COMPONENT CAR MANUAL

.LOCUST.

BUILDING INSTRUCTIONS PLAN SHEETS AND TECHNICAL INFORMATION

J.C LOCUST BUILDING INSTRUCTIONS - PREFACE

CHOICE OF DONOR VEHICLE AND CHASSIS

TRIUMPH, FORD

Before you progress to the stage of building the body for the LOCUST from the patterns provided, you may wish to consider which choice of base vehicle is right for you. Following on from our other “patterns build" car, the MIDGE the LOCUST was intended to be a “body Swap" for the Triumph Herald/Vitesse range of cars. It soon became obvious the body style and extremely low ride height of the LOCUST could not be accommodated by the Triumph chassis range.

TRIUMPH CHASSIS

A lowered chassis was developed especially for the LOCUST to take the suspension parts from the Triumph range, including the Spitfire.

Our price list shows current Chassis prices. Just about all the components from the Triumph Herald, Vitesse and Spitfire can be used in the LOCUST build up. Using the aforementioned chassis, all the suspension parts are transferred from the donor vehicle together with the engine, gearbox, radiagramor, pedals, instruments and steering column. Extras to the finished product are, therefore, very few and comprise such things as seats, lights, wiper arms and possibly an alternative choice of petrol tank. Without a doubt, this choice of base car is the most economical way of completing your LOCUST and is should be possible to finish the car for around £700 before extras.

FORD CHASSIS

The second choice for the enthusiast wanting a lively performance is a chassis for Ford components. This chassis has a "live" rear axle, courtesy of the Ford Escort and takes the front wishbones from a MK 3 Cortina. The rear axle is attached with clamps to four trailing arms, and sideways location is controlled by a panhard rod. Rear springs and shocks are taken from the front of a Hillman Imp.

THE PRICES FOR ALL THREE CHASSIS ARE INCLUDED IN OUR CURRENT PRICE LIST.

J.C. LOCUST BUILDING INSTRUCTIONS

These instructions are intended to take the builder stage by stage to the completion of the kit.
There are 22 stages of construction, illustrated by numbered drawings of the assembly as it progresses.

The Kit construction is extremely straight forward and can be handled by any competent DIY amateur.

The choice of base car, the chassis and running gear are dealt with in the section headed CHASSIS PREPARATION, we will assume that the chassis work is completed and deal here with the construction of the body itself.

TOOLS REQUIRED

The following tools would be found useful.

1. Electric drill (half inch chuck preferred) plus good assortment of drill bits.
2. Jig saw with adjustable foot for varied angle of cut.
3. Panel saw
4. Tenon saw
5. Hacksaw
6. One flat blade and one number 2 point pozi-drive screwdriver
7. Pop rivet gun
8. Tape measure
9. Rubber mallet

OTHER ITEMS REQUIRED

100 3/4" x 6 countersunk screws (for fixing half round aluminium trim around cockpit edge), if car is to retain a polished aluminium body, these may be preferred to be brass.
100 1 1/2" =x 8 csk wood screws
100 1" x 3/16" (or 1" x 1/4") diagram nuts and bolts for securing aluminium/steel angle.
1 Small tub of Evostik wood adhesive.(Waterproof).
Various assorted: pop rivets.
1 box of 3/4" panel pins or small round nails with flat heads
2 tins of Scotchgrip Fastbond Ten to skin tub with aluminium, (For stockists, contact 3M House, TEL: 061 236

NB Jigsaws are available on hire from most good hire shops for around 5 per day or 10 per week. AN ADJUSTABLE FOOT IS ESSENTIAL

CUTTING LIST

All the plywood body panels are cut from 3/4" exterior ply. Marine ply. would also be suitable but more expensive. Blockboard could be used for absolute economy but is not recommended due to its poor Weathering ability, although with good underbody paint protection it could be a viable alternative.

3 off 8’ x 4’ sheets of 3/4". exterior plywood.
6' of 1 1/2" Square block.
6’ of 1 1/2" square block with one face angled at 27 degrees.
6' of 1 1/2" square block with one face angled at 18 degrees.
15’ of 1" square wooden block.
20’ of steel/aluminium angle, minimum 1" face.
1 of sheet 22 swg aluminium (for body sides).
1 off 6’ x 24" off-cut 22 swq aluminium (for back panel).

To economise, one 6’ x 3’ sheet of either 18 swg or 22 swg could be used for both BACK PANEL and SCUTTLE TOP but, the BACK PANEL is easier to wrap in lighter gauge whereas the SCUTTLE TOP being unsupported needs a heavier gauge for Strength. You will also require 15’ of 1" half round’ aluminium edging strip to finish the top edges of the cockpit area of the body.

Commercial vehicle body builders and repair shops are a good source of supply for these items if you have no local aluminium stockists (also caravan and coach builders).

PREPARATION

PATTERN

Obviously the concept of fixing paper shapes to sheets of plywood and aluminium and simply cutting them out to patterns ensures great accuracy and is simplicity itself. However, to take the concept a stage further we do also supply the panels ready cut out, prices are listed but, this method starts to become expensive as we engage the help of professional sub-contractors (at a reasonably high hourly rate).

CUTTING OUT THE PATTERNS

First study the patterns together with the stage drawings and try to grasp the concept. Take heed of the overwritten details and instructions. Notice that some plywood panels have edges that are bevelled under or over at various angles. The jigsaw foot should be set with a protractor to cut these angles as accurately as possible. These bevelled edges are important to the final assembly. The paper patterns should be cut out with scissors leaving a l" approx. border around each Panel outline.

The cut out patterns should next be positioned onto the plywood in the most economical way to avoid waste. Next, stick the patterns onto the wood in the desired layout by applying glue to each pattern all around its inked outline. This prevents the paper lifting under the action of the jigsaw blade.

CUTTING OUT THE PANELS

Some panels which are not handed may be cut out two at a time as required. Others where bevelled edges are indicated may cut out square edged and planed up, if an adjustable jigsaw is not available. Otherwise cut these out separately with the appropriate undercut. Note this undercut is reversed on same due to 'handing' of the panels.
All the the panels should be cut on the bold outline constant reference to the overwritten instructions is essential.

NB When cutting aluminium panels with a jigsaw that:
a. The blade has fine teeth and is correct for cutting this material.
b. always use a ‘sacrifice’ material. i.e. hardboard, or scrap wall-board under the aluminium to prevent distortion by the blade dragging on the cut edge. This method ensures a clean cut and is preferable to cutting with shears where some distortion is inevitable.

CONSTRUCTION

You are now at the first stage of construction and are at the same point as the customer who may have purchased the panels from us ready cut out. Before commencing, please note that all wooden Joints must be both screwed and glued using Evostick waterproof glue or similar. Pour some of the glue into a small bowl and brush onto the assembly face of each wooden block as it is screwed to each panel. Similarly where aluminium or steel angle is used to make up a corner joint between corner panels it is preferable to glue as well as bolt the angle in situ. Araldite or similar is recommended.

ASSEMBLY

Stage 1, FLOOR PANELS (see diagramram. p.11)

Take both FLOOR PANELS and screw and glue wooden blocks where indicated by the shaded area on the patterns.
The forward face of these blocks should lean back at 27 degrees.

Stage 2, FIXING ANGLE IRON (see diagram p.11)

Now bolt and glue steel or aluminium angle (minimum 1") to the FLOOR PANELS where indicated.

Stage 3. PROPSHAFT TUNNEL (see diagram p.12)

Now bolt and glue the PROPSHAFT TUNNEL SIDES into place. Space these 3/4" away from the wooden block previously screwed to the FLOOR PANELS. Use an off-cut of 3/4" plywood as a spacing piece to substitute for the positioning of the "RISER".

Stage 4. GEARBOX SIDE PANELS (see diagram p.12)

Now bolt and glue into place the GEARBOX SIDE PANELS, these may be either dowelled to the PROPSHAFT TUNNEL or the joints overlaid with steel strip to make the joint firm.

Stage 5. FOOTWELL END PANELS (see diagram p.13)

Cut either angles 1" block or use steel/aluminium angle “opened out’, fix up each side of the FOOTWELL END PANELS. Also fit short lengths of square block or angle along the bottom edge of each FOOTWELL END PANEL but only along the top edge of the passenger side.

Now bolt and screw these FOOTWELL END PANELS into position.

Stage 6. THE RISER (see diagram p.13)

Take the RISER and fix it to the FLOOR PANELS where indicated. It should slot between the ends of the PROPSHAFT TUNNEL SIDES and the angled wooden block to which it should now be secured with screws and glue. The outer ends should be quite flush with the car body. The positioning of the FLOOR PANELS in relation to the FLOOR RISER is self evident. Fix square wooden block up each end of the RISER on it's rear face and fix an angled wooden block along the top rear face of the RISER. Keep the upper face of the block horizontal as the REAR FLOOR sits on here.

Stage 7. THE FLANKS (see diagram p.14)

Now take each FLANK in turn and screw and bolt it in place. Keep the bottom edge of the FLANK level with the under side of the FLOOR PANEL. The FLOOR PANEL rear edge lines up exactly with the front edge of the suspension 'cut out'. Don't forget that all screws and bolt heads should be sunk below the surface of the wood so that skinning of these panels will present no problem.

Stage 8. THE VALANCES (see diagram p.15)

Now fix each valance in turn making sure you sink the bolts. Again keep the bottom edge flush with the underside of the floor. Keep the butt joint between the VALANCE and the FLANK as tight as possible. The joint may be dowelled and glued or overlaid with steel strip on the inside to strengthen the joint. Secure the joints between the VALANCES and the FOOTWELL END PANELS. Now fix a block to the inside face of the VALANCES 3/4" below the top edge. This is where the FOOTWELL TOP will rest. Similarly fix a 1" square block to the upper edges of the GEARBOX TUNNEL SIDES. The ‘drivers’ GEARBOX TUNNEL SIDE needs this block on both its faces because the FOOTWELL TOP is in two pieces for the convenience of having the drivers side section removable until pedal installation/adjustment is complete.

Stage 9. THE FOOTWELL TOP (see diagram p.16)

Loosely fix the FOOTWELL TOP (both pieces) in situ. 1" square block needs to be fastened along the upper face and rear edge of the FOOTWELL TOP (both pieces), so that the bulkhead may be screwed to it.

Stage 10. THE BULKHEAD (see diagram Pl7)

THE BULKHEAD is 3/8" narrower than the overall car width when in place and each end is set in 3/16" accordingly. Short lengths of wooden block screwed on the inner face of the VALANCE cto arry the BULKHEAD. Screw and glue the FACING PIECE to the rear face of the BULKHEAD sitting it on top of the VALANCES at each end. The FACING PIECE is 3/16" larger than the BULKHEAD all the way round its upper curved edge and in fact dictates the width of the car at this point. Ensure that its ends, therefore, are flush with the outer faces of the VALANCES. The ‘passenger side’ section of the FOOTWELL TOP may now be permanently screwed and glued into position.

Stage 11. THE REAR SILL: GUSSETS: BACK PANEL (see diagram p.18)

Next take the REAR SILL and simply pin in place where shown. Now similarly fix the GUSSETS to the top rear corners of the FLANKS. They have angled faces to suit the inclination of the BACK PANEL. Pin the BACK PANEL in situ. to ensure its correct positioning and also the correct positioning of the SILL and GUSSETS. The rear SILL and the GUSSETS may now be permanently fixed in place using 1" square block as required. The rear upper edge of the SILL should carry wooden block cut to suit at an angle of 18 degrees to form a joint with the back panel

Stage 12. REAR FLOOR (see diagram p.19)

The REAR FLOOR may be placed in situ. providing the body is level, use a spirit level to ensure that the rear floor is horizontal, and then draw round its underside with a pencil to mark its position onto the FLANKS and REAR PANEL. More wooden block should then be Screwed and glued in place to form a platform on which the REAR FLOOR can sit.

Stage 13. SKINNING THE BACK PANEL (see diagram p20)

The BACK PANEL should next skinned with 22 swq aluminium using the pattern provided. Note how it wraps round each ‘open’ corner to the approximate centre line of the wheel arch. Scour the inner face. Apply adhesive to all surfaces as required. Try to keep the overlap of the aluminium beyond the edge of the wood to a minimum, especially around corners (say 3/4") this will prevent creasing as the overlapping flange is pinned over with a soft face (preferably rubber) hammer. With the panel glued and carefully held in position, work from the centre outwards top and bottom edge and secure at 2"-3" intervals with panel pins or similar.

Stage 14. SKINNING THE SIDES (No diagram)

No pattern is supplied for skinning the sides of the car. An 8’ x 4’ sheet of 22 swg aluminium should be cut down the middle into 2 off 8’ x 2’ pieces. Carefully position each piece in turn down the side of the car, overhanging the bottom edge by 1/2". Butt the sheet up to the front edge of the section already wrapped in aluminium. Draw around the outline of the car’s side onto the inside face of the aluminium sheet, in pencil. Remove the sheet from the car, lay it flat, add 1/2" on to the marked contour all the way round (apart from the bottom edge where you have already allowed a 1/2" overhang) - This gives sufficient margin for peening over and pinning. Now scour the inner face with glass paper to form a Key and apply the adhesive to both surfaces as required. With assistance, accurately position the aluminium panels back on the the car’s side starting at the butt joint at the rear. Smooth the aluminium forward as you go, pressing firmly onto the side of the car body. The difficult bit is maintaining the original positioning and the all round half inch overlap. Leave the adhesive to cure completely before peening over all the edges and pinning at say 2" intervals.

Stage 15. COCKPIT EDGE TRIM (No diagram)

Prior to trimming the edges of the cockpit with 1" x half round aluminium it is a good idea to make the patterns for the trim panels. These may be made using large cardboard pieces and drawing the outline of the body onto the card. The 1" x half round aluminium bead can be curved through its flat plane with practice. This is obviously necessary on the rear corners of the body but, it may be found easier to pre-shape three separate sections to surround the cockpit, one down each side and one across the rear, and join these half way around the rear corner in each case. The fixing method is by csk screws into the wooden panel edge. Overlay the beading by 1/4" on the inside face of each panel, this will then form a natural lip to cover the trim panel and disguise its edge.

Stage 16. PEDAL ASSEMBLIES (No diagram)

The triumph pedal assembly should be used in all cases. The mounting positions are pre-described on the FOOTWELL TOP PANEL. The pedal arms will need shortening and cranking to suit the driver. They also need lengthening by 3/4" at the pushrod end to allow for the thickness of plywood through which they pass. Pedal space is very limited! The clutch pedal should just skim the GEARBOX SIDE. The brake pedal should be positioned far enough away from the GEARBOX SIDE to clear the driver’s left shoe when the foot is on the clutch. The Triumph ‘organ type’ accelerator takes up what space is left. Bring the cable in through the FOOTWELL TOP directly above the pedal. Ballet shoes are the order of the day! But, if you really can’t cope with the narrow width here, then the following mods can be implemented.

1. The GEARBOX SIDE could be reduced in thickness to say 1/4" ply.

2. we can a supply a suitable ‘blister’ to screw onto the car side in the area of the accelerator pedal to make for more width, the body side being cut away behind the blister which lies under the clam shell wing and is quite unobtrusive.

If a cable clutch is to be employed a la Ford etc. the best option still seems to be the Triumph clutch pedal assembly without the master cylinder. This should be suitably

modified to carry the cable end. One look at the Escort or Vauxhall assembly will show you wh6y it is unlikely that these could be satisfactorily made to fit.

