CONTENTS

TOOLS YOU WILL NEED

SPANNERS

2BA Open ended	
7/16" AF Open ended	7/16" AF Ring
1/2" AF Open ended	1/2" AF Ring
5/8" AF Open ended	11/16 AF Ring
11/16" AF Open ended	1⅛" AF Socket (for SEI only)
3/4" AF Open ended (SEI only)	3/4" AF Ring (SEI only)

Spanners to suit non-kit components

OTHERS

Hacksaw	Metal cutters
Set of Screwdrivers	Pop rivet gun
5/16" Round file	1" Flat file
Electric drill	3/16",1/4",& 5/16" drill bits
Tape measure	

Westfield Sports Cars Ltd.
5, Gibbons Industrial Park
Dudley Road
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West Midlands DY6 8XF **Telex:335494 Westfield G**

Manual written by Jenvey Dynamics Ltd. Bridgnorth, England

WESTFIELD SE — GUIDE TO COMPONENT SELECTION

ENGINE
Any Ford "Kent" unit may be used, the 1600cc G.T. versions being ideal. Mountings are Ford Cortina MkII 1600cc,'67-'70, right hand only, part number EM1363. The engine sump is the lowest part of the car and its depth therefore directly affects ground clearance. A 6½" deep sump and suitable oil pick-up pipe is available from a number of Ford models, and we recommend this or, better still, our *Westfield* 5½" Baffled Sump and Pipe.
Please consult us if you intend to install more than 200 B.H.P. or other engine types.

GEARBOX AND PROPSHAFT
The *Westfield SE* is designed to take any of the Ford "single rail" gearboxes. However, the Escort version places the gearlever inconveniently far forward and is best avoided. Ford's G.T. models provide the most suitable gear ratios whilst gearboxes used with the 2 Litre engines are stronger and best considered for power in excess of 130 B.H.P.
The preferred clutch is cable-operated and may require a change of bell-housing to suit.
The gearbox mounting is Ford Cortina MkII or MkIII, '67-'76, part number EM569.
The propshaft is 23¼" long between universal joint centres, with a 3⅜" flange at the axle end. We stock suitable shafts at Westfield, or it can be made by any reputable propshaft specialist.

AXLE AND REAR BRAKES - *WESTFIELD SE*
Use an axle from Ford's Escort Mk.I or MkII, or Cortina MkII, all identified by a welded differential rear cover plate. The Cortina axle provides a wider track, and may cause bodywork clearance problems with wheels wider than 5" unless special offsets are used.
The Mk II Cortina 1600E and high-performance Escorts used the best combination of brakes and axle ratios, the later being 3.77:1 and 3.54:1 (RS2000) respectively.
The only suitable propshaft flange has an overall diameter of 3⅜". Flanges from different units vary and can be interchanged as required.

FINAL DRIVE PARTS AND REAR BRAKES - *WESTFIELD SEI* (Option)
Differential/ final drive unit, oil filler plug, brakes, and half shafts from any of the above axles are required. Half shafts are used at Westfield in the manufacture of drive shafts, and will be exchanged at the factory.

FRONT UPRIGHTS, BALL JOINTS, BRAKES AND HUB ASSEMBLIES
The complete upright assemblies from a Ford Cortina Mk III, IV or V are suitable. Pay carefull attention to the condition of brake callipers and discs when buying second hand.
Ball joints are; top- 2 Quinton Hazel part no: QD1117RHT, *Right hand thread only.*
Bottom- 2 Ford Cortina Mk III, IV, or V, lower ball joints, Quinton Hazel part no: QSJ663S.
All ball joints are available from Westfield.

STEERING RACK, TRACK ROD ENDS, STEERING COLUMN AND CONNECTING SHAFT.
Use Ford Cortina MkIII, IV or V track rod ends *(available from Westfield)* with Ford Escort MkII Steering rack, mountings, inner steering column and column bushes. The universal jointed connecting shaft is Austin Allegro, to be delivered to Westfield for modification.

PEDAL BOX, BRAKE MASTER CYLINDER AND HANDBRAKE
The *Westfield SE* is equipped to accept the Ford Escort Mk I pedal box and handbrake, the former to be delivered to Westfield for modification. Use a dual circuit master cylinder with angled tank, as fitted to the Ford Cortina MkIII O.H.V. (ie: Kent engine), non-servo.

RADIATOR
A large number of Ford radiators will fit with varying degrees of convenience, some Ford Cortina MkIII versions being ideal. The use of a combined thermostat and filler cap housing eliminates the need to remove the nose cone for topping up. *A radiator with blanked-off filler neck and a suitable thermostat housing are available from Westfield.*

INSTRUMENTS AND SWITCHES
Any equipment, to suit the associated senders and fittings, may be used. Remember that speedometer, indicators, hazard warning lights and low brake fluid warning light are legal requirements. The Allegro, Marina and Mini ranges provide the best dip / indicator stalk.
A complete set of instruments, switches and wiring loom is available from Westfield.

WINDSCREEN WIPERS AND WASHERS
Use a Lucas wiper motor as fitted to the Mini and Marina ranges. Windscreen washers are a legal requirement and most types will fit. *A suitable kit is available from Westfield, as are wiper arms and blades.*

FUEL TANK AND GAUGE SENDER
For the *Westfield SE* a Mini Van tank can be shortened to fit between the rear chassis tubes, and a new filler pipe fitted. *This item is available from Westfield.*
For the *Westfield SEI* we can supply a fabricated aluminium tank, ready to fit, which is also an option (not interchangeable) for the *Westfield SE.*

