may be extended. No second set of pedals to push on the first set of pedals.
- k) Power steering is only permitted in EFI cars that came out with it.

10. SUSPENSION

A Junior Sedan race car must use a complete metal body with suspension mounting points in original position and being used.

Suspension mounting points are defined as;

- (i) Mounting points of suspension arm - either end;
- (ii) Strut either – end;
- (iii) Shock absorber - either end;
- (iv) Springs - either end.

All Cars may use Aftermarket Camber caster adjustment.

- a) All Arms, Rods, Struts, Spring Hangers and Sway Bars must remain standard, and functioning as manufactured, as per Manufacturer, for year, make, model and body type.
- b) Shock Absorbers/Strut Inserts:
 - (i) All cars may change shock absorbers and springs to aid handling. Standard sealed replacement

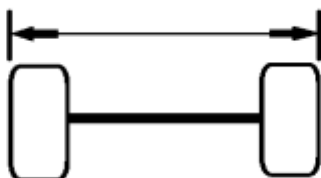
units only. No external adjustment/adjusters. E.g. no external reservoir/canister type or externally gas pressure adjustment, (e.g. increase/decrease gas pressure).

- (ii) No shock absorber is to have the capacity to be adjusted whilst still in the car.
 - (iii) Koni and Bilstein O.E.M. street replacement shock absorbers allowed. No competition aftermarket derivatives. E.g. .AFCO, Bilstein, Koni, Pro, racing type etc.
 - (iv) Shock absorbers/strut inserts must be standard replacement listed in the catalogue for the model, and readily available from automotive parts suppliers e.g. Repco, Auto Pro etc
 - (v) Mounting ends to remain original.
 - (vi) Fitment of Koni style shock absorbers – the top swaged section of the OEM housing maybe removed and a new insert fitted, with the insert bolted through the bottom of strut.
- c) Coil Springs to remain Coil Spring, Leaf Springs to remain Leaf Springs. Spring spacers are allowed above the coil springs.
 - d) Suspension components not STANDARD on Base Model passenger car being used, cannot be added.i.e. Torsion bars, Stabilizer bars, and Panhard bars, etc.
 - e) A strut brace between front towers is permitted.
 - f) Adjustable suspension arms, Panhard rod/watts linkage's etc are not to be used.
 - g) NO COILOVERS, AIR SHOCKS or PUMP-UP SHOCKERS ETC
 - h) No lowering blocks allowed.
 - i) Aftermarket caster, camber adjusters may be used.

11. WHEEL TRACK

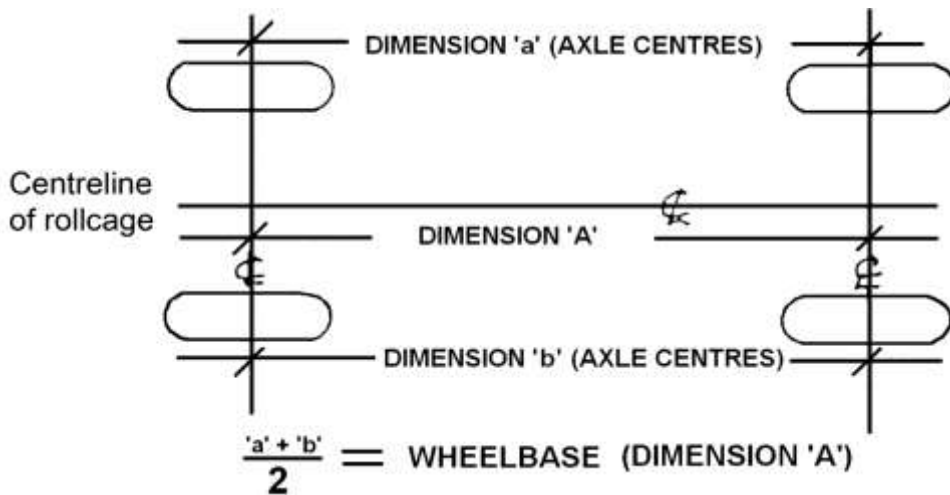
Wheel Track to be within 50mm of standard measurement (absolute). Measured from outside of one rim to the outside of the opposite rim. (Wheel/tyre measured at stub axle height, and averaged front and back of the rim). Measurements (Table 7) include 160mm for measurement (155mm rim width and 5mm rim thickness) to accommodate SSA Wheel track measuring tool.

Fig 10



12. WHEELBASE

Original, within 1% ABSOLUTE.