Stage 17. THE DASHBOARD (No diagram)

The DASHBOARD, suitably pre-drilled and cut out for switches and instruments etc. may now be mounted. It fits against the sloping uprights of the VALANCES, not in between them. Use the usual wooden blocks and screw and glue the panel into position. You may care to fit the instruments and wiring loom t this stage, whilst access is easy, because the next stage is skinning the DASH TOP COWL.

Stage 18. SKINNING THE DASH COWL (No diagram)

The DASH TOP COWL may now be skinned using the pattern provided. Thee aluminium overhangs the DASHBOARD by about 1" to form a slight cowl. Apply adhesive to both surfaces as required. The very front edge of this aluminium panel needs to be beaten into the step down of the bulkhead in order to carry the bonnet. Only hammer it along this step where where it may then be pinned. The pin heads may then be disguised by covering them with foam rubber strip, for the bonnet to rest on. Take care not to catch any exposed areas whilst beating this panel into position. Start from the centre of the car and work out, continually re-check the position for the correct overlap. Instead of pinning the aluminium along the top of the DASHBOARD, consider using tonneau fittings at 4" intervals, even if you never fit a tonneau cover, they look authentic and they effectively disguise the method of fixing. Continue over the 'Shoulder' and either overlap onto the aluminium side skin or form a butt joint with it. a straight line visible joint, either butt or overlap,is acceptable here (check Photos for details).

Stage 19. THE WINDSCREEN (diagram with purchase)

The WINDSCREEN should now be fitted according to its separate instructions.

Stage 20. FITTING THE WINGS AND NOSE CONE (diagram with purchase).

The rear wings, front wings and nose cone may now simply attached with screw/bolts in the correct positions according to their separate instructions. The nose cone may be be temporarily fitted at this stage to establish its proper position in order that the bonnet can be formed using the patterns provided, and tried for best fit. Make the bonnet panel from 18 swg. aluminium sheet.

Stage 21. THE BONNET (see diagram 21)

The aluminium bonnet may be quite simply made from a sheet of 18 swg. aluminium using the pattern provided. Refer to the diagram for details.
Tips on how to make louvres are given later.
A suitable 'blister' for carburettor clearance is listed in our parts order form.

Stage 22. BOLTING THE BODY IN POSITION (No diagram)

Thee body finished so far may now be bolted into position on the chassis although its mounting position is reasonably obvious, the following tips may be of assistance. The body should be pushed forward so that the REAR SILL butts up against the rear of the J.C Auto Patterns chassis, this rear chassis member dictates the body's fore and aft position. The width is best judged by line of sight by positioning the body between the wheels and suspension. Actual bolting up of the body may be carried out by drilling through floor into available chassis members as required.
It is envisaged that the REAR FLOOR should carry mounting bolts into the rear suspension bridge and will need under packing accordingly, i.e. some wooden packing will be required between the top of the suspension bridge and the underside of the REAR FLOOR PANEL.

The VALANCES of the body may best be secured at the front by small brackets to the suspension towers or in the case of the Ford, to the chassis itself.

PETROL TANK (No diagram)

Choices of tank are many and various - if it fits, use it being the maxim. Herald/Escort tanks can be fitted but, they protrude through the rear floor and this must cut away accordingly. A midget/Spitfire, Morris 1000 or estate
tanks are possibly bestt choice.

WIRING (No diagram)

The loom taken from the donor car is usually adaptable. All tails should be labelled prior to removal, simply lay the loom into the body tub shorten/extend its extremities accordingly. Re-connect all items as per original layout.
If a replacement loom is to he used, detailed instructions will be supplied with the loom.

UPHOLSTERY (No diagram)

Having formed the trim panels from hardboard, these should next be vinyl covered and fixed into place using either screws and cups or soft aluminium pop rivets (into the wooden tub!) to give an authentic appearance. The seat back and squabs are simply upholstered boards made up to suit.

SEAT BELTS (No diagram)

Despite continued rumours to the contrary, the only criteria for seat belt mountings is that they be sufficient for the purpose and that the mounting points are strong enough for the job. This can best be achieved by passing the bolts for the lap belts through the floor of the Locust into the chassis at each side of the seat pan. The over the shoulder belt may be bolted through the rear floor to the suspension bridge beneath.

DOT TESTING (M.O.T)

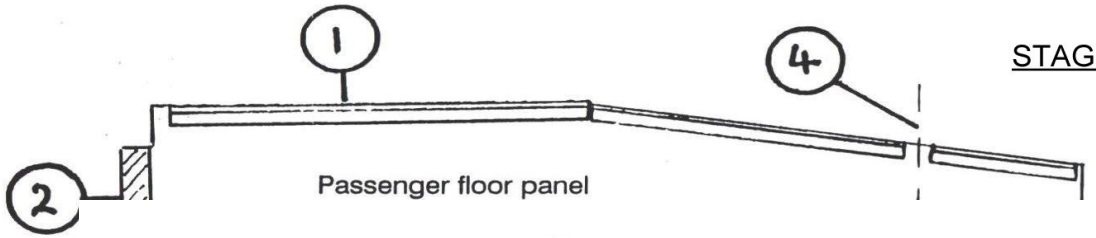
This should be straightforward subject to the normal requirements for lights, brakes, steering, seat belts, exhaust etc. Testing may be completed on a chassis number which the DOT will give you when you apply for registration.

REGISTRATION

A new registration number will be required. This will carry a 'Q' prefix. This is dealt with through your local Motor Tax Office. You need a form called a V55/5.
Stolen vehicle division of the CID will wish to inspect the car, ostensibly for stolen parts etc., this being a formality with any vehicle built from components - 'some or all of which were not new' - to quote the entry on your registration document.
The Motor Tax Office make this arrangement for you but, a phone "call to the Police department concerned, making an appointment for viewing, usually speeds things up.

INSURANCE

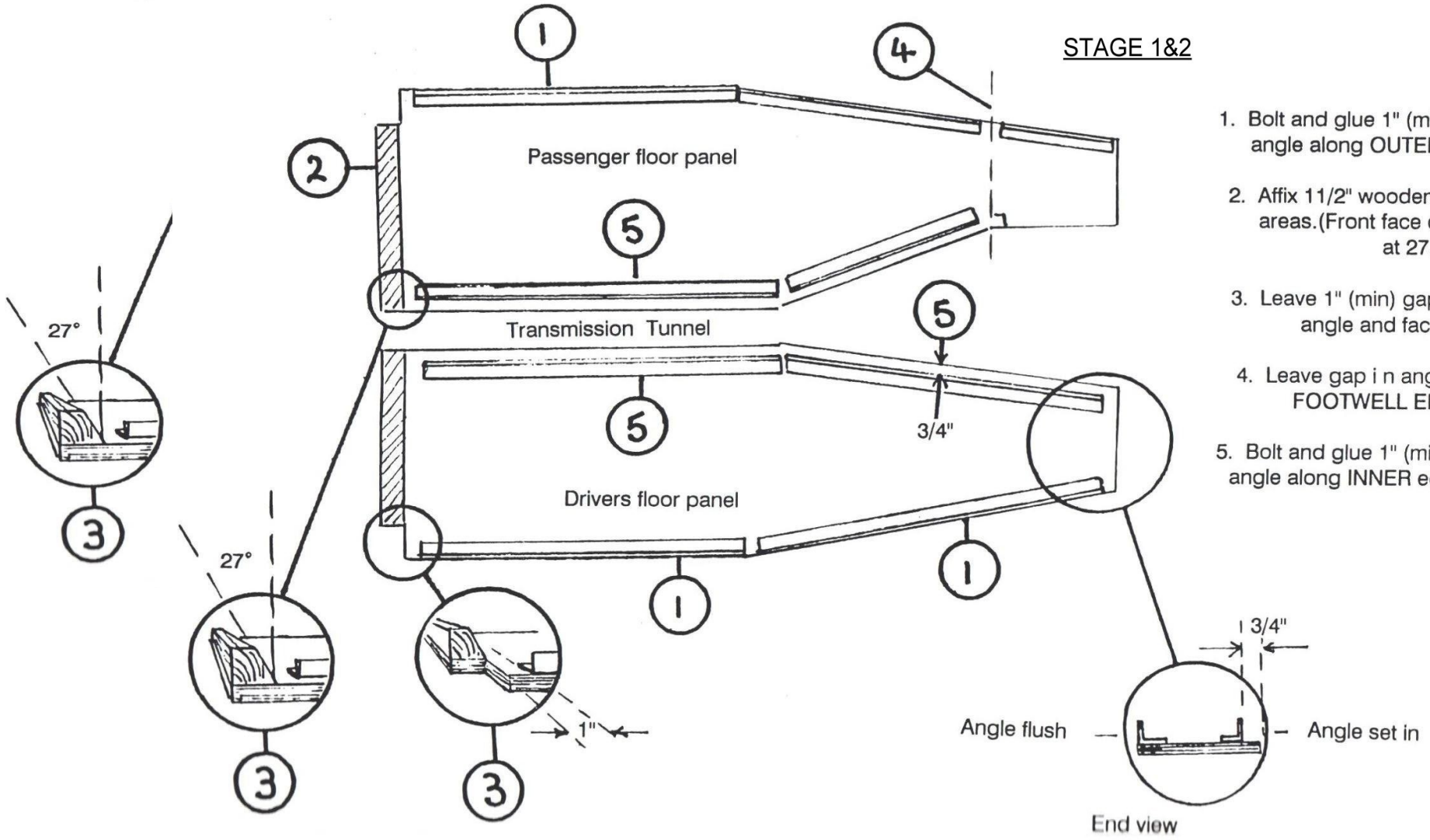
Quotes from run of the mill insurance companies could be frightening so make sure you go to one of the specialist brokers advertising in all current kit and component car magazines. A fair average ought to be about £100 TPFT or £200 Fully comp. Adjust these figures for extremes of age or engine size!



STAGE 1&2

1. Bolt and glue 1" (min) steel/aluminium angle along OUTER edges, flush.

STAGE 1&2



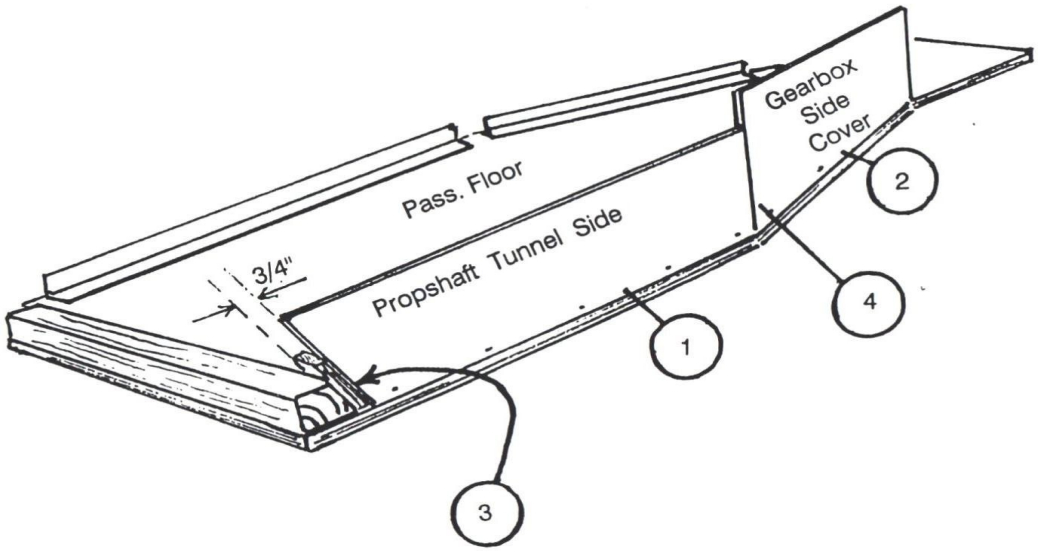
1. Bolt and glue 1" (min) steel/aluminium angle along OUTER edges, flush.

2. Affix 11/2" wooden block to shaded areas.(Front face of block slopes back at 27.)

3. Leave 1" (min) gap between end of angle and face of block

4. Leave gap i n angle for pass. side FOOTWELL END PANEL

5. Bolt and glue 1" (min) steel/aluminium angle along INNER edges SET IN 3/4"



STAGE 3&4

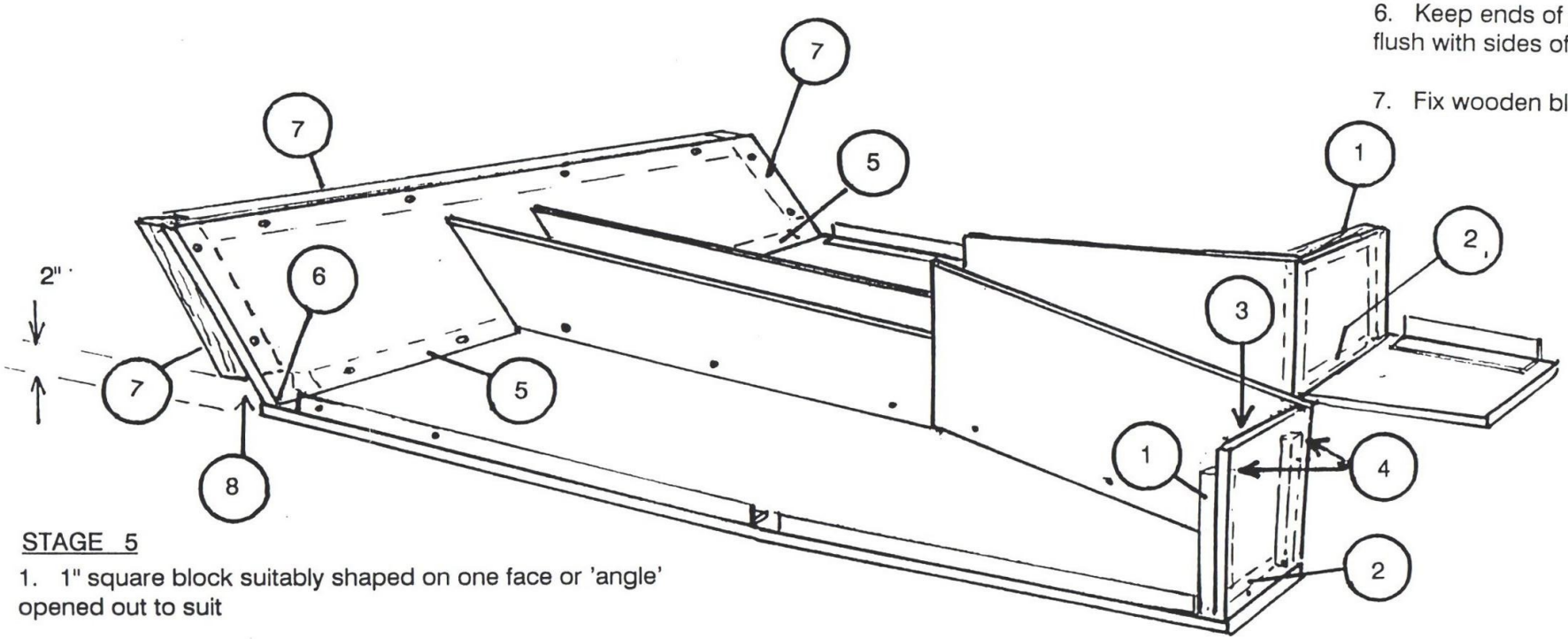
1. Fix propshaft tunnel side flush with edge of floor