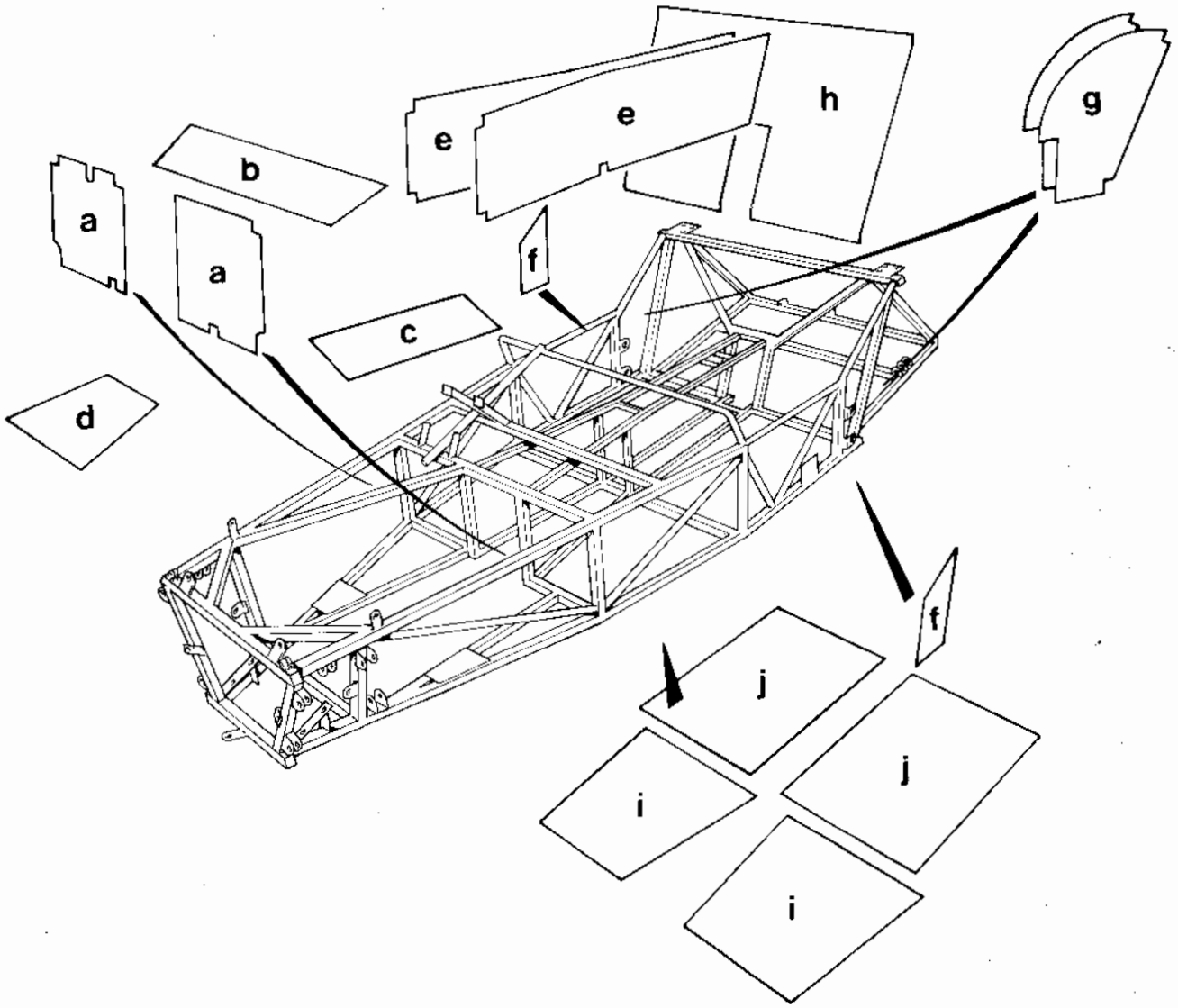
CHASSIS PREPARATION

PAINTING OF BARE STEEL COMPONENTS

Careful attention at this stage is essential to good appearance and chassis life.
Thoroughly clean and degrease chassis, and all steel parts, before priming and painting.
In our experience, the very best results are achieved by a fine beed blast and powder coating process. Ensure that tapped and precision holes are clean before assembly.
Note; *We can bead blast and powder coat your chassis for you as an option.*

ALUMINIUM PANELS

Refer to the illustration to identify the panels and where they fit the chassis.
For S.E. only:- Place the cockpit rear quarter panels (g) in position and mark it for the four trailing arm bolt holes, using the trailing arm brackets as a guide. Drill to clear the trailing arm bolt heads, and put the panels to one side for future use.
All panels except the front transmission tunnel top (c) are fixed using a one-part silicone sealant and pop rivets. The sealant serves as an adhesive which deters water leaks, vibration and electrolytic action between steel and aluminium components. The recommended distance between rivets is shown in the instructions bracketed thus; [ ].
Fit the tunnel sides (e) [2"], seat back (h) [3"], and foot well panels (a) [1½"]. Turn the chassis over and fit the floor panels (i & j) [2"]; lap front (i) over rear (j) and drill the overlap in one action. *Don't forget the sealant.*
Note; *We can carry out the above processes for you as an option..*
The wheel arch deflector plates (f), scuttle top (b) and tunnel tops (c & d) will be fitted later.



PEDAL BOX, SCUTTLE TOP AND BRAKE PIPES

PEDAL BOX

The Ford Escort MkI pedal box requires modification before fitting. We carry out this service at the factory free of charge.

Align the pedal box in the chassis brackets, such that the pedal pads are at a comfortable angle for the driver and there is adequate clearance for full pedal travel. It may prove necessary to relieve the brake light switch bracket to clear the steering column.

Using the chassis brackets as a guide, mark and drill four 5/16" mounting holes in the pedal box and attach to the chassis brackets using 5/16" U.N.F. bolts, plain washers and Nyloc nuts.