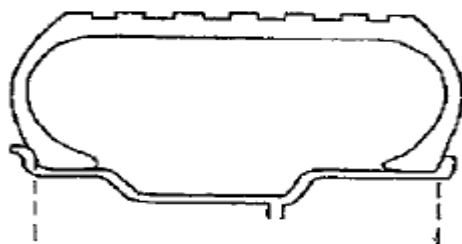


Method of measuring wheelbase shall be; with each front wheel pointing straight ahead. Measure distance from front axle centre to rear axle centre on each side of vehicle. Add dimensions for left and right and divide by 2, allowable tolerance is +/- 1%.

13. WHEELS

- All wheels must be steel or alloy construction.
- Alloy or Mag wheels may be used, but must be of one-piece construction. Correct matching nuts must be used.
- OEM steel rim centres may be modified using steel 6" outers (blanks).
- Rim diameter to be max. 13". Max rim width 155mm (6") Fig 11. Custom made wheels not permitted.
- No bead locks.
- Wheel covers (discs that cover the wheel) are not permitted.
- Wheel spacers may be used.
- Wheel studs not to protrude further that 1/2" (12mm) past the outer face of the wheel nut.

Fig 11



14. TYRES:

- a) Radial tyres only.
 - (i) Tyres listed as Sport-Kumho Motorsports tyres Race & Rally listed “for competition only” are not to be used.
 - (ii) Racing tyres are NOT PERMITTED.
 - (iii) Any tyres listed on a Manufactures “Specialist” Tyre list, such as McCreary and Hoosier, are NOT permitted. (This could include some mud and snow tyres) CR6ZZ Avon competition tyres are outside the specification.
IF IN DOUBT, REFER TO THE SSA Inc. TECHNICAL COMMITTEE.
 - (iv) Any type of lubrication (grease or oil etc) is not permitted on the tyre walls. (01/07/17)
- b) The maximum tyre size that can be run on Junior Sedan Cars are 185 Radials. Minimum 60 profile; speed rating H max.
- c) All details are to be visible in O.E.M markings on tyre sidewall. (e.g. 185/60 R13H or 185/75 R13H).
- d) Tyres must be in good condition and markings to be legible.

15. BRAKES

- a) Foot operated O.E.M. brake system to remain standard and operate correctly, on all four wheels, and be effective at race speed.
- b) No brake isolation switch/s or drilled/lightened disc rotors allowed.

16. FUEL

THE USE OF COOLING SYSTEMS FOR FUEL IS NOT ALLOWED.

All cars are to comply to the following fuel specification;

Petroleum Must be supplied by a commercial outlet through multi volume network via Bowser Pump.
E.g: Shell, BP, Caltex and must meet the fuel standard (petrol) determination act.
Maximum Octane; 98 (RON). Maximum Specific Gravity; 0.780
Premium or standard unleaded fuel only to be used.
The use of exotic or racing fuels and additives not permitted.
Fuel shall be tested as per the SSA Inc. policies and procedures.

17. FUEL TANK AND FUEL SYSTEM

- a) Original fuel tank to be removed and replaced by a tank of no more than 30 litres capacity or 8 US Gallons.
- b) Tank may be constructed of minimum 1mm steel or minimum 3mm aluminium alloy. All joints to be welded to a professional standard.
- c) Competition type “plastic” tank permitted. Jerry can or boat tank may be used, but must comply with the above metal thicknesses.

Plastic marine tanks have been suggested for use instead of jerry cans as these are a safer option to the jerry can.
- d) All fuel tanks to be constructed with pick-up fittings etc., coming from the top, bottom or lower sides of the tank.
- e) The boot floor must remain, except for a hole 25mm larger than the fuel tank, directly below the tank. Cars

that have cross members across the boot floor pan area; the drilling of multiple holes as large as possible that will allow spilt fuel to escape quickly is allowed. Cross member not to be cut or drilled.