2. Fix gearbox side panel flush with edge of floor

3. Space gap with 3/4" wooden block

4. Make vertical joint between panels as tight as possible. Either dowel joint or overlay with steel strip for extra rigidity

5. Repeat for drivers side



STAGE 5

1. 1" square block suitably shaped on one face or 'angle' opened out to suit

2. Steel/Aluminium angle preferred

3. Leave out

4. Finish drivers side blocks or angle 2" below top

STAGE 6

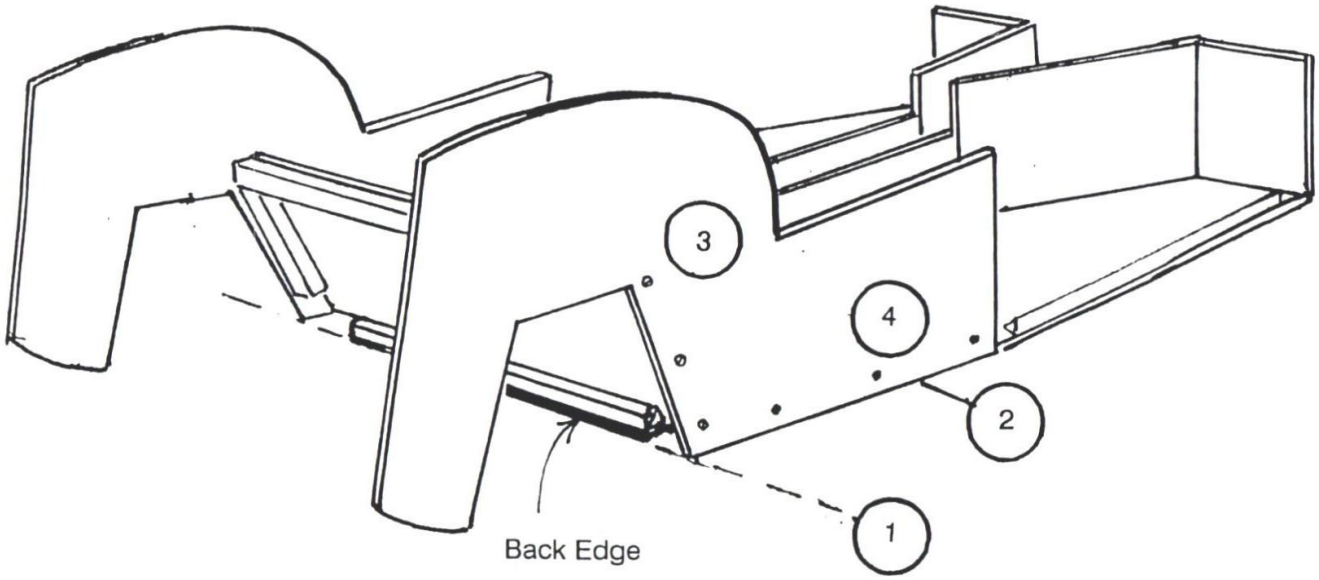
5. Affix riser to angled blocks

6. Keep ends of riser flush with sides of floor

7. Fix wooden blocks

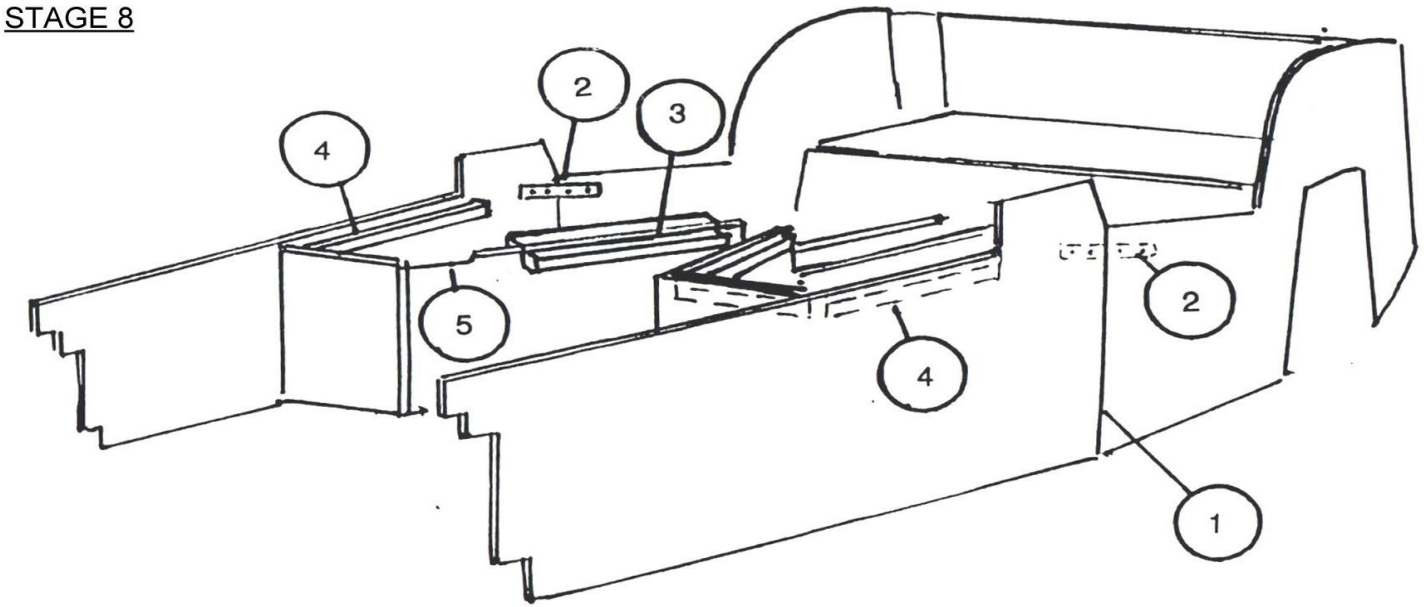
8. Leave 2" space below block here

STAGE 7



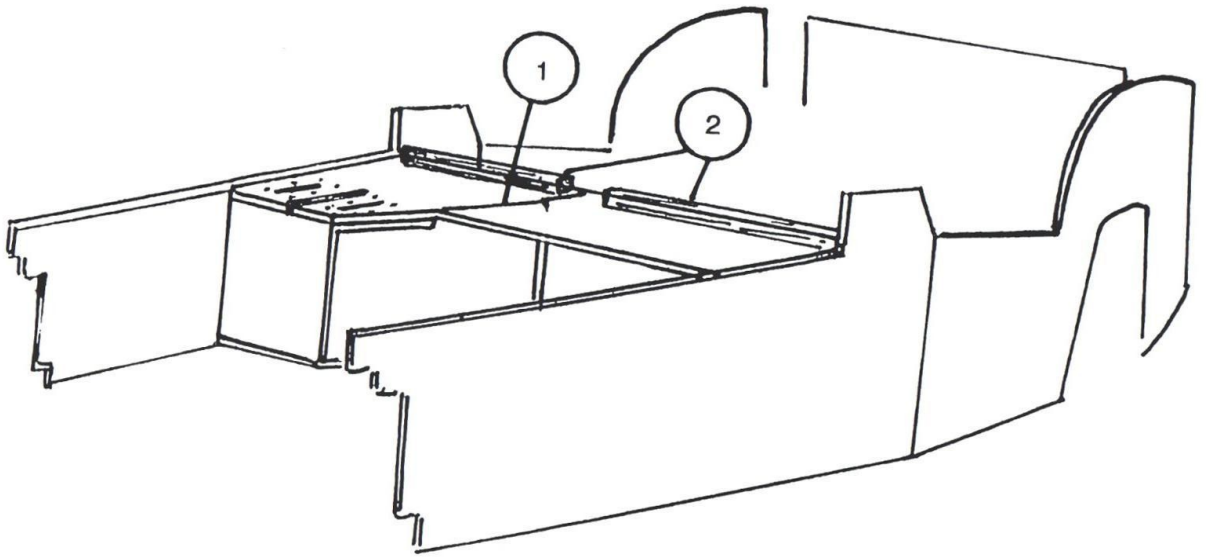
1. Line up lower corner of flank with back edges of floor panels
2. Keep bottom of flank flush with underside of floor panel
3. Sink screwheads
4. Sink boltheads

STAGE 8



1. This joint should be as tight as possible and should be either dowelled and glued or:-
2. Alternatively brace joint with steel strip
3. Fix square block to upper edges of gearbox side panels
4. Fix square block 3/4" below top edge of valances
5. Note 'notch'in gearbox side panel to clear pedal assembly

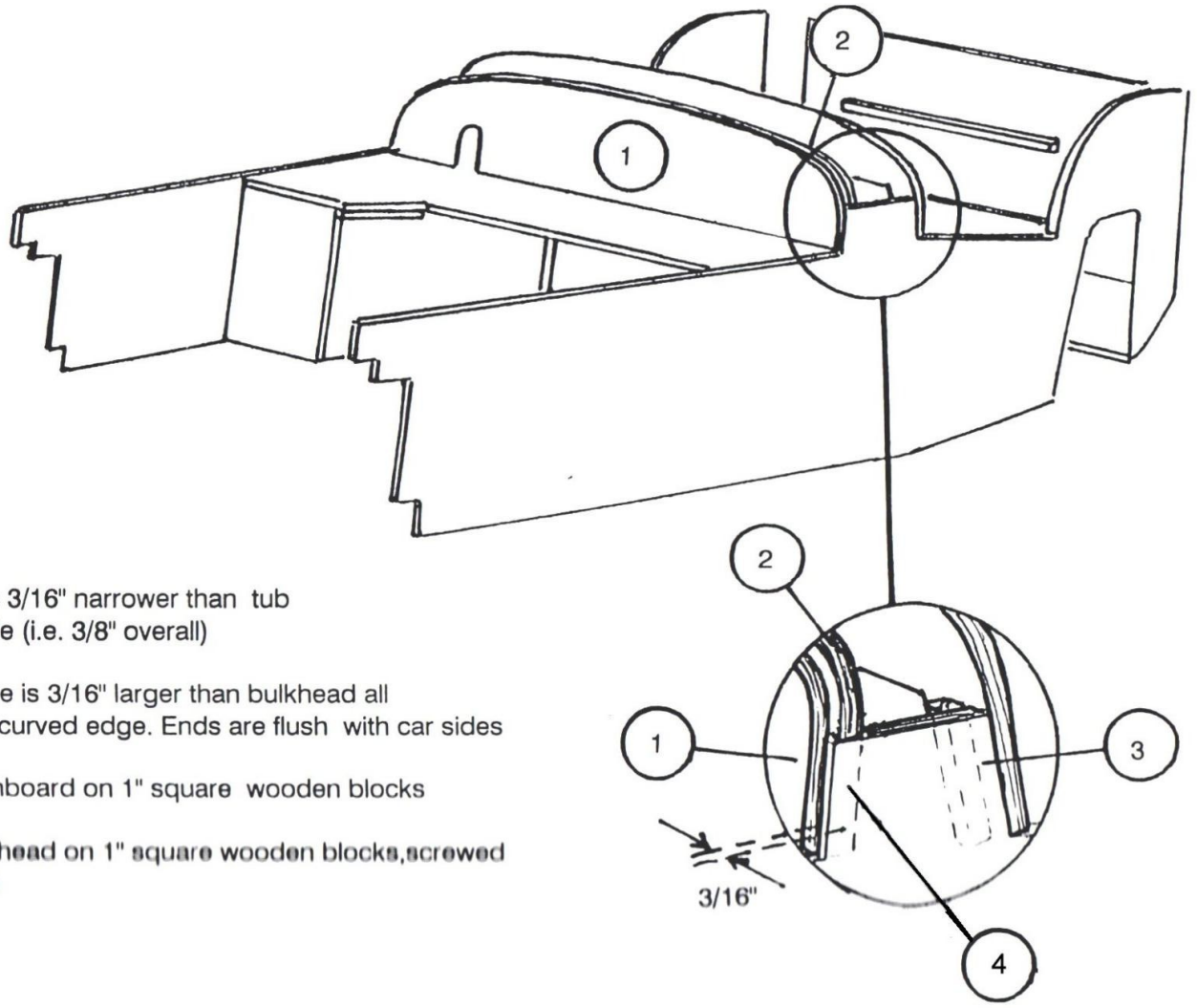
STAGE 9



1. Footwell top separates here into two pieces

2. Fix two separate lengths of 1" wooden block to back upper edge of footwell top

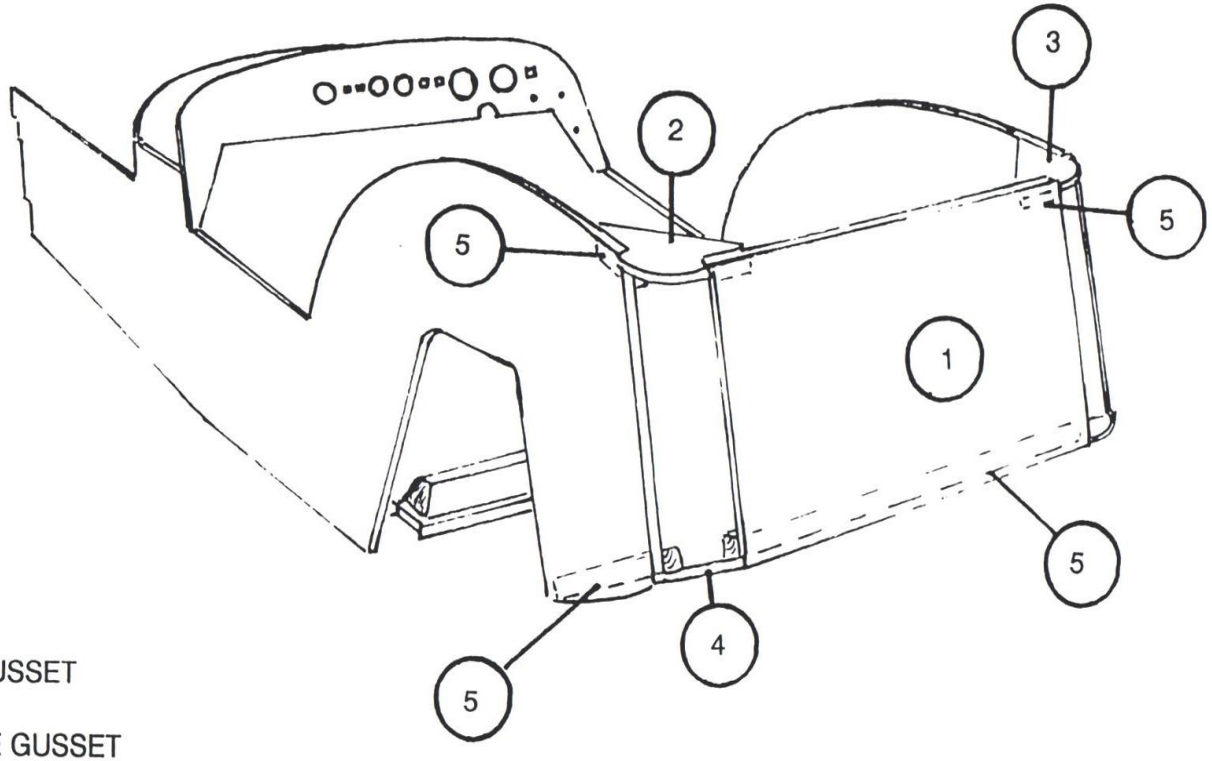
STAGE 10



1. Bulkhead is 3/16" narrower than tub at each side (i.e. 3/8" overall)
2. Facing piece is 3/16" larger than bulkhead all around its curved edge. Ends are flush with car sides
3. Mount dashboard on 1" square wooden blocks
4. Mount bulkhead on 1" square wooden blocks,screwed to valances