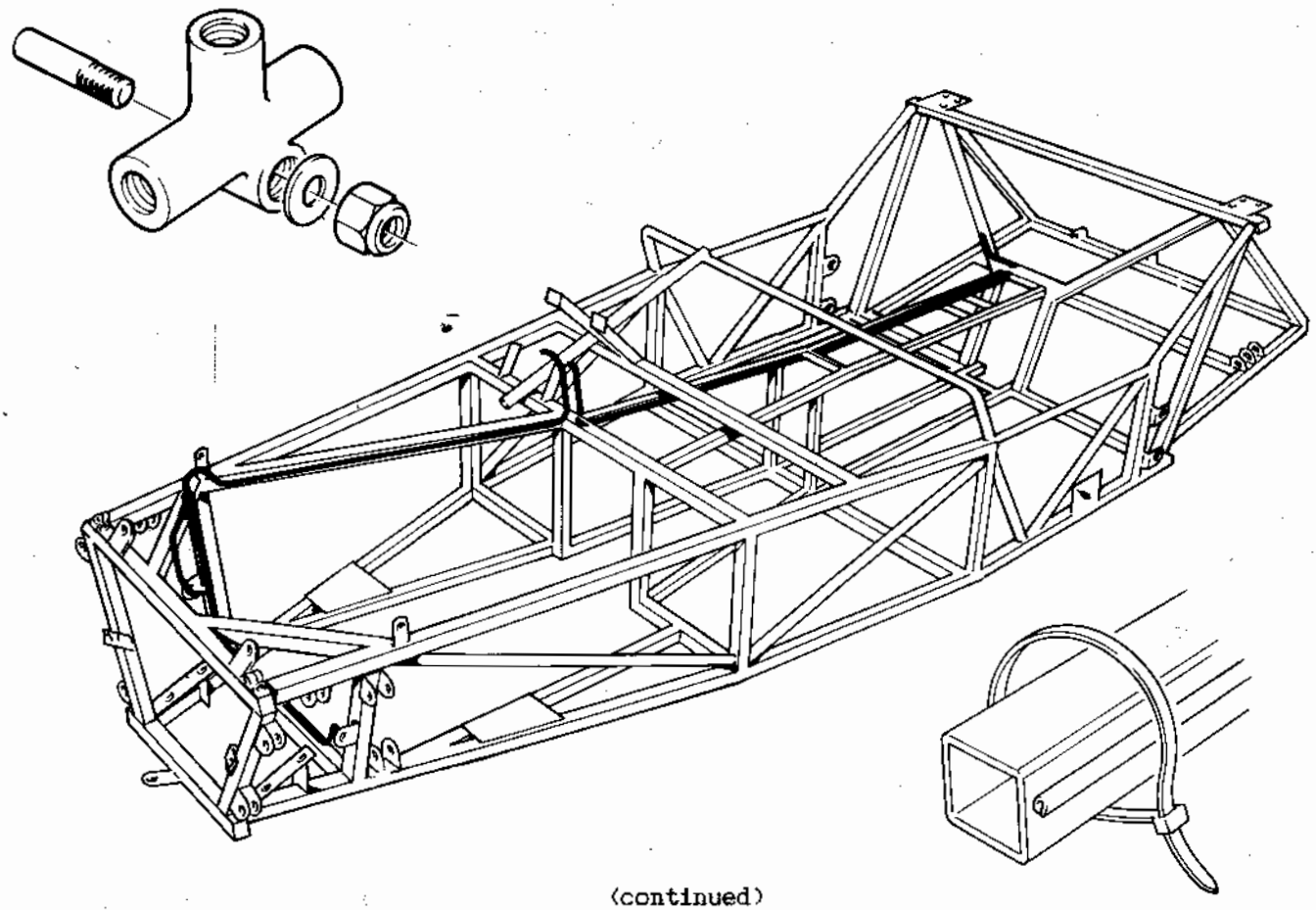
SCUTTLE TOP

Cut the smaller part of the scuttle top to fit around the pedals, allowing for full pedal movement. Fit both parts, riveting at 3"-4" centres along the cross tubes only. *Do not rivet into the chassis side rails.* Rivet the overlap at 2" centres, and to the chassis. *Don't forget the sealant.*

FRONT BRAKE PIPES

Attach a three-way brake pipe junction to the stud provided on the chassis brace in the right-hand side of the engine bay. Make 3 brake pipes as follows:-

1) From the master cylinder, along the engine bay brace to the three-way junction.
2) From the junction, down the front of the nearest chassis upright to the hose bracket on the upright.
3) From the junction, down the front of the nearest chassis upright, across the chassis and up the left-hand chassis upright to the hose bracket.



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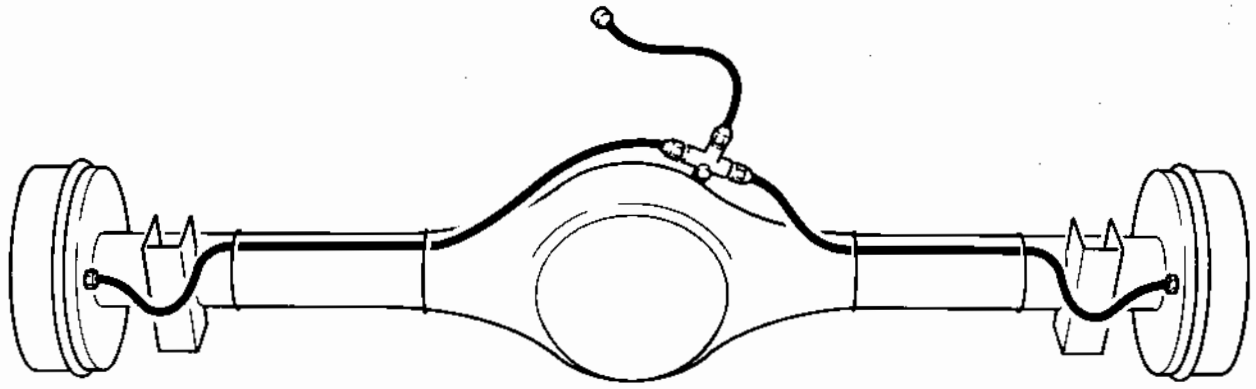
REAR BRAKE PIPES *WESTFIELD SE* ONLY

Attach a three-way brake pipe junction to a bracket fitted to the differential stud at the 10 O'Clock position, when viewed from the front. Make three brake pipes as follows:-

1) From the master cylinder, along the top right-hand corner of the transmission tunnel, to the hose bracket on the rear of the seat-back. Keep the pipe close to the corner to clear the propshaft flange during extreme axle movement.