- f) Filler caps to be positive seal and be behind and below the fire wall.
- g) Lever on cam locked caps to be clipped.
- h) Tank vent to be fitted with an anti-spill device and must go through the floor of the boot.
- i) Fuel tank to be securely mounted, located in the boot area of the car, no further forward than the front edge of rear suspension towers, 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 the side of vehicle. Fuel tank is to be isolated from the driver by a minimum 0.9mm metal firewall. (01/07/16)
- j) Fuel tank not to be mounted using brackets welded to tank or cell. Minimum strap size is to be 25x3mm FMS. Tank to be protected by substantial barwork on all sides.
- k) Fuel tank protector bars must be a minimum 38x3mm CHS with angle braces.
- l) Fuel tank protection: Bar must be constructed of minimum 38x3mm CHS or 40x40x3mm RHS and be 25mm minimum clearance all around tank and filter, projecting a line from the rear wheel centre to the bar.
 - (i) 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.
 - (ii) Underslung fuel tank is a fuel tank that has some portion below the bumper or chassis rails and therefore is to have a fuel tank protector bar fitted.
 - (iii) 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 not to constitute bumper mountings)
 - (iv) Fuel tank protection bars must have radius corners as per Fig 12. No straight side pipes for jacking to extend from protection bars.
- m) Brace bars do not constitute Bumper mountings.

FUEL LINES

- a) Fuel line from tank to engine, is to have a flexible section within 75mm of the tank, the line must be securely fixed in position.
- b) 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).
- c) Fuel lines **MUST BE ISOLATED** from electrical wiring.
- d) Neoprene, reinforced plastic or "Black Fuel Line" may be used. OEM type Bundy steel tubing may be used through or under the car.
- e) High pressure lines are to use high pressure hoses and fittings.
- f) Carburettor Cars Only: The fuel line to the engine must be fitted with a quick action NON-LEAK fuel tap, in working order. The actuator or switch is to be securely mounted within easy reach of the driver, and crash crew, and clearly marked "FUEL" "ON-OFF".
- g) Solenoid valves or remote mounted fuel taps are permitted.
- h) **NOTE:** Any fuel line, passing through the cabin area must be secured, and where possible, should be positioned in such a manner, that it is least likely to be damaged, when gear, e.g. tools, tool boxes, jacks, and spares etc., are loaded into the car. Anywhere, where damage is likely to occur to the fuel line, and the fuel tap, must be protected.

- i) Flexible fuel lines may be run through a metal conduit in the cabin area, but wiring in the same conduit is not acceptable.
- j) Front and rear firewall to be sealed around fuel line or conduit. If a return line is used, it must be fitted with a one-way valve.
- k) OEM electric fuel pumps permitted if standard fitment. Can be replaced with non high performance pump.
- l) Electric fuel pump MUST be isolated from the Driver by a firewall and fitted with an independent earth to case, and switched off by the KILL switch AND, by an engine monitoring relay.

Fig. 12

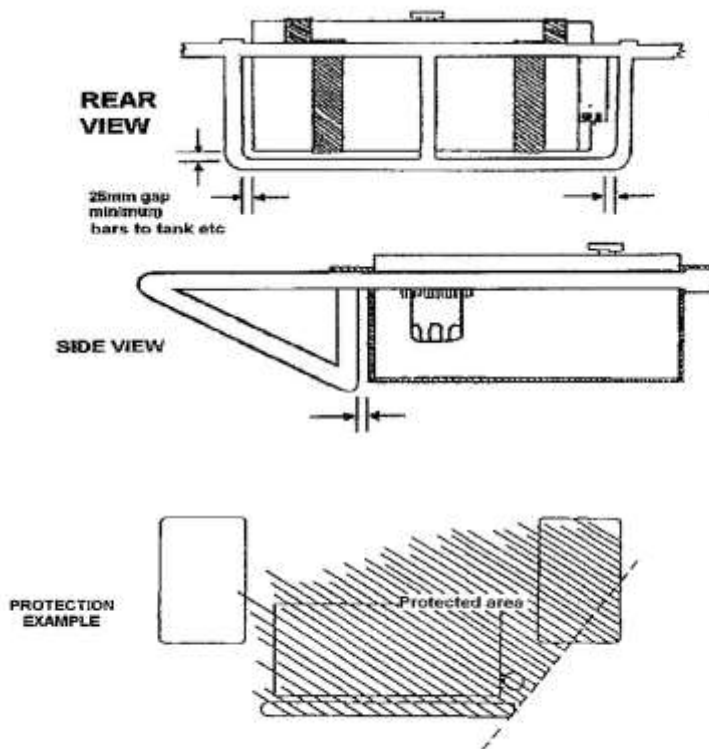


TABLE 1. ENGINE LIST FOR VEHICLE MODEL – CARBURETED

MAKE	MODEL	STANDARD BORE	STANDARD STROKE
DATSUN	1200, 120Y, Sunny	73.0mm	70.0mm
DAIHATSU	Charade	76.0mm	73.0mm
FORD	Escort MK 1	80.978mm	53.29mm
HOLDEN	Torana	77.77mm	60.96mm
LEYLAND	Mini 1100	64.588mm	83.72mm
SUZUKI	Swift SA SF	74.0mm	77.0mm