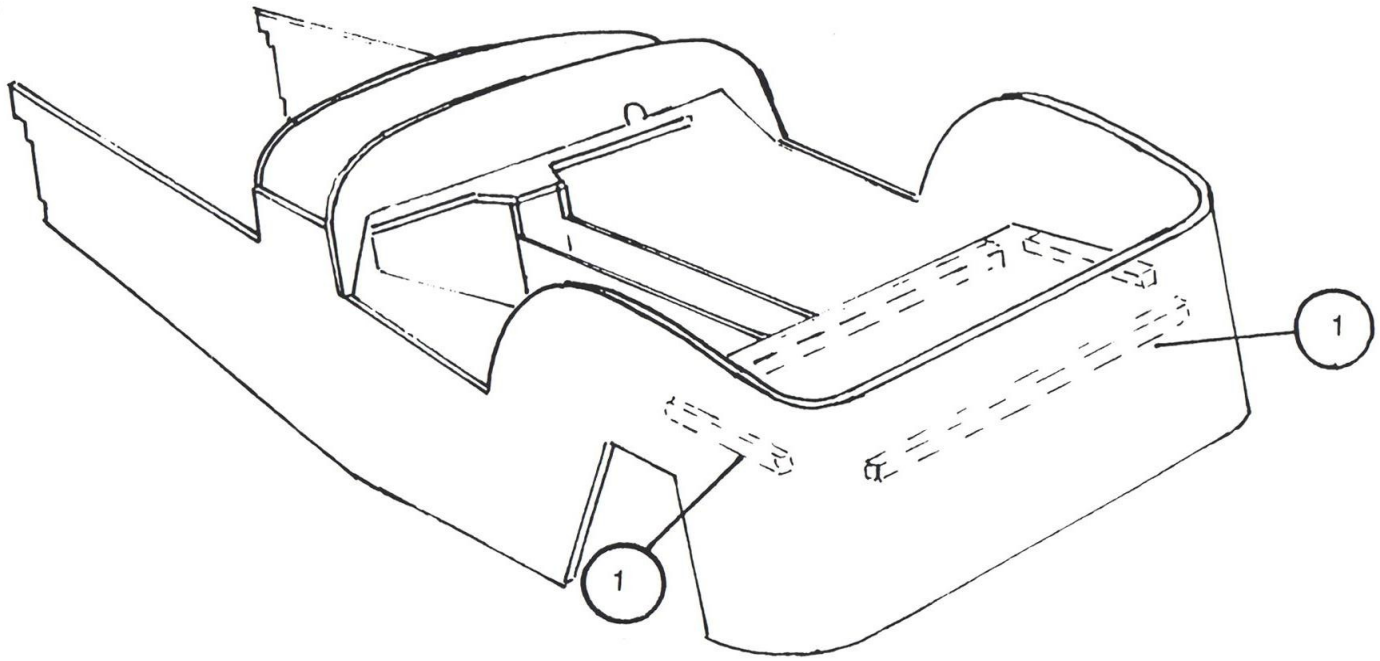
N.B.
Facing piece screws to BACK face of bulkhead

STAGE 11



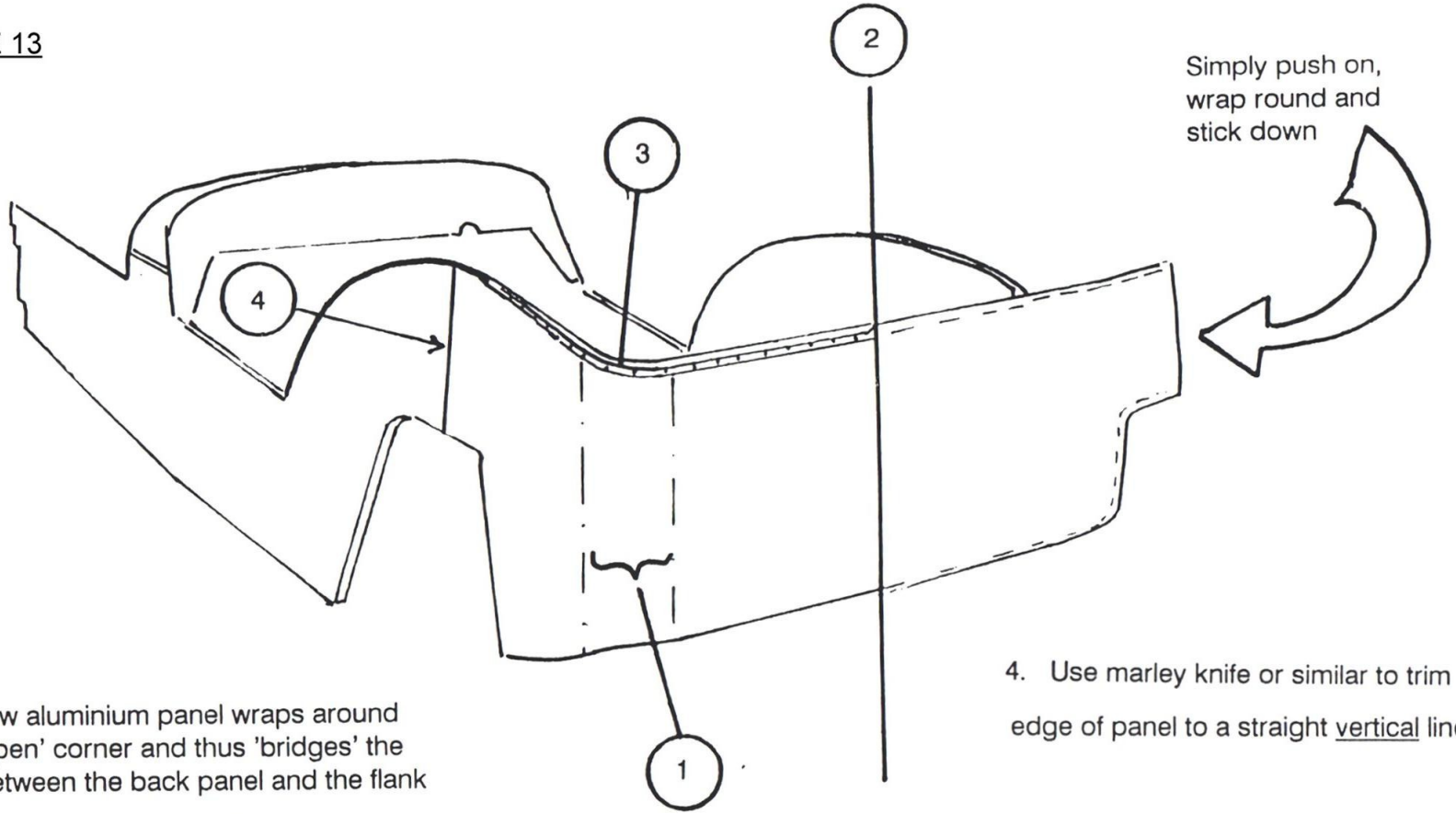
1. BACK PANEL
2. PASS SIDE GUSSET
3. DRIVERS SIDE GUSSET
4. SILL
5. DOTTED LINES SHOW POSITIONING OF MOUNTING BLOCKS

STAGE 12



1. Positioning of block to carry rear floor

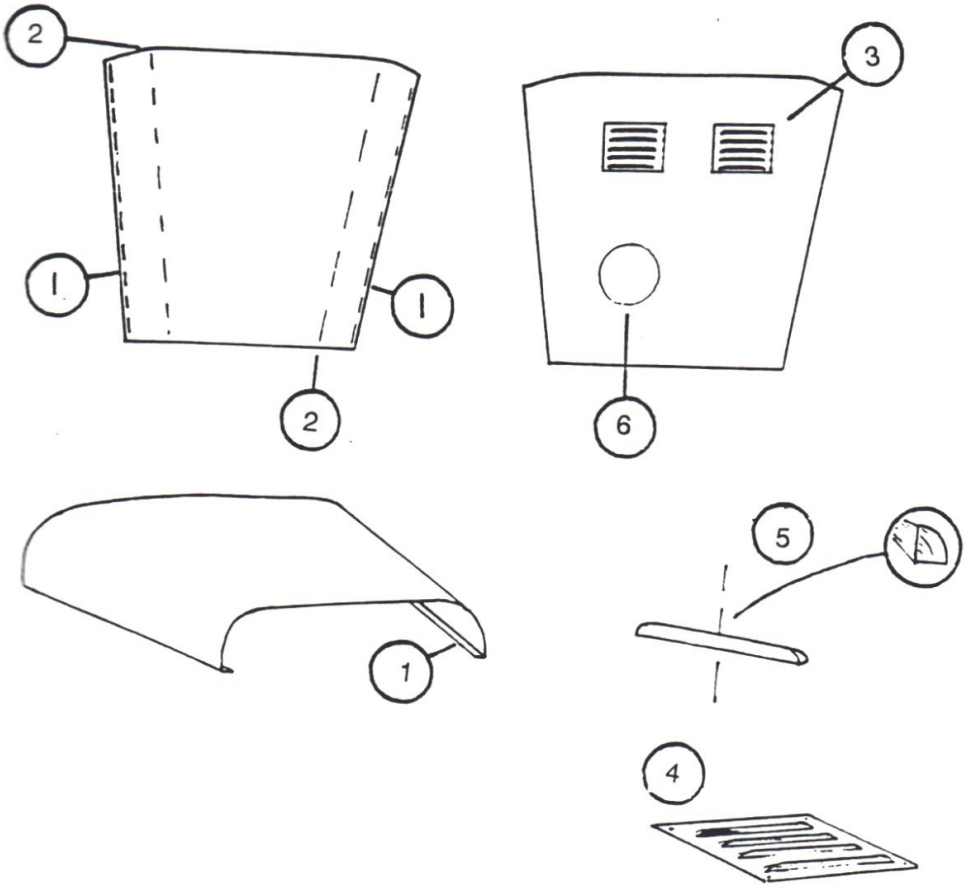
STAGE 13



1. Note how aluminium panel wraps around each 'open' corner and thus 'bridges' the gap' between the back panel and the flank
2. Work from centreline outwards
3. Keep overlap of aluminium to be peened over to a minimum especially around corners (say1/4")
4. Use marley knife or similar to trim edge of panel to a straight vertical line

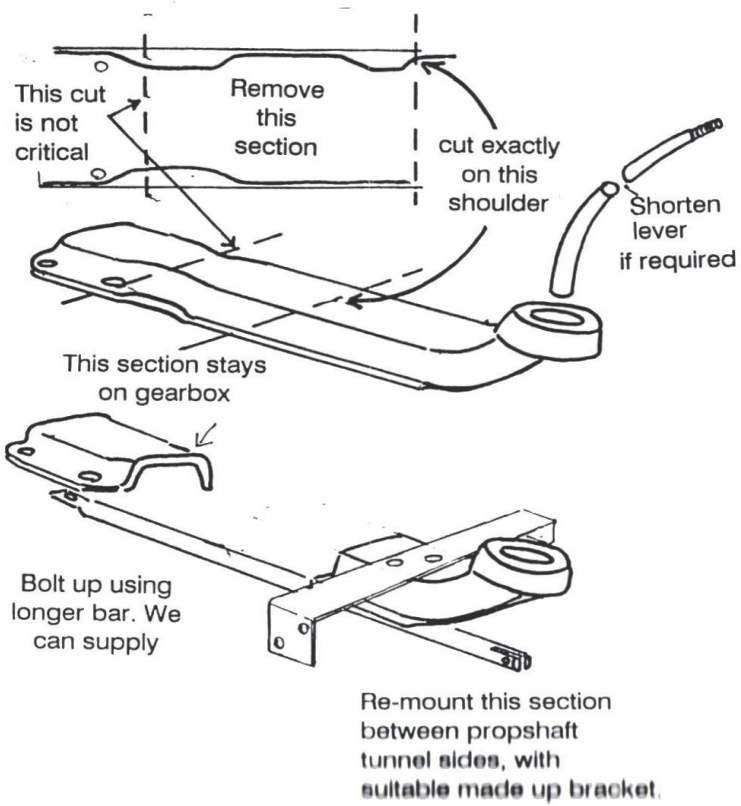
FORMING THE BONNET

STAGE 21

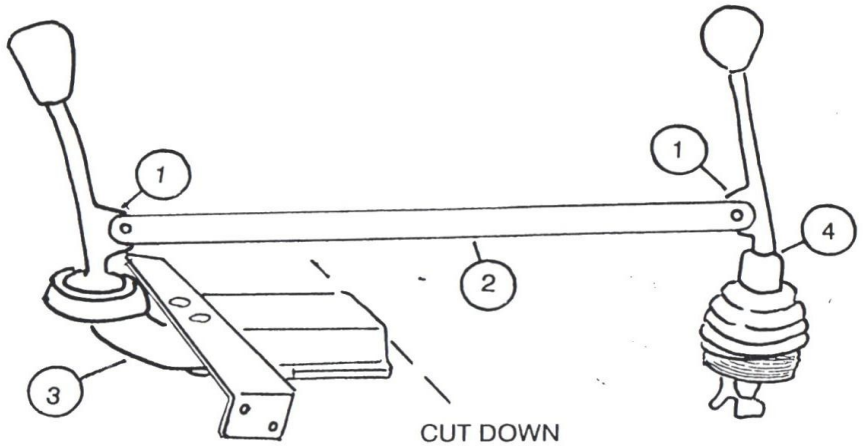


1. Form 3/4" flange at 90, down both sides of bonnet
2. Form curve of 9 1/2" Dia. approx, along this line as marked on pattern. Modify finished curve to suit bulkhead and nosecone as required.
3. Form louvres as required position to own preference.
4. Louvred 'map vents' from builders merchants are one answer.
5. Alternatively, cut slots in aluminium panel and form each louvre in turn over solid wood 'former' made from quadrant beading. Secure former to bench top and beat each louvre using soft faced (rubber) hammer.
6. Cut hole for carb.(if required) . We can supply blister to cover.

TRIUMPH



FORD



1. Weld lugs to levers
2. Connect with flat bar to length required.
3. Use Triumph gearbox neck cut down
4. Remove circlip (Ford). Triumph gearlever controls reverse selection on remote end.

FORD CHASSIS PREPARATION

Ford chassis preparation consists simply of obtaining the required parts and bolting them onto the replacement chassis supplied by us. We also supply the axle clamps, trailing arms and panhard rod to complete the assembly.
Other parts required are as follows: -

FRONT SUSPENSION

Cortina Mk 3 or 4 wishbones, springs, shocks, hubs, brakes, back plates etc. stripped as complete units from the front cradle. These simply bolt back onto our chassis at a narrower track. This necessitates the use of and Escort MK 2 steering rack as the Cortina rack is now too wide. Some
racks are fitted with a short Cortina track rod end which will not allow sufficient track to be gained by adjustment alone. We can supply a rack adjusting spacer if required. (See price list). Discard the Cortina anti-roll bar but save the tie bars. These should be swapped over ‘side to side’ to form trailing compression struts. Save also the collared rubber mounting bushes from the body end of these tie bars. These rubbers are re-located into our chassis. Adjusting the arms to push the suspension forward increases the caster angle and hence the feel or feedback of the steering. Trial
and error adjustment is required on the finished car to give the right ‘feel’.