2 & 3) From the three-way junction on the axle, behind the suspension brackets, to each brake cylinder. Secure to the axle with 2 plastic ratchet straps per side.



REAR BRAKE PIPES *WESTFIELD SEI* (Independant Rear Suspension) ONLY

Drill a ¼" hole in the top right-hand differential mounting gusset and attach a 3-way brake pipe junction. Make three brake pipes as follows:-

1) From the master cylinder, along the top right-hand corner of the transmission tunnel, to the 3-way junction.

2) From the junction, along the top right-hand wishbone mounting rail, to the hose bracket which is to the rear of, and below the rail.

3) From the junction, along the transmission tunnel cross member and the top left-hand wishbone mounting rail, to the left-hand hose bracket.

Secure the brake pipes at regular intervals with plastic ratchet straps and/or 'P' clips.

NONE

DASH PANEL AND WIRING

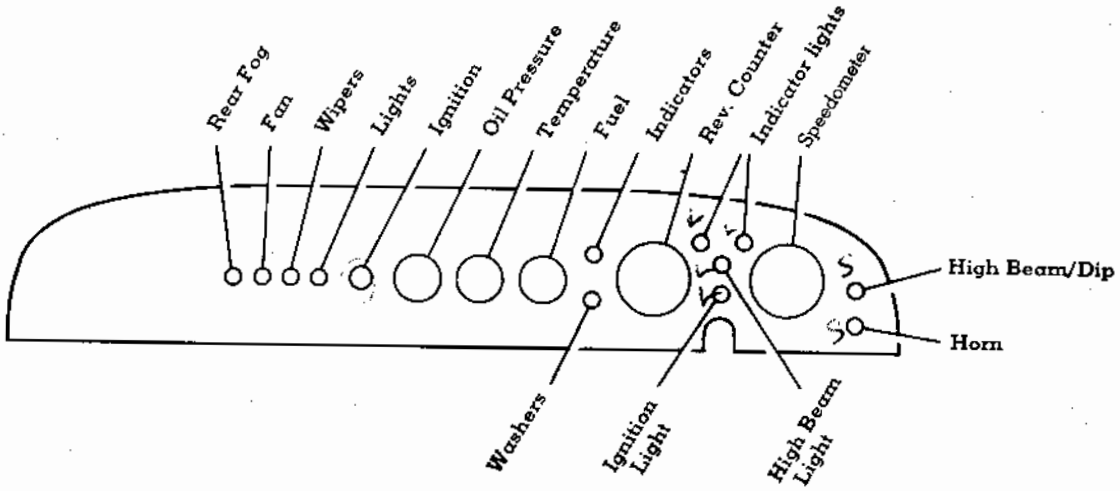
DASH PANEL

Mark out and drill the dash panel to suit your instruments and the steering column. Take care that there is sufficient clearance for the scuttle and dash hoop. The diagram below shows our own recomendation, and our optional wiring loom is designed to this layout.

To cover the panel with leathercloth or similar, mark out and cut the cloth to the dash shape with a ½" allowance all round. Use contact adhesive to glue the main surface first and then the ½" overlap to the rear.

When the adhesive has set, cut out the holes with a sharp knife and fit the instruments, switches and warning lights.

Use adhesive tape to hold the panel to the dash hoop in readiness for the wiring.

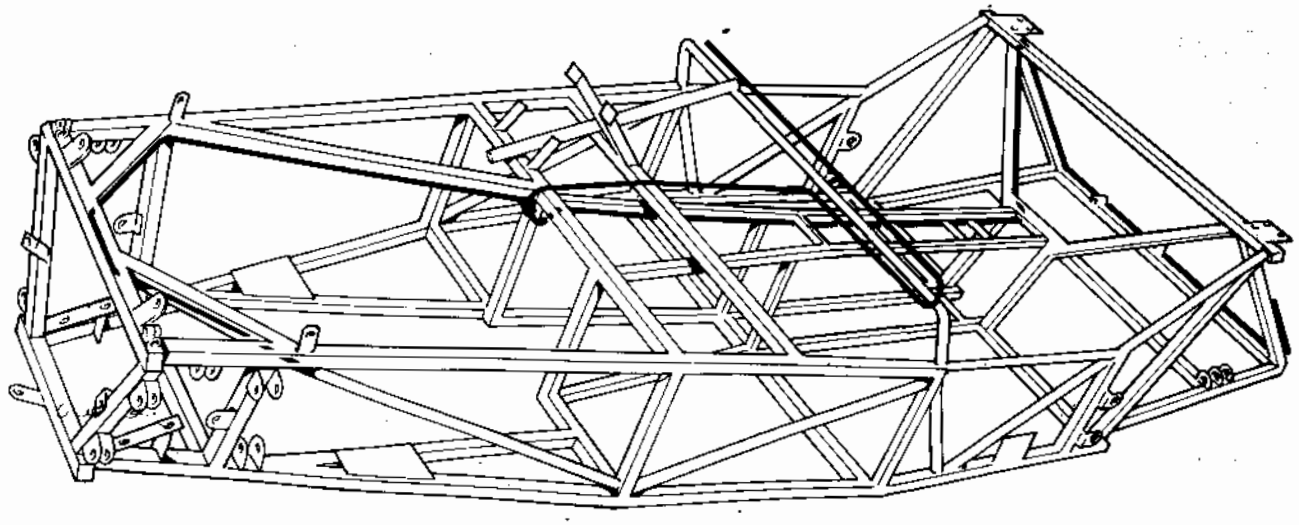


MAIN WIRING

Connect the instruments, switches and warning lights in accordance with the wiring diagram. Refer to section 5 for fitting of indicator/wiper stalks. The following guide applies to the optional *Westfield* wiring loom and may prove helpfull for others.