TOYOTA	Corolla 1200	75.0mm	66.0mm
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TABLE 2 – ENGINE LIST FOR VEHICLE MODEL – EFI

MODEL	ENGINE DESCRIPTION	STANDARD BORE	STANDARD STROKE
DAIHATSU			
Charade 1987-92 1993-96 G102 & G200 Range	1300 OHC 4 Cylinder 16 Valve SOHC	76mm 76mm	71.4mm 71.4mm
Charade 1993-96-00 G200 Range as per OEM	1500 OHC 4 Cylinder 16 Valve SOHC	76mm	82.6mm
HYUNDAI			
Excel 1989-95 X2	1500 SOHC	75.5mm	82.0mm
Excel 1995-97 X3	1500 SOHC model only	75.5mm	83.5mm

TABLE 3 – THROTTLE BODY

MAKE	THROTTLE BODY OUTER SECTION I.D.	BUTTERFLY SECTION I.D.
DAIHATSU		
Charade G100 and G102 1.3 litre		45mm
Charade G200, G202 and G203 1.3 litre		45mm
Charade G200, G202 and G203 1.5 litre		50mm
HYUNDAI		
Excel 1989-95 X2		
Excel 1995-97 X3		

TABLE 4 – COMPUTER AND INJECTOR LIST

COMPUTERS

CAR TYPE	COMPUTER	COMPUTER BRAND	COMPUTER NUMBER
DAIHATSU			
Charade 1987-92 1993-96 G102 & G200 Range			89661-87715 89661-87730
Charade 1993-96-00			89661-87758

G200 Range as per OEM			
HYUNDAI			
Excel 1989-95 X2			39110-24550/39110-24880/39110-24881
Excel 1995-97 X3			39110-22335/39110-22A00/39110-22336

STANDARD FITMENT FUEL INJECTORS

CAR TYPE	FUEL INJECTOR
DAIHATSU	
Charade 1987-92 1993-96 G102 & G200 Range	195500 – 2120
Charade 1993-96-00 G200 Range as per OEM	195500 – 3030 (1500)
HYUNDAI	
Excel 1989-95 X2	35310-24010 5616
Excel 1995-97 X3	

TABLE 5 - VALVE SIZES – maximum two (2) valves per cylinder

MAKE	MODEL	INTAKE VALVE SIZE	EXHAUST VALVE SIZE
DATSUN	1200	35.0mm	29.0mm
DATSUN	120Y, Sunny	37.0 -37.2mm	30.0 – 30.2mm
DAIHATSU	Charade	36.0mm	33.0mm
FORD	Escort MK1	35.69 – 35.94mm	31.50 – 31.75mm
HOLDEN	Torana	33.45 – 33.60mm	29.90 – 30.05mm
LEYLAND	Mini 110	29.23 – 29.26mm	25.40 – 25.53mm
SUZUKI	Swift SA	36.0mm	30.0mm
SUZUKI	Swift SF	35.0mm	28.0mm
TOYOTA	Corolla 1200	36.0mm	29.0mm

TABLE 6 - CARBURETTOR LIST

Carburetted Cars

MODEL OF CAR	CARBURETTOR PERMITTED – Venturi Sizes
Datsun – 1200, 120Y, Sunny	Primary 20mm,secondary 26mm.Twin Barrel Down Draught Primary
Daihatsu – 1.0 Litre 3 Cylinder	Primary 18mm, secondary 25mm. Twin Barrel Down Draught
Ford – Escort 100 MK1	Ford 1250 Single Barrel

Holden – Torana 1200 HB-LJ	Zenith 301Z. Solex 30/PSEI/6 & 7. Single Throat Down Draught
Holden – Torana 70 Series	CD 150 Zenith-Stromberg. Single Throat Down Draught
Leyland – Mini 1100 engines	1-½” S.U.
Suzuki – 1.0 Litre 3 Cyl	Primary 18mm, secondary 25mm. Twin Barrel Down Draught
Toyota – 1200 3K Series Engine	Primary 21mm, secondary 25mm. Twin Barrel Down Draught

TABLE 7 – VEHICLE DIMENSIONS

Note: Listed measurements for the track includes the 50mm max. allowance and 160mm rim measurement – to accommodate SSA Wheel Track measuring tool.