Although the Escort column (Mk 1 or 2) is used, this needs to be lengthened by a further extension with universal joints this is required so as to reach the rack and route around the offside engine mount and oil filter. It is best provided for via the Cortina lower steering link. The triangular end of the Cortina column should be sawn off and grafted onto the lower Escort column section and the lower Cortina link complete with ‘UJ’ will now connect the column to the rack.

Any crossflow engine and box is suitable, all are interchangeable.

N.B. Only use the Escort engine mountings.

The propshaft should be a single piece straight shaft from an Escort Van or Estate or MK 2 Cortina this will need shortening to suit. After engine installation, measure between the gearbox tail and the differential to find the correct propshaft length. No fixed measurement can be given as the engine mountings and the gearbox lengths vary from model to model. Any Escort MK 1 or 2 axle will fit although obviously a van or estate car differential is not considered suitable due to the low ratio.

The axle is mounted and located by means of four trailing arms and a panhard rod which bolt to the chassis with high tensile bolts and also bolt to the axle by means of ‘axle clamps’ which need welding onto the axle casing. This is mild steel tube and not a casting, so welding of these items
is straightforward. The correct positioning of these is as follows:

The clamp should be mounted equidistant of the centre line at the same distance apart as the trailing arm mounting points on the chassis itself. pack the chassis up on 8" (MIDGE) blocks at all four corners (5" LOCUST). This indicates the eventual neutral ride height. Cut

the front springs to suit the gap between their upper and lower mounting points and add about 1" for settlement.

Roll the rear axle complete (on its wheels) under the chassis and hang the axle clamps loosely in place on the trailing arms and around the axle case. Rotate the neck of the diff. to 'point' at the gearbox neck now having established that the axle is centrally positioned chalk the axle clamp mounting positions onto the axle case remove the full assembly and weld up. This method ensures that the propshaft line of drive is kept straight and not stepped. Upon replacement, the rear springs are either Herald/Vitesse front or Hillman Imp front coils and shocks should be held in position and some shortening may be required as per the front suspension to give the correct ride height. The Imp springs give the hardest ride. If Herald are preferred for softness then heavy duty shocks are recommended. Shortening the Triumph springs removes a lot of preload which softens
them still further.

Remember to take this into account when shortening them. The Cortina Saloon 1300 front springs are recommended these will require shortening by about two loops depending on age and condition, to give the correct ride height.

The springs may be burned through or cut with a grinder. Put the newly formed spiral end downward onto the spring pan (lower arm) which has a slight spiral formed seat, don't forget to allow for compression under load as this will reduce the ride height by about another 1".

If the suspension proves too hard for your liking, some customers report that they have successfully used Escort springs. The overall diameter of these is the same and they should be fitted unshortened, they are much softer and 'squash up' to the required length. If Escort springs are
used heavy duty shockers are recommended.

The handbrake linkage may be concocted from and Ford cable system. A tall lever type handbrake i.e. Rover or MGBGT is suggested for best appearance although the Escort/Cortina handbrake lever can be usefully bolted through the passenger floor adjacent to the tunnel. a drawing is provided showing the Ford chassis layout.

FORD CHASSIS SKETCH AND DETAILS

A FRONT SUSPENSION

Cortina MK 3 top wishbone bottom arm, upright backplate, hub assembly and brakes complete inc. shocks and shortened springs (1300 or Escort front).

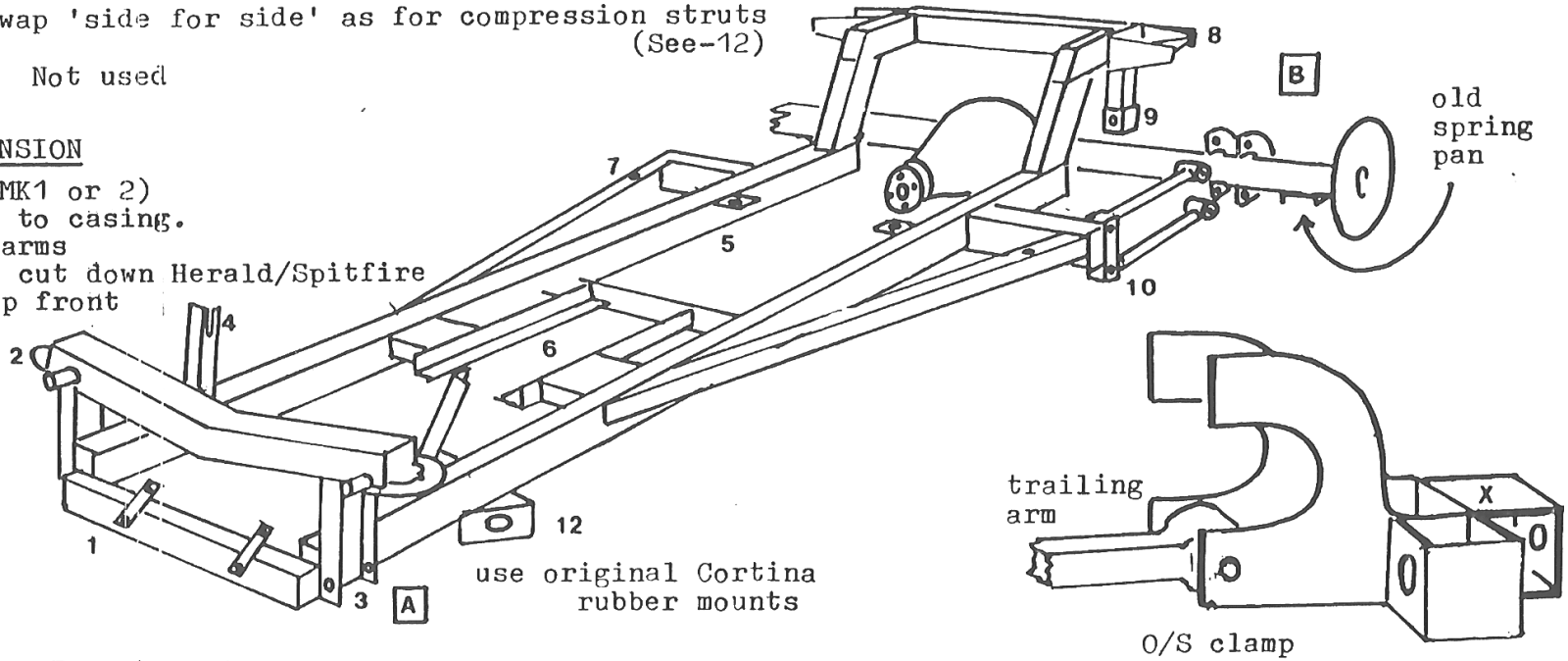
TIE BARS

Shorten and swap 'side for side' as for compression struts (See-12)

ANTI-ROLL BAR Not used

B REAR SUSPENSION

Escort axle (MK1 or 2)
Clamps welded to casing.
Our trailing arms
Suspension is cut down Herald/Spitfire Vitesse or Imp front



(BOTH CLAMPS SUPPLIED WITH CHASSIS)

1 rack mount - Escort MK 2
2 Spring pan for 1300 Cortina (2 loops removed) or Escort front coil (shorten as required) use Cortina top wishbone (MK 3/4)
3 Cortina 3/4 bottom arm
4 engine mounts (1300/1600 crossflow
5 seat belt mounts
6 gearbox mounting pan
7 body mounts/seat belt anchorages
8 rear spring pan takes Herald, Spitfire and Vitesse coil over shocks or Hillman Imp front (remove original top pan but use rubber locator pad)
9 panhard rod mount on chassis
10 brackets for trailing arms
11 axle clamp (offside showing panhard rod mount-to-axle at x)
12 mounting bracket for compression struts

FORD CHASSIS

FITTING OF TRAILING ARMS AND AXLE CLAMPS

Panhard Rod change August ’88.

The trailing arm rubbers are standard Ford Escort inner track control arm bushes. *These may be fitted as follows:

First smear bush in washing up liquid or Swarfega and press same into eye of trailing arm using a vice. A certain amount of fairly fierce side to side and backward and forward movement is required on the free end of the arm as the vice is progressively tightened up.

*If no press is available

Now position the chassis on blocks (5" LOCUST, 8" MIDGE) as per chassis instruction sheet.

Next with the back axle on its wheels roll the axle approximately into position under the rear of the chassis. Position the axle clamps loosely onto the axle casing up against the old spring mounting pads, which should remain horizontal throughout.(See diagram “B").

Now plumb a vertical line between the upper and lower shock absorber mounts. (As viewed from the axle end). Next roll the axle back (rearward) to a position approximately 1/4" “behind this vertical line, (See diagram A’).

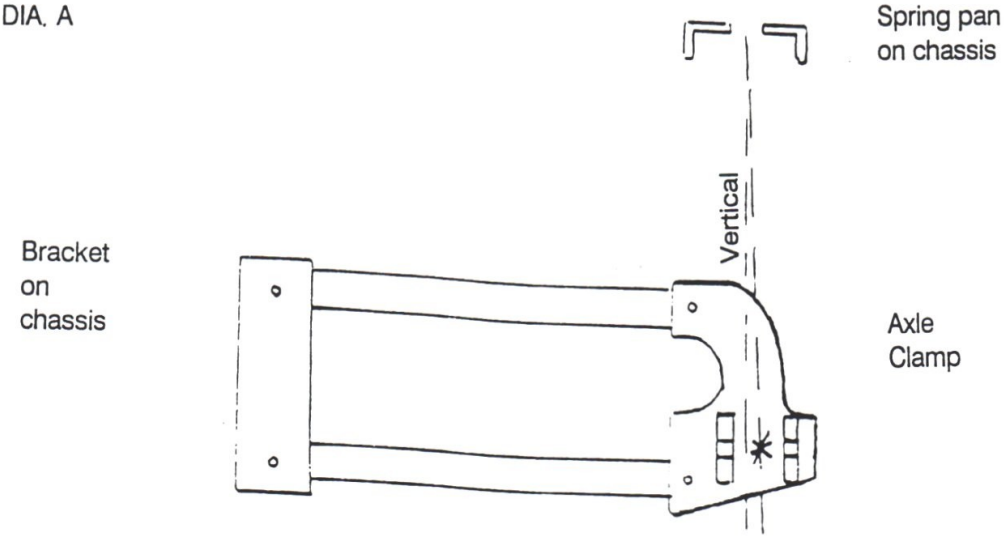
Check the axles alignment by measuring each side of the car between the axle and the chassis, at points marked ’X’ diagram ’B’. The trailing arms may now be placed in situ and the drilling centres chalked onto the clamps. If you are now satisfied that the alignment is correct the clamps may be chalked to record their mounting position, removed for drilling, (See diagrams.— 'C,D & E’) then welded into place on the axle casing.

Tube is mild steel and therefore presents no welding problem.

The trailing arm set up may now be assembled. Note that the Panhard rod is now threaded at its axle end to take
Cortina or Escort MK 2 track rod end, this in turn bolts into the tapered hole in the rear of the offside axle clamp and provides restriction of lateral movement of the axle. Rear track may be adjusted by means of screwing this track rod end which should have a lock nut. Track may be centred by measurement from each side of chassis to wheel rims.

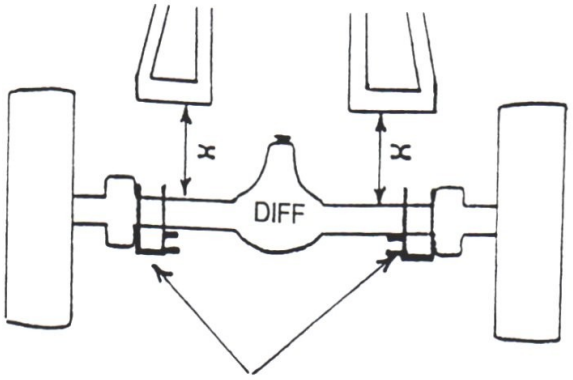
FORD CHASSIS

DIA. A



Position and drill axle clamp so that point * is 1/4" rearward of true vertical position i.e. spring/shocker assembly will be mounted 1/4" out of plumb.

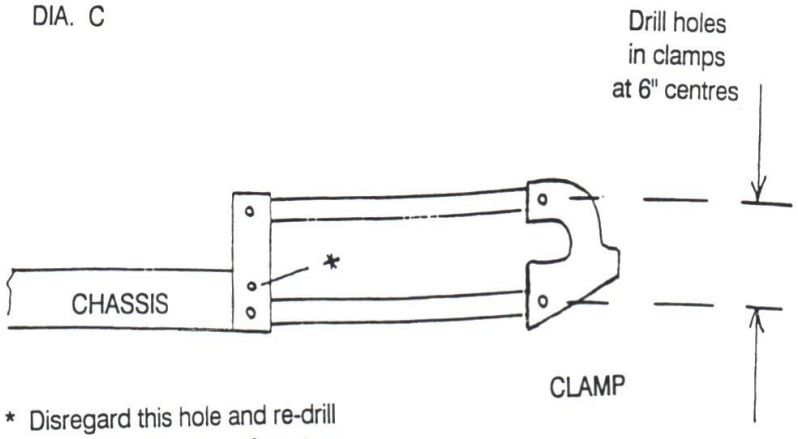
DIA B



Mount clamps hard against old spring pads

FORD CHASSIS

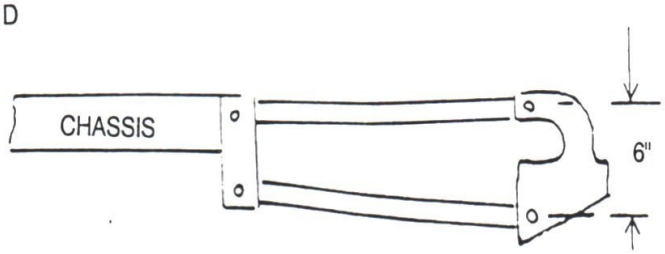
DIA. C



* Disregard this hole and re-drill lower hole at 6" centres from top hole to match clamp