Use the wiring diagram and wire colours to identify the final destination of each wire.

From the dash panel, run the loom to a point opposite the engine bay cross brace, across the scuttle top and along the right-hand and two front engine bay braces to the left-hand chassis rail. Ensure that the headlamp wires emerge close to their brackets and secure the loom to the underside of the chassis rails with plastic ratchet straps.



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NONE

Fix the fuse box (and regulator if required) to the scuttle top, in a convenient position for its wiring, and connect. Similarly, mount and connect the ignition coil (we recomend the left footwell end panel), washer bag (inside of the right-hand chassis side tube), starter solenoid (right footwell end panel), horn solenoid and compressor (plate in the top left corner of the chassis front). Connect the brake light switch on the pedal box.

The rear harness connects to the main wiring loom at the front of the transmission tunnel. Run it along the top right-hand corner of the tunnel, up the right-hand seat back brace, down the rear support tube, across the rearmost tube and up the left-hand rear support tube.

Attach all the black earthing wires to convenient points on the chassis, ensuring good electrical contact.

The battery can be fitted on the right hand side of the scuttle top or behind the passenger seat (Westfield SE only). Make and fix a tray to support the weight and provide holding-points for the battery. Make and fit leads for battery to earth and battery to starter solenoid.

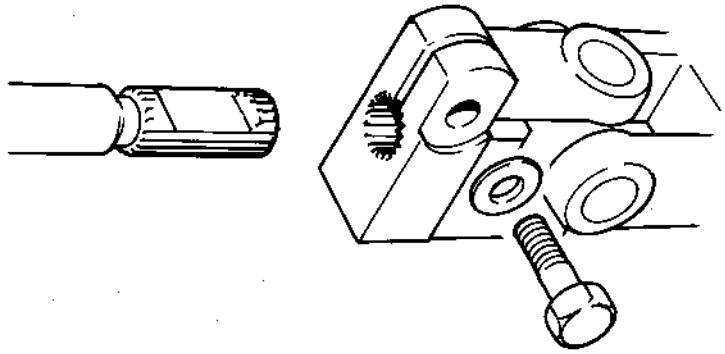
Finaly, secure all wiring with plastic ratchet straps and use 'P' clips or similar for both wiring and brake pipes in the transmission tunnel.

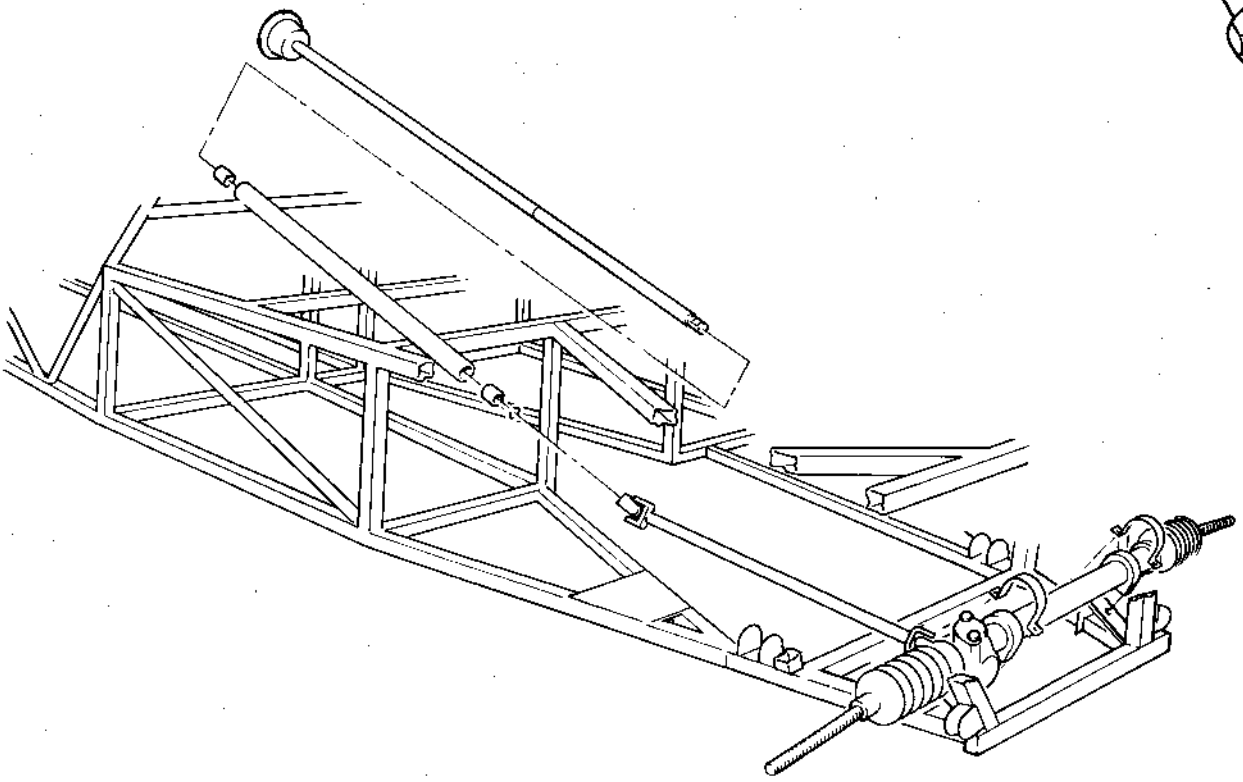
STEERING, FRONT SUSPENSION AND FRONT BRAKES

STEERING

Fit the steering rack to the chassis brackets behind the front chassis tubes using the Ford rubbers and retainers with 5/16" bolts, plain washers and nyloc nuts. Slide the end of the universal joint shaft furthest from the extension tube onto the steering rack pinion, taking care to line up the unsplined segments on both. Attach with a bolt having a plain, unthreaded shank where it passes over the pinion; made by cutting down a long bolt if necessary. Screw on the track rod ends and locknuts, such that the track rods are of identical length and leaving about ½" of thread showing.