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM	LENGTH MM	WIDTH MM
DATSUN					
1200 Coupe 1970-74	2300	1450	1455	3820	1515
1200 Sedan 1970-74	2300	1450	1455	3835	1515
120Y 1974-79	2340	1460	1455	3950	1545
Sunny 1979-81	2340	1540 <small>(typo correction)</small>	1510	3940	1600

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM	LENGTH MM	WIDTH MM
DAIHATSU					
Charade XTE 1980-81	2300	1510	1490	3485	1510
Charade XTE 1981 -83	2300	1510	1495	3510	1510
Charade CSCX 1983-85	2320	1550	1520	3550	1550
Charade CSCX 1985-87	2320	1550	1520	3595	1550
Charade G100 1987 -	2340	1595	1575	3680	1615
Charade G200 1993-96	2395	1595	1600	3750	

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM	LENGTH MM	WIDTH MM
FORD					
Escort MK 1970-73	2400	1470	1490	3960	1590

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM	LENGTH MM	WIDTH MM
HOLDEN					
Torana HB 1967-69	2440	1505	1505	4090	1600
Torana LC LJ 1969-75	2433	1505	1505	4120	1600
Disc Brake Model	2433	1520	1505	4120	1600

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM	LENGTH MM	WIDTH MM
LEYLAND MINI					
1100 1969-71	2030	1420	1400	3176	1410
Clubman 1100 1971-73	2030	1420	1400	3220	1410

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM	LENGTH MM	WIDTH MM
SUZUKI					
Swift SA 1984-88	2245	1540	1510	3585	1530
Swift SF 1988 -	2265	1575	1550	3745	1575

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM	LENGTH MM	WIDTH MM
TOYOTA - Corolla					
KE20 Sedan 1970-74	2335	1465	1455	3910	1535
KE25 Coupe 1970-74	2335	1465	1455	3910	1570
KE30 Sedan 1974-78	2370	1505	1495	3995	1570
KE35 1974-78	2370	1505	1495	3995	1570
KE50 Lift Back 1977-78	2370	1505	1495	4120	1600
KE55 - May use body only					

TABLE 8 – VEHICLE DIMENSIONS FOR EFI MODELS

Note: Listed measurements for the track includes the 50mm max. allowance and 160mm rim measurement – to accommodate SSA Wheel Track measuring tool.

MODEL	WHEELBASE MM	FRONT TRACK MM	REAR TRACK MM
DAIHATSU			
Charade 1987-92 G102 1.3	2340	1595	1575
Charade 1993-96 G200 1.3	2395	1595	1600
Charade 1993-96-00 G200 1.5	2395	1595	1600
HYUNDAI			
Excel 1989-95 X2 1.5	2380	1599	1551
Excel 1995-97 X3 1.5	2400	1630	1620

TABLE 9 - TYRE RATINGS - THE MAXIMUM IS A (H) RATING.

TYRE RATINGS	SPEED RATING	TYRE RATINGS	SPEED RATING
A1 – A8	5-40 kmh	M	130 kmh
B	50 kmh	N	140 kmh
C	60 kmh	P	150 kmh
D	65 kmh	Q	160 kmh
E	70 kmh	R	170 kmh
F	80 kmh	S	180 kmh
G	90 kmh	T	190 kmh
J	100 kmh	U	200 kmh
K	110 kmh	H	210 kmh
L	120 kmh	V	240 kmh

Summary of Updates:

15/06/16

Page 14 – Section 4 – Engine – Approved Models Updated

01/07/16

Page 3 – Section 1 – Body/Rolling Shell – Item f) iv)

Page 6 – Section 2 – Roll Cage – update to AS number

Page 6 – Section 2 – Roll Cage – Item 2 Roof Hoop clarification

Page 14 – Section 4 – Engine

Sub-Section 4.1.1 EFI – ECU Sealing Process

Page 24 – Section 17 – Fuel Tank and Fuel System – Item i)

01/10/16

Page 5 – Section 1 – Body/Rolling Shell – updated steel size on Fig (ii) and Fig (iii)

Page 8 – Section 2 – Roll Cage – mounting of anti spear plates

Page 10 – Section 2 – Roll Cage – mounting of head plates

Effective 01/07/17

Page 2 – Reference changed to www.automobile-catalog.com

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

Page 8 – Section 2 Roll Cage - #12 Foot Protection Bar

Page 8 – 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 14 – Section 3 – Bumper Bars & Optional External Barwork – Rub Rail

Page 14 – Section 4 – Engine – placement of engine seal ID tag

Page 24 – Section 14 – Tyres – lubricant not permitted