LOCUST post August '88

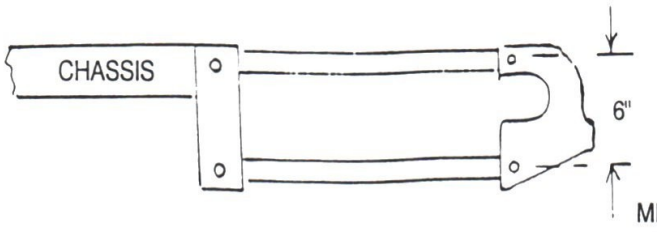
DIA D



Drill holes in clamps at 6" centres

MIDGE pre August '88

DIA. E

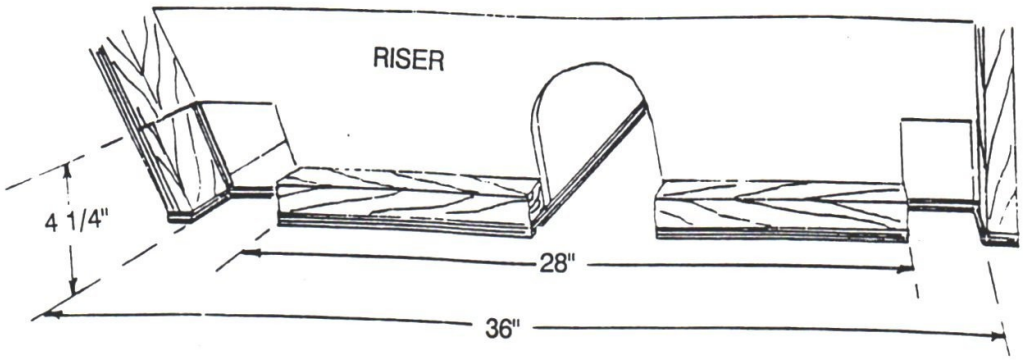


Drill holes in clamps at 6" centres

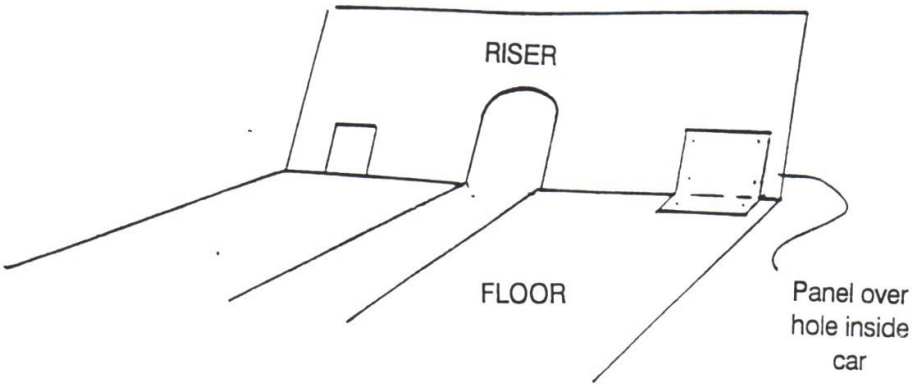
MIDGE post August '88

FORD LOCUST

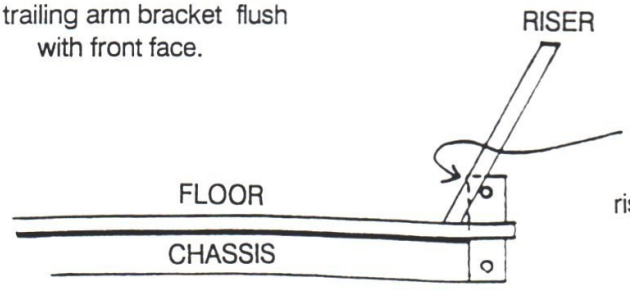
The following modification is required in order to fit the Locust body onto the currrent Ford based chassis.



Notch floor and riser as shown. To clear trailing arm brackets on chassis.



This drawing indicates correct position of body on chassis, prior to to bolting down i.e. with trailing arm bracket flush with front face.



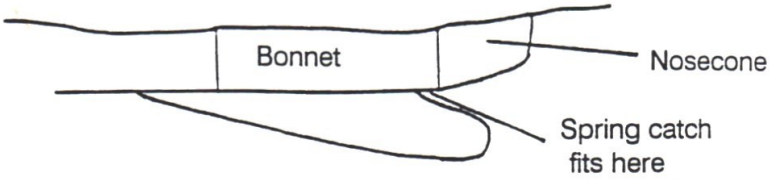
N.B. Trailing arm bracket falls flush with front of riser and does NOT protrude into car.

LOCUST GRP FITTING INSTRUCTIONS

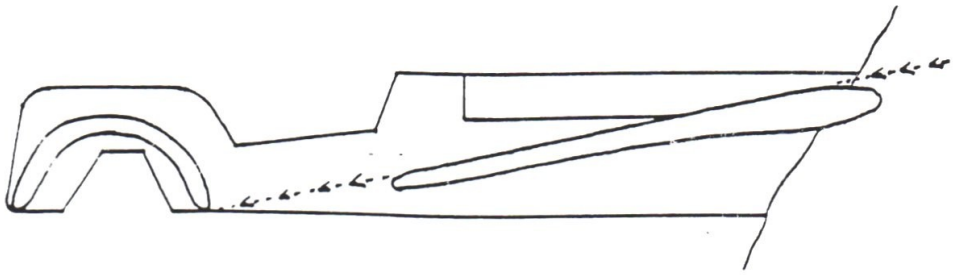
Please note both rear wings are handed and so can only be fitted on the correct side. The two bottom edges of the wing fit flush to the bottom of the body tub, as shown below:-

The main concern when fitting the front wings is the height over the front wheels which is one of personal taste. However they should be mounted far enough back so that the spring bonnet catch is easily reached.

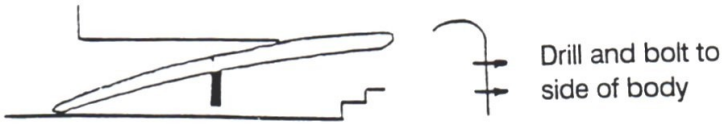
Plan view



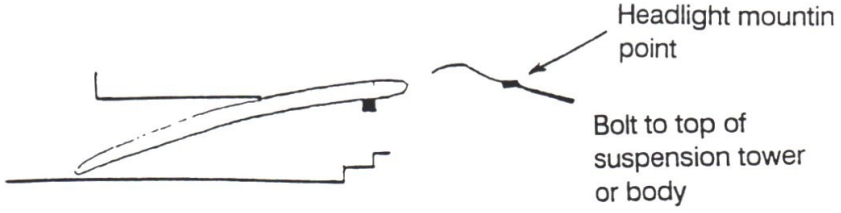
The front wing should then be held on the side of the car with the wing pointing in a straight line to the bottom corner of the rear wing.



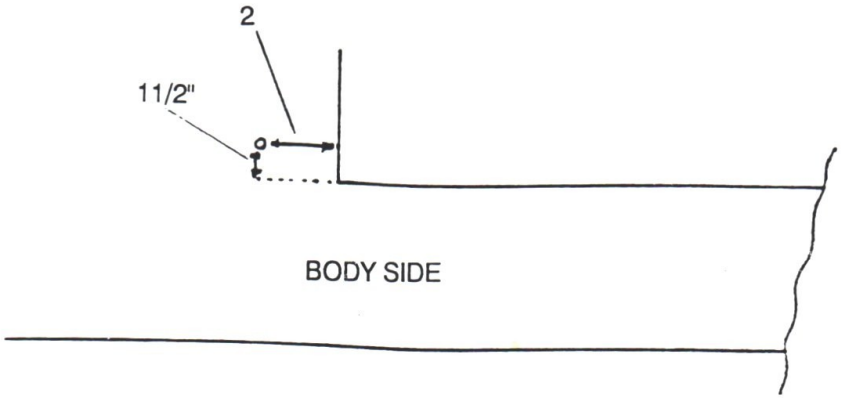
WING STAYS



Position the bracket half way along wing and shape to match the underside of the wing.



LOCUST SCREEN FITTING INSTRUCTIONS



Drill first hole as shown above.
The pattern on the reverse side will describe the remaining holes to be drilled.

As the screen is narrower than the body of the car, the brackets have to be angled inwards as shown below.

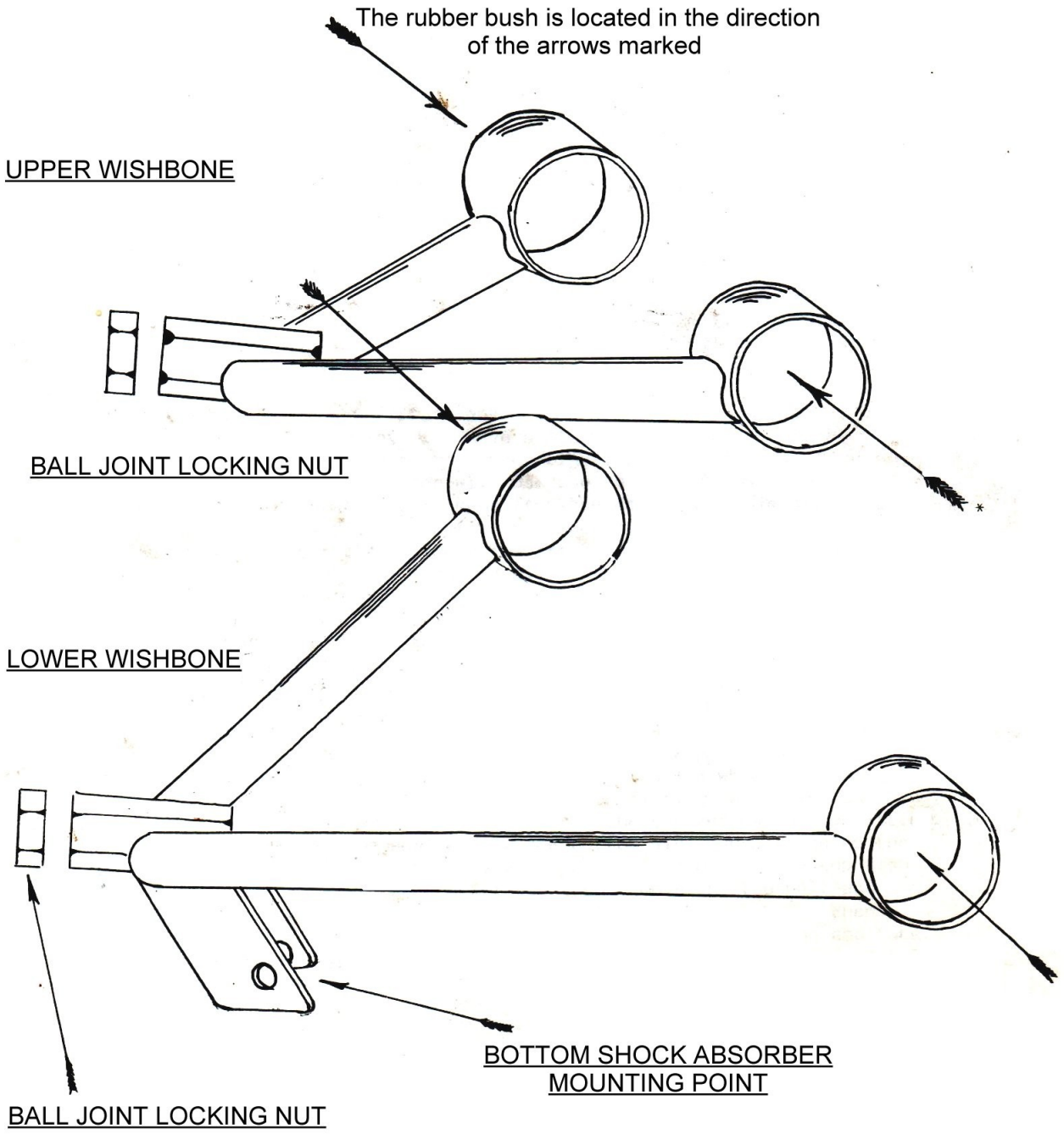
FITTING THE T & J FRONT SUSPENSION

Parts supplied:
1 pair of coil over shockers
1 pair of top wish bones
1 N/S lower wish bone
1 O/S lower wish bone
4 adjustable ball joints
8 bushes (Cortina top wish bone bushes)
4 80 x 12 bolts and locknuts

You will also need:

2 Top bolts from the top wish bone of the Cortina donor (not supplied)

If bushes are not fitted take note of diagram A which will give you the correct way round the bushes locate in to the steel collars of the arms. Screw the ball joints (with the locknuts already on the ball joints) in to the upper and lower wish bones until the end of the thread just starts protruding. The adjustment on these ball joints will give you your camber angle so at this stage of the build just leave loose until a later date. Starting with the top arms first look at the arm from the side and you
will see that the ball joint will have a slight angle upwards to the ball joint end. When the top arms are in the right position they are ready to be bolted into position. You will use the top bolt from the standard Cortina top wish bone which will come from the donor car. The top bolt will need to be removed later to fit the shocker. The bottom arm and shock absorbers can now be fitted. These two arms are sided, they way to determine this is to place them on the floor to give a mirror image, with the suspension points facing down, the straight arms on the wish bones are the forward facing part of the wish bone arms and the sloping arm slopes back to pick up with the pick up point on the chassis. If the bushes are fitted correctly they will have to be fitted from the front and the steel outer collar of the bush will be tight up against the front wish bone collar. These arms can be bolted into position to the front sides of the chassis mounts. The bottom arms may need shimming from the chassis point and inbetween the bush, this will push the bottom arms further forward giving you a greater angle. It is now an ideal time to build up the hub and wheel, and set the caster angle which should be 3% +- 1° before fitting the coiled over shockers. When the caster angle has been set the shocker can now be fitted. Bolt the bottom eye of the shockers to the bottom wish bones, line up the top eye with the tube that the large bolt passes through for the top wishbone, mark either side of the shocker eye then remove the top bolt and cut out the two marked positions for the top eye of the shocker. When this has been done push the bolt partly through the top wish bone and tube. Position the shocker between the cut out tube then push the bolt completely through and tighten, this will compress the top wish bone and the top eye of the shocker all in one. The camber angle will need setting, probably last of all when the car is built, allowing the suspension to settle. The setting for the camber is 0°. To set the camber angle first adjust the bottom ball joints by finding the centre of the chassis and then taking a measurement from either side screw the ball joints in or out to give the same measurement each side. When this has been done check the camber angle, if it toes in at the top remove the bail joint from the hub, screw out the ball joint, and refit. Keep doing this until you get the correct camber, reading. If you have a toe out repeat this but screw the ball joint in.


The rubber bush is located in the direction of the arrows marked
UPPER WISHBONE
BALL JOINT LOCKING NUT
LOWER WISHBONE
BOTTOM SHOCK ABSORBER MOUNTING POINT
BALL JOINT LOCKING NUT

JC FORD LOCUST PEDAL BOX

Note the easier option is to use the T&J pedal box.