Press the top and bottom steering column bushes into place and introduce the inner column from the top. Fit the column thrust washer and slide the universal joint shaft into position, lining up the flat portion on the column end with the bolt hole in the universal joint. Fit the thrust-washer retaining pin, and adjust the column position in the universal joint to give .010" to .020" clearance between outer column and thrust washer. Fit and tighten the universal joint bolt and check that the steering turns freely, correcting as necessary. To fit **stalk type indicator/wiper controls**, file the plastic key from the bore of the unit and clamp to the column, inserting a strip of aluminium to ensure a good fit. Centralise the rack and fit the steering wheel in the 'straight ahead' position.





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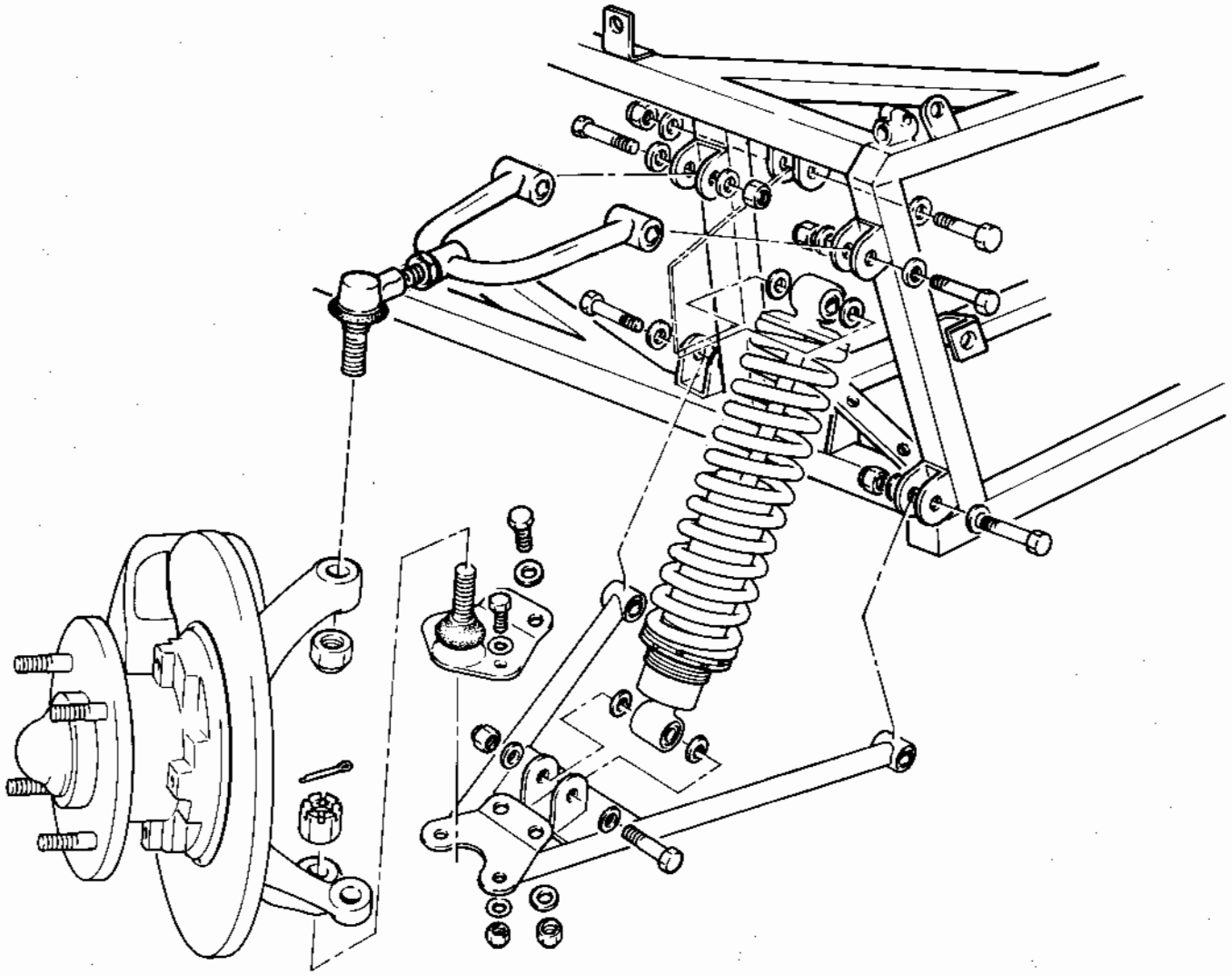
FRONT SUSPENSION

Press the rubber suspension bushes into all four wishbones, using spacers (eg. thick washers) to prevent any pressure on the inner sleeve. These are a precision press fit and will require a large machine vice or bench press to acheive sufficient force.

Fit the ball joints to the bottom wishbones and the locknuts and ball joints to the top wishbones. Fit all the wishbones to the chassis, using 2½" long bolts with plain washers and Nyloc nuts. The top wishbones are not symetrical and must be fitted with the ball joint offset towards the rear. *Do not tighten at this stage.*

Fit the suspension units to the chassis using Nyloc nuts with 2¼" long bolts and plain washers either side of the units: ie. *inside* the brackets. *Do not tighten at this stage.*

Fit the suspension uprights, hub and brake assemblies to the wishbones. Connect the track rod ends and suspension units, using washers either side of the later: ie. *inside* the brackets.



Do not tighten any supension mountings until the car is standing on its own wheels.

FRONT BRAKES

Tighten the front brake hoses into the calipers, using copper washers against the calipers. Use a shakeproof washer each side of the brake pipe bracket and prevent the pipe from turning, with a spanner on the pipe end fitting, whilst you fit and tighten a ⅜" UNF retaining nut. Fit and tighten the pipe nut, again preventing the pipe from turning with a spanner.

REAR SUSPENSION AND HANDDBRAKE (SE)

REAR SUSPENSION

Mount the two rear suspension units to the chassis brackets, using 2½" bolts with washers on both the *inside* and outside of the brackets.

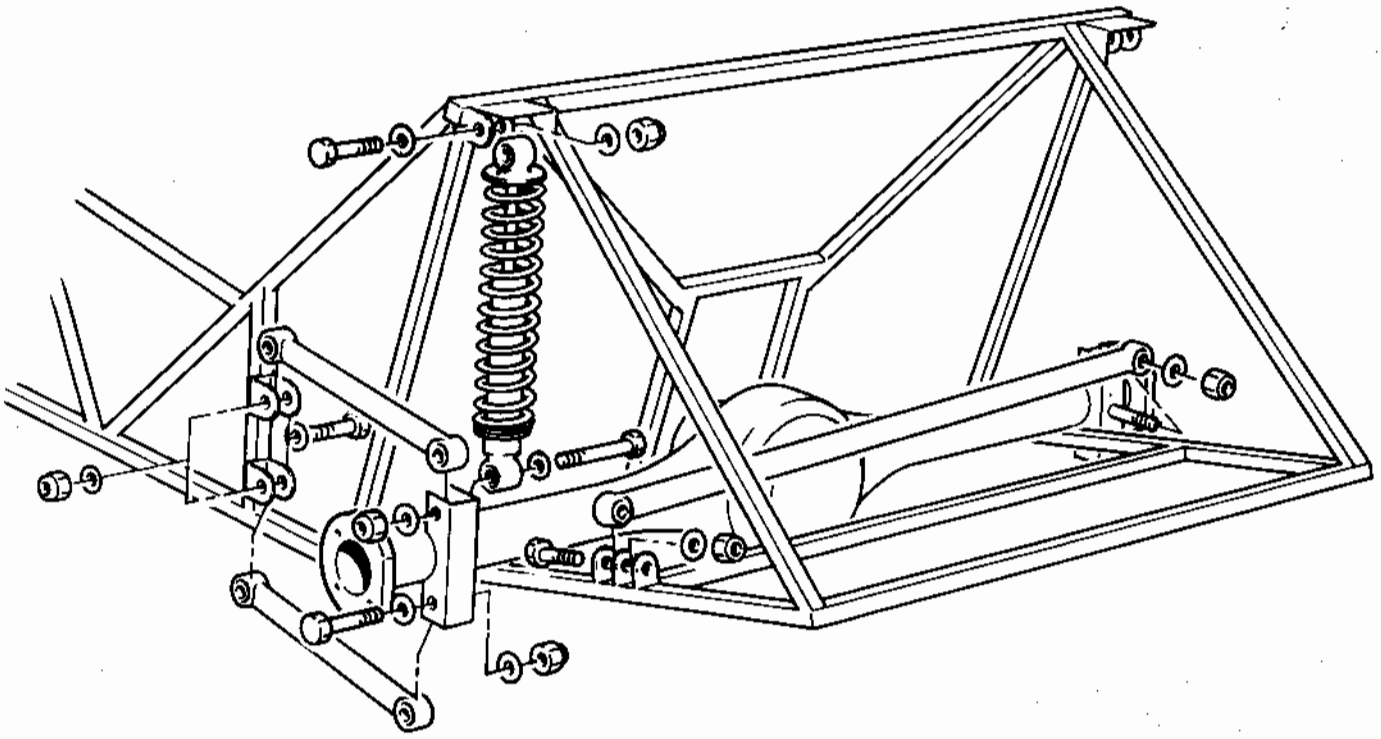
Press the rubber suspension bushes into the eight trailing arm and two panhard rod ends with a large machine vice or bench press. Use spacers to avoid pressure on the inner sleeves.

Place the axle in approximate position and fit the trailing arms to the chassis. The axle must now be lifted, both ends at once, to allow a bolt to pass through the suspension unit and axle bracket with the top trailing arm inside the bracket. This is best achieved by carefuly chocking the axle in position or, better still, the help of an assistant. Repeat for the other side and swing the axle to the correct angle to fit the bottom trailing arms to the axle brackets.

Fit the panard rod to the stud provided on the axle and then to the chassis bracket.

Check for clearance between the axle nose and chassis, relieving the webbing on the nose if necessary to provide adequate clearance.

Do not tighten any suspension mountings until the car is on the ground, supporting its own weight.



HANDBRAKE

Position the Escort handbrake lever on the transmission tunnel cross pieces such that the cable attachment point lines up with the cable hole in the bracket behind. This will put the lever attachment points aproximately central. Drill two 5/16" holes to suit and bolt the lever into position.

The Escort axle can be used with its standard handbrake linkage by bending the brake rod slightly to clear the panard rod.

The Cortina axle will require the existing compensator arm and guide to be removed and replaced with a Marina compensator arm and bushes.

Use a Marina handbrake cable, shortened to suit. Measure the length with the handbrake off and brakes adjusted allowing sufficient length to braze or crimp a nipple in place.

✓ COMPLETE

INDEPENDANT REAR SUSPENSION AND FINAL DRIVE

FINAL DRIVE UNIT

Fit studs to the 8 x 5/16" U.N.C. tapped holes in the final drive housing face, using Loctite studlock or equivalent. Thoroughly clean housing, final drive and drive shaft ends. Stand the final drive unit with propshaft flange downwards and apply a 1/8" bead of Silicone gasket compound to the mating face, ensuring that the stud holes are sealed on their outside edges. Place the housing in position, with the filler plug boss towards the underside of the final drive unit and loosely fit plain washers and 5/16" U.N.F. Nyloc nuts to the 8 studs.

To correctly align the final drive unit and housing, lubricate the output shaft bearings, bearing surfaces and oil seals then carefully insert the drive shafts, avoiding contact between splines and seals. Give both shafts 2 or 3 turns before tightening the eight nuts evenly to a torque of 18 lb ft.