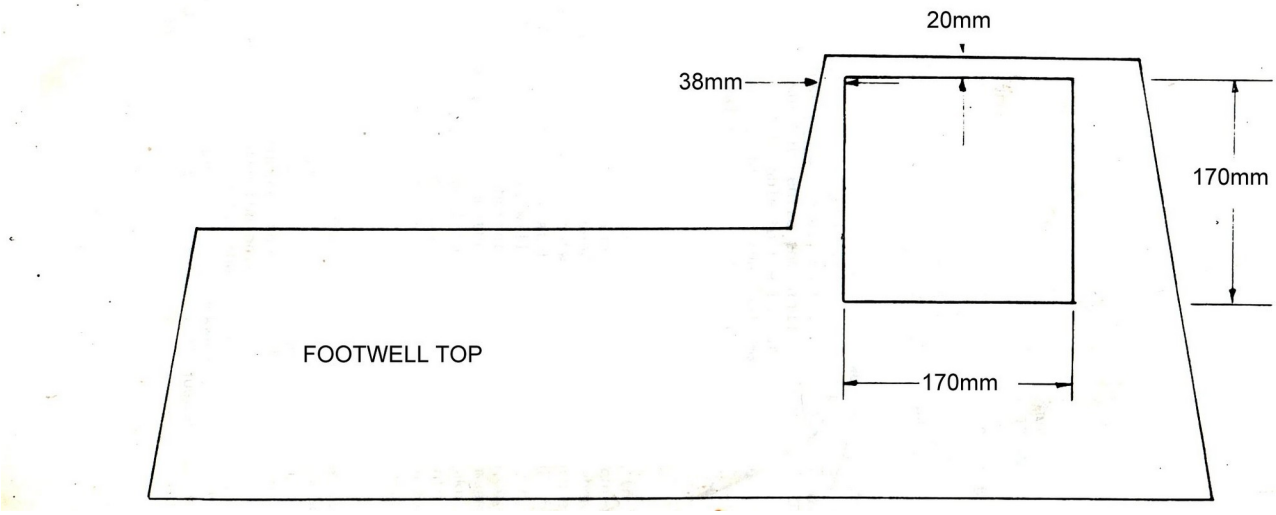
Parts wanted:
MK2 Escort non servo type master cylinder
4 - 5/16" x 1 1/2" UNF bolts, locknuts and washers
T & J Pedal box
Ford Escort MK2 accelerator pedal
1 - 3/16" x 1" UNF bolts and locknuts
Ford Cortina accelerator cable
Ford Cortina clutch cable
1 - 3/8" x 1 1/2" UNF bolt and locknut
Marina clutch pedal
1 - 3/8" nut
Marina brake pedal
1 - 3/8" lock nut
Marina or Ford brake switch
2 - 1" x 1/8" split pins

When building up the Locust pedal box first get two Marina pedals, take the Marina brake pedal and straighten it out. This pedal is now going to be used as the-Locust Clutch pedal, so take a measurement of 50mm up from the main pedal pivot bar centre and drill a 3/16" hole. Use the 3/16" x 1" bolt to bolt the clutch cable to the top of the pedal (note: tighten up the bolt then release slightly so the cable may pivot round the bolt), also looking at the pedal from the front the left hand pivot point collar of the pedal needs to be removed, cut down the side of the pedal, through the collar, this flat face will now sit flush up to the side of the pedal box.

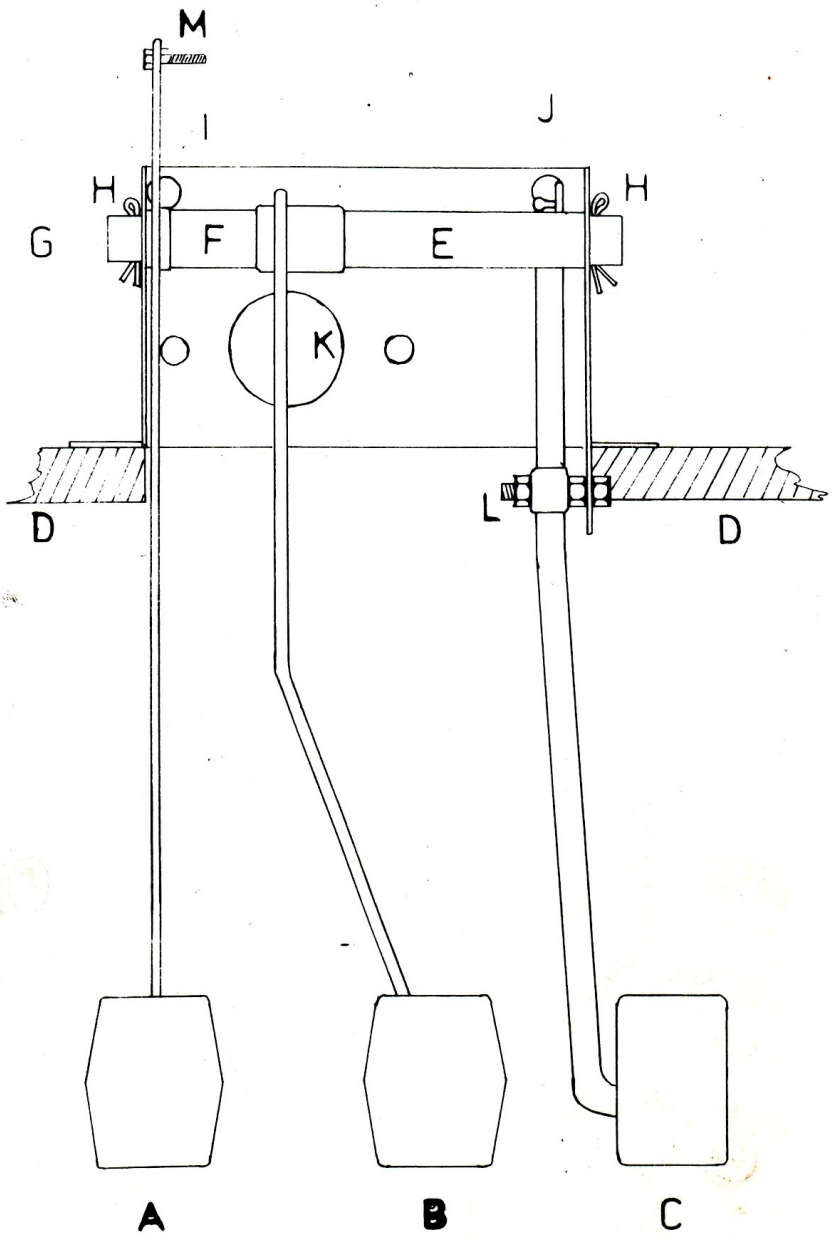
The next step is the Marina clutch pedal which is now going to be the Locust brake pedal, this pedal requires slight adjustment by straightening out the top bend and putting more of a bend on the foot plate, when the pedal is fitted there should be a spacer between the clutch and brake pedal of 30mm. There will also be a spacer at the right hand side of the brake pedal to the pedal box side, this will measure approximately 85mm (this spacer may need to be longer or shorter depending on the gap, but the pedals need to be as tight as possible on the pivot bar). Take a measurement from the centre of the clutch pedal to the centre of the brake pedal, this should measure 100mm. These two pedals can now be fitted into position by sliding the pivot bar through the spacers and pedals. To fix the bar in position drill a 1/8" hole through both ends of the bar and push through the two split pins.

The next step is the accelerator pedal, put the pedal in the vice and knock out the pivot bar leaving a 3/8" hole through the pedal, also straighten out the top section of the pedal. The pedal can now be fitted into position, push through the 3/8" bolt through the lower hole on the right hand face of the pedal box side. Tighten the bolt by using the first 3/8" nuts, push the pedal over the bolt and fit the second 3/8" nut, tighten the nut then loosen slightly so the pedal pivots backwards and forwards. The pedal box is now ready to be fixed into position, with just the cable and master cylinder to be fitted.

FOOTWELL CUT OUT FOR LOCUST FORD PEDAL BOX



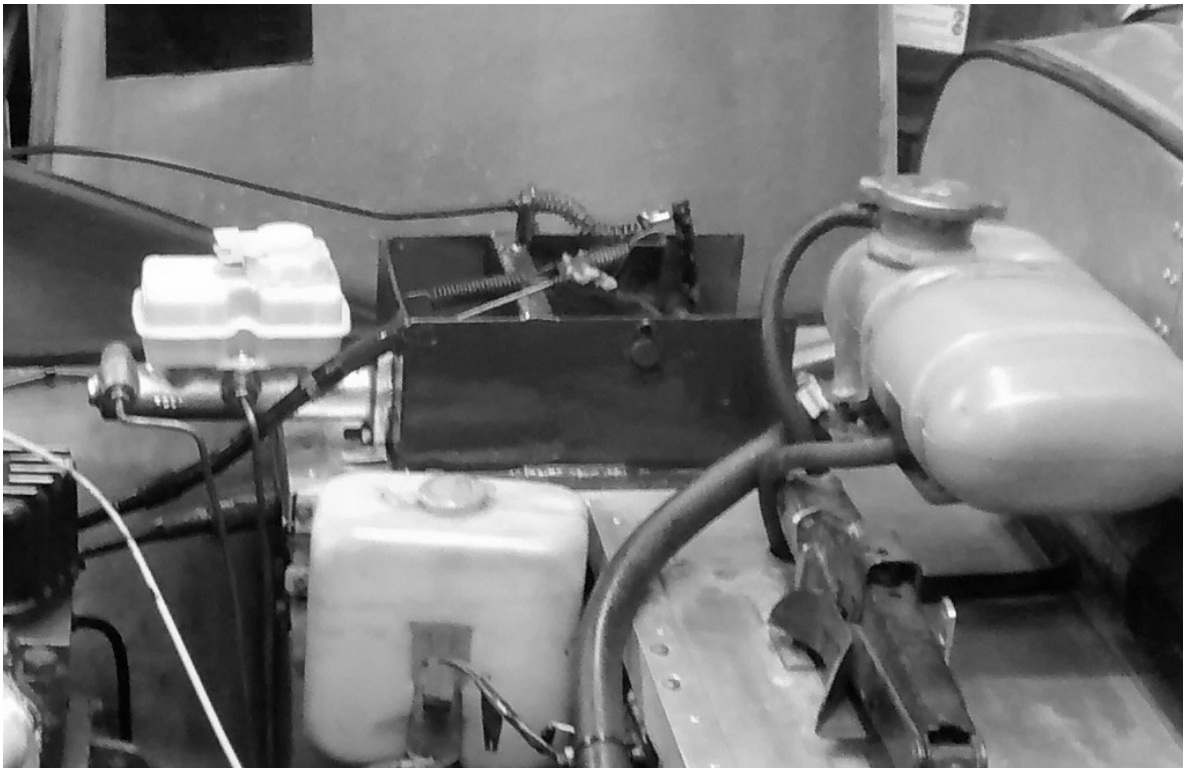
JC FORD LOCUST PEDAL BOX



A MARINA BRAKE PEDAL (NOW LOCUST CLUTCH PEDAL)
B MARINA CLUTCH PEDAL (NOW LOCUST BRAKE PEDAL)
C ESCORT MK2 ACCELERATOR PEDAL
D FOOTWELL TOP
E PEDAL SPACER
F PEDAL PIVOT BAR
G SPLIT PINS

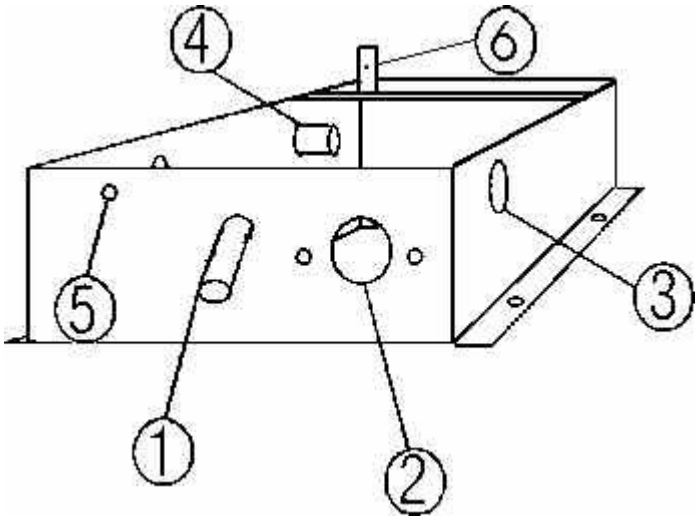
I CLUTCH CABLE POSITION
J ACCELERATOR POSITION
K MASTER CYLINDER POSITION
L ACCELERATOR PIVOT BOLT
M CLUTCH CABLE PIVOT POINT

T&J FORD ESCORT PEDAL BOX



T&J manufacture a purpose built pedal box can be used to mount Ford Escort pedals. This is by far the easiest method. The pedal box as manufactured by T&J takes standard pedals mounted on the Escort pedal hinge pin. The pedals are spaced to suit using appropriate washers and spacing tubes. The Escort throttle pedal will require a slight modification to mount in the pedal box. The pedal box also includes mountings for brake master cylinder (non servo Ford) and clutch cable (Ford Cortina). It is often a tight fit for the pedals and if this is so you can gain extra space by replacing the Driver's Gearbox Side Panel with a thinner material.

Pedal Box



1. Clutch cable receptacle.
2. Mounting for brake master cylinder.
3. Hole for pedal hinge pin.
4. Mounting for throttle pedal.
5. Hole for throttle cable.
6. Throttle cable retainer.

LOCUST WIRING

General Points

If you are using the wiring loom from an existing car you should be able to simply plug in the components and switch on. You may have to modify your loom because the loom does not fit your chassis i.e too long, or you want to fit additional components or you want to remove the wires for components you haven't fitted.

Dismantling

When you take the loom out of your donor car it is really essential to label all the connections as you go. You can do this with bits of white insulating tape and a permanent pen. Don't rely solely on the circuit diagram of your manual as there may be differences.

Renovating and installing a loom

The old wrapping will be dirty, it could hide all sorts of badly-done repairs and breaks. Take the opportunity to take the wrapping off and replace it later. Leave on the tapes you will find underneath at junction points - otherwise the whole thing will collapse into a tangle. You should find once the loom is bare that you can see what goes where and how the system fits together, which makes life so much easier. Once you start putting the loom into the car, do it without re-wrapping it so that you can adjust exit points of wires from the loom, put in extra wires (e.g rear fog lights) and remove ones you don't need (rear window heater, courtesy lights). Tape the exit points where wires come out of the loom. Get all the connections sorted. Then with everything connected, test the whole lot. Then you can re-wrap the loom, using non-adhesive pvc tape. - you don't need to take it out of the car to do this. Don't forget to put grommets onto the relevant parts of the loom before you put all the connectors on and before you wrap it.

FORD ESCORT WIRING LOOM

There are colour codes for vehicle wires. In fact there are several sets of codes - older British cars have one set, older continental cars like the Escort have another (DIN standard), and this seems to have changed in more recent cars. The main colours in the Mk1 and 2 Escorts are:

Colour	Main uses	Examples
Red -	direct supply from the battery, always on.	Starter cable from battery Cable from Alternator to battery and ignition switch Supply to steering column switches for lights Supply to courtesy lights and clock
Black	switched supply (and negative battery lead)	From Ignition switch position 2 to components which are only on when ignition is on. The supply wire for the reversing lights is black.
Black / yellow	ignition circuit	supply to coil, tachometer, instrument voltage regulator
Black / red	ignition switch start position	to starter solenoid
		(also) brake lights
Black / green	offside indicator	
Black / white	nearside indicator	
Black / green / white	supply to indicators	
Black / blue	supply to washer pump	(can also be supply from ignition switch to solenoid)
Brown	all earth wires (to chassis)	
Brown / yellow, Brown / green, Brown / white	switched earth (I think)	circuits where the switch is on the earth side of the circuit rather than on the supply side - parts of the heater circuit, the brake warning light circuit and bits of the wiper delay.
Grey	sidelight / panel light supply	divided into - see below
Grey / yellow	panel lights	
Grey / white	nearside side lights	
Grey / red	offside side lights	
White	headlight main beam	
Yellow	headlight dipped beam	
Blue / black	fuel tank to fuel gauge	
Red / white	temp. sender to temp. gauge	
Blue / green	oil sender to oil warning	

	light	
Green	wiper supply	slow speed
Red	wiper supply	high speed
Pink / white	ballast resistor wire to coil	

You may have a serviceable battery. If not you can buy one for about £40, Don't mess about with second hand units from scrapyards.

Headlights
The Escort loom may be too short to reach the headlight units. You can take a pair of headlamp looms from a Mini: they have a bulb holder for the sidelight which then lines up with the gap in the reflector of the standard Escort round sealed beam unit, which means you don't need separate side lights. The wire colours for this part are: black = earth, red = sidelight, blue / red = dip, blue / white = beam.

Repeater indicators
Some posh Escorts had these but most did not. hey should be wired in with the front indicators, by connecting feed wire to feed wire and earth to earth.

Wipers
Assuming you are using a BL wiper motor, you have the problem that the wire colours are different to those on the Escort.

The Escort has five wires to the wiper motor, in two groups - two power wires (green and red, from the column stalk) which have a grey plug, and three other wires via a black plastic connector to a headlamp-type plug on the wiper body (these are the motor earth and the park wires).

The BL motor also has five wires doing the same jobs, going to a 5-way multi connector with 4.8mm female spade terminals which plugs into the wiper unit. You should cut off this connector with as much wire to spare as possible when you get your motor from the scrapyard. You can remove the wires from it by poking a small pointed object into the business side of each terminal - there is a small cut-out - and bending the non-return lug flat. This allows you to use new terminals. Or, you can leave the wires in place and make soldered connections to the Escort wires.

The big question is, which Escort wire to which BL wire? OK - BL black is the motor earth, which goes to Escort brown / white. Escort green is low speed, and goes to BL red/green. Escort red is high speed, going to BL blue/green. Escort black/violet is the park power supply and goes to BL green. Escort black/brown is the park earth and goes to BL brown/green.

If your Escort has a wiper delay (marked on the column stalk, plus you have a large red relay like a flasher relay) then this will work fine with the BL motor. Its wiring isn't detailed in the Haynes manuals, so I can't help if you don't have one but want to add one.

Dashboard switches

There are many ways to connect the various items that were controlled from the stalk switch on the Escort. Most people use individual dash mounted switches for the various components but beware of the SVA requirements the old type of toggle switch can not be used. You will have to source the safer rocker switches.

Hazard switch

Your hazard lights must work with the ignition off or on. The original Escort loom uses only one flasher unit to work indicators and flasher, and does this by having a special switch. The switch has seven terminals: 1: flasher unit feed (two terminals, a black/yellow feed wire and a black wire to the flasher unit) which is "on" when the hazard lights are off), 2: battery input (two terminals, a red and a brown which gives power to the flasher unit when the ignition is off) and 3: hazard flasher supply (three terminals, a black/white/green input from the flasher unit and two outputs to the lights, black/green and black/white. The switch keeps the battery input and the hazard flasher supply groups of terminals separate (otherwise the hazard lights would be permanently on). If possible use this switch.

A standard after-market hazard switch has only six terminals, in a group of two and a group of four. You need a separate flasher unit for your hazard lights if you change to one of these switches. Proceed as follows: take a battery feed (red) wire to the B terminal of the new flasher unit, and put in a new wire from the L terminal to the new switch. Connect the two wires which were on the old flasher unit feed to the pair of terminals on your new switch. Lose the black/white/green wire (cut it off short and tape it back into the loom). Connect the remaining three wires (black/green, black/white and the red supply wire) to any of the four other terminals (I mean one terminal per wire, not all wires to one terminal!). If your new switch has a telltale lamp, take a short wire from the fourth terminal to the positive side of the lamp, and an earth wire from the negative side to earth.

Rear Lights

There are many ways of getting a set of rear lights, such as buying a trailer lighting board. For SVA purposes you must have: indicators, stop lamps, tail lights/rear side lights, a rear fog light and two reflectors.

Electric cooling fan

Assuming you are putting in a cooling fan and using a x-flow engine, you should have got a Fiesta (or similar) temperature switch in the thermostat housing you found in the scrapyard. To get this to control your fan you could just wire a supply to one side of the switch and the other to the fan, taking the earth lead from the fan to the chassis (after checking the fan is blowing or sucking as required). However you ought to use a relay to switch the fan on and off. You need a simple (and cheap) 4-blade relay - The relay will have the following numbers on the terminals: 30 (supply from ignition switch terminal 30,

i.e. on when ignition is on), 87 (output to fan), 85 and 86 (switching current - it doesn't matter which terminal is wired "live"). Proceed as follows: run a cable from the black terminal of the ignition switch or from the fusebox to the relay terminal 30. You ought to have an in-line fuse in this cable. Connect the output from terminal 87 to the fan input, connect the fan output to the chassis. Connect a similar feed wire (which could be the same one) to the control input, terminal 85. Connect terminal 86 to one side of the temperature switch, and the other side of the temperature switch to earth. Do not connect the fan circuit (heavy current) to terminals 85 and 86, as this won't work.

Dashboard (adapting to non-Ford instruments)
The dashboard wiring tends to get messy because unless you have a removable scuttle it is hard to get at. The main bits are:

Panel lights and earth: You should have panel light feed wires (gray/yellow) hanging out of the dash area of your loom - they often get cut and adapted in the life of a car as accessories are added and removed. They go to the panel lights, preferably only using one wire to keep the mess at bay. Depending on the instruments you are using, illumination will differ. With after-market gauges or salvaged Smiths ones, the panel lights sometimes have a red feed wire and black earth wire because of the old British standard system. If you want dimmable panel lights all you need to do is find a dimmer switch in a scrap car and wire it into the FEED wire. Don't put it in the earth wire unless you are sure no other dash components are using that particular wire.

Voltage regulator: Screwed to the back of the Escort instrument cluster is a small rectangular box, probably a bit rusty. This has two springy brass contacts on it. This unit is the instrument voltage regulator, and governs the voltage used by electrical gauges (fuel, temperature etc). It has an input and an output terminal (input is right-hand side as you look at the back of the Escort cluster), and if you connect it back to front it won't work. It needs to be fixed somewhere under the dash, and you then connect its original black/yellow feed wire to the input and a feed wire from the output to the various gauges' input terminals. You can use 6.3mm spade connectors on the unit if you snip off the bent-back part of the terminals.

Tachometer: These instruments use the pulsing of the ignition circuit to show engine speed. There are 2 types of tacho you may meet. The older Escorts had one continuous wire from the coil negative terminal through a sensor on the back of the tachometer and back to the distributor. Some Smiths tachos use the same system. Happily, later models are more sensible: they have feed wire (black/yellow) and a trigger wire (should be green), the trigger wire coming from the coil negative post but not going back to it.

Telltale lights: When you took your loom to bits you marked the connectors, of course. The one or (for tacho-equipped cars) two instrument connectors are as follows: tacho trigger (green), tacho supply (black/yellow), panel light supply (grey/yellow) and earth (brown) make up the smaller connector. The bigger one has: panel supply and earth (as

previously), indicator telltales (right is black/green, left is black/white), beam telltale (blue/white), fuel sender (blue/black), temp sender (red/white), voltage regulator feed (black/yellow), oil pressure sender (green/blue), charge warning sender (blue). If you want to use alternative telltale lights, you need only wire the relevant sender wires to one side of your new lights and the other side to earth. The exception to this is the oil pressure light, since it earths through the engine block. This circuit needs a live feed to its telltale lamp (it uses the voltage reg. feed in the original dash) and the blue/green wire goes to the negative side of the lamp, thence to the sensor on the engine.

Fuse Box
If possible fit the origional Escort fuse box. Because the connectors to the box are moulded onto the loom I would not advise getting an after-market fuse box.

Starter and solenoid
If you are staying with the Escort engine and gearbox simply mout the Escort solenoid some ware suitable.

If you want to change an inertia starter for a pre-engaged one (if you are using a Sierra gearbox), you won't need the old solenoid because the pre-engaged starter has the solenoid mounted on it. After you have finished modifying your Sierra engine backplate to get it to fit your x-flow (the x-flow plate starter holes don't match a sierra gearbox) you need to make the connections as follows: red battery cable - the big one - to the big terminal on the starter solenoid, and the black/red cable which was connected to your old solenoid, which runs from the ignition start position, to the small terminal. There is a third terminal on the solenoid, but it is the output to the started motor and should not be touched.

SVA
There are several sections of the SVA test which affect the electrical system.
Lights and position of lights: You must have the obvious lights (indicators, hazard lights, headlights, sidelights, stop lights) and also a rear fog light. The units must either be E-marked or else give an light equivalent to an E-marked unit. There are detailed instructions for the position of lights relative to the sides of the vehicle and to the ground, and angles of visibility - you really need the SVA Tester's manual for this, but you ought to get it anyway.
Security / tidiness of wiring: Untidy wiring, poor connections or lack of protection for the loom from abrasion or heat could all be failure points, as they could for an MOT test.

<u>Compulsory components :</u>
A brake fluid warning light which is visible to the driver and which illuminates when the level in either brake circuit is low. The light must be fitted with a test switch to allow you to test the warning bulb.

A hazard light circuit with a switch which has a telltale light visible to the driver.

A rear fog lamp whose switch has a telltale light visible to the driver. The fog lamp must not operate in conjunction with the stop lights.

Telltale lamps for left and right indicators and for main beam (visible to the driver).
Stop lights operated from the brake pedal or brake fluid pressure.

Dashboard projections: When you choose switches, remember they are not allowed to project more than 5mm from the dashboard in most instances, which means you need rocker switches.

TRIUMPH WIRING LOOM

Most British cars tended to use the Briish Standard BS-AU7 to determine the colour of wire to each component Lucas used this. A list can be found here. Lucas wiring Colours

The wire colours in this chart are based on the standard Lucas wiring colour scheme.

LOOM TERMINATION SHEET

1. DASHBOARD

a.	Hazard switch (Hella)	Purple	30
		Black	31
		Orange	49
		Lt Green/Brown	49a
		Green/White	R
		Green Red	L
		Green	15
b.	Fog light switch	Red/Black	Supply +
		Yellow/Red	to fog light
		Yellow	to dash light
c.	Wipe/Wash switch	Green	Supply+
		Green/Black	Washer
		Brown/Green	Wiper motor
		Red/Green	Wiper motor
		Blue Green	Wiper motor
d.	Horn Push	Purple/Black	To Horn
		Black	Earth
e.	Indicator switch	Lt Green/Brown	Supply +
		Green/Red	LH indicator
		Green/White	RH indicator
f.	Ignition/Starter	Brown	+ Feed (30)
		White	Ignition (15)

		White/Red	Starter (58)
g.	Oil gauge	Lt Green	Supply if electric gauge
		Red/White	Light
		Black	Earth
l.	Volt Meter	Green	Supply
		Red/White	Light
		Black	Earth
l.	Fuel gauge	Lt Green	Supply +
		Red	Light
		Black	Earth
		Green/Black	To sender
j.	Temp gauge	Lt Green	Supply +
		Red/White	Light
		Black	Earth
		Green/Blue	To Sender
k.	Voltage Regulator	Green	Supply +
		Lt Green	Stabilised Output
l.	Light switch	Brown	Supply +
		Red	To side lights
		Blue	To Head lights
m.	Dip Switch	Blue	Supply
		Blue/Red	To dip lights
		Blue/White	To main beam
n.	L/H indicator lamp	Green/Red	
		Black	
p.	Hazard lamp	Yellow	
		Black	
q.	Oil warning lamp	White/Brown	
		White	
r.	Main beam lamp	Blue	
		Black	
s.	Charge warning lamp	Brown/Yellow	

		White
t.	Brake fluid lamp	Black/White
		Green
u.	R/H indicator lamp	Green/White
		Black

2. LIGHTS

Front R/H	Side Light	Red/White
	Indicator	Green/White
	Main beam	Blue/White
	Dip beam	Blue/Red
	Earth	Black
Front L/H	Side Light	Red/Black
	Indicator	Green/Red
	Main beam	Blue/White
	Dip beam	Blue/Red
	Earth	Black
Rear R/H	Side Light	Red/White
	Indicator	Green/White
	Brake light	Green/Purple
	Fog light switch	Yellow/Red
	Earth	Black
Rear L/H	Side Light	Red/Black
	Indicator	Green/Red
	Brake light	Green/Purple
	Earth	Black

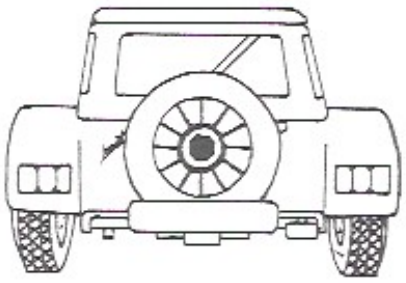
Locust

T & J SPORTSCARS

Affordable Exhilaration

ENGINE AND TRANSMISSION

Engines:	Ford Crossflow range
Cooling:	Ford Escort Mk. II radiator
Gearbox:	Ford Escort or Cortina
Propshaft:	Ford Escort (one piece)
Rear Axle:	Ford Escort Mk. I and Mk. II
Wheels:	Any. Must be Ford Escort inset
Tyre size:	185/70 R 13.

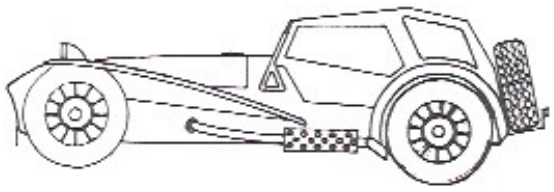


BODY / CHASSIS

Body:	Wood and aluminium with fibreglass wings and nose.
Chassis:	Ladderframe
Front suspension:	Ford Cortina wishbones
Rear suspension:	Trailing arms and Panhard rod
Front brakes:	Ford Escort/Cortina discs & calipers
Rear brakes:	Ford Escort drum
Steering:	Ford Escort Mk. II rack & pinion

DIMENSIONS AND WEIGHTS

Overall length:	11 ft. 4 ins.
Overall width:	5 ft. 3 ins.
Cockpit width:	37½ ins.
Cockpit length (pedals to seat riser) :	39 ins.
Seat squab width:	15½ ins.
Total weight:	
Ground clearance:	4½ ins.
Insurance Group:	1300 Gp 4 1600 Gp 5



A MEMBER OF STATUS

Locust

T & J Sports Cars

Unit C, 11 Gateway Industrial Estate, Parkgate,
Rotherham S62 6JL.
Telephone 0709 527090

Specifications.....

	Midge (Triumph)	Midge (Ford)	Locust (Triumph)	Locust (Ford)
Overall length	3350mm	3350mm	3570mm	3570mm
Overall width	1480mm	1480mm	1600mm	1600mm
Chassis options	Herald (2+2 & 2 seat) Spitfire (2 seat) T & J (2+2 & 2 seat)	T & J (2+2) T & J (2 seat)	T & J (Triumph based)	T & J (Ford based)
Engine recommendations	Triumph 1300cc 1500cc (2000cc T&J chassis)	Ford 1100cc 1300cc 1600cc	Triumph 1300cc 1500cc	(Ford X flow only) 1100cc 1300cc 1600cc
Gearbox recommendations	Standard Triumph Inc. Overdrive model	Escort or Cortina 4/5 speed	Standard Triumph Not overdrive	Escort/Cortina 4/5 Speed
Front suspension	Triumph original may be lowered and softened as required	Cortina wishbones/ shocks Escort springs Adjustable Spax recommended	Triumph original may be lowered and softened as required	Cortina wishbones/ shocks Escort springs Adjustable Spax recommended
Rear suspension	Triumph (remove leaves to soften) may be lowered to match front by fitting spacing block	Escort 5 link supplied with chassis Dolomite rear springs over Spit. front shocks Adjustable Spax recommended	Triumph (remove leaves to soften) may be lowered to match front by fitting spacing block	Escort 5 link supplied with chassis Dolomite rear springs over Spit. front shocks Adjustable Spax recommended
Tyres	175/13	175/13	185/70/13	185/70/13
Hood/sidescreens	Yes	Yes	Yes	Yes
Tonneau cover	Yes	Yes	Yes	Yes