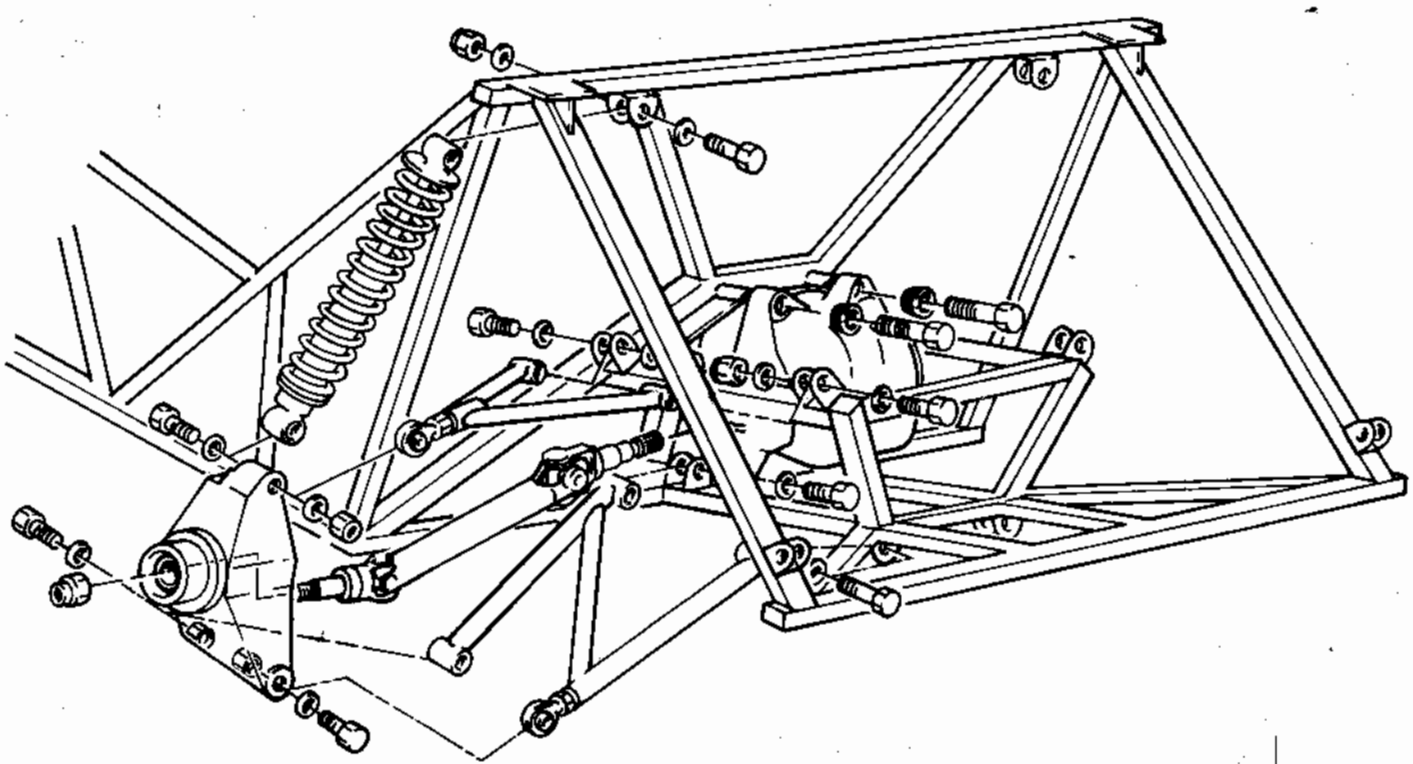
Check for free rotation, remove shafts and plug the bores to prevent dirt from entering.

DRIVE LINE AND SUSPENSION

Fit 8 rubber mounting cones into the differential housing using rubber grease, copper slip, or other suitable lubricant to aid assembly. Locate the assembly in the chassis with 1/2" U.N.F. bolts and plain washers inserted from the rear. Use Loctite on the top and Nyloc nuts on the lower mounting bolts. Tighten to a torque of 35 lb ft.

Press ten rubber suspension bushes into the wishbone ends with a large vice or bench press, using spacers to prevent pressure on the inner sleeves.

Assemble all four wishbones to the chassis with the adjustable rod ends on the lower set towards the rear of the car. Attach the suspension units to their brackets on the top chassis member with a plain washer between the unit and bracket on each side. *Do not tighten any wishbone or suspension unit mounting bolts until the car is on the ground and supporting its own weight.*



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Attach the handbrake cable brackets and brake backplates to the suspension uprights such that the handbrake operating lever will be on the same side as, and pointing approximately towards, the single boss on the upright. Fit hubs into the suspension uprights. Engage drive shaft and hub splines and, if necessary, support the hub on wooden blocks whilst using a soft mallet or equivalent to tap the drive shaft into place.
Loosely fit hub nuts to retain the shafts.

Assemble suspension uprights to the lower wishbones with the single boss at the top and to the rear. Remove your plugs from the differential housing and guide one drive shaft into place whilst raising the upright to line up with the top wishbone. Insert a 3 3/4" long, 7/16" U.N.F. bolt from the rear through the rod end, upright and suspension unit with a plain washer between each item and at both ends. Loosely fit a Nyloc nut. Repeat for the other side.

HANDBRAKE

Position the Escort handbrake lever on the transmission tunnel cross pieces such that the cable attachment point is central. Drill two 5/16" holes to suit and bolt into position.
Use an 8mm Nyloc nut and plain washer to attach the threaded trunnion of an Austin Allegro handbrake cable to the bracket on the upright. Fit clevis and split pins, and align cable and operating lever before tightening. Repeat for the other side.
Run both cables between the top final drive mountings and attach the outer cables to the rail provided with 10mm Nyloc halfnuts. Clip inner cables to an Allegro handbrake compensator bar and attach to the handbrake lever with a clevis and adjuster bolt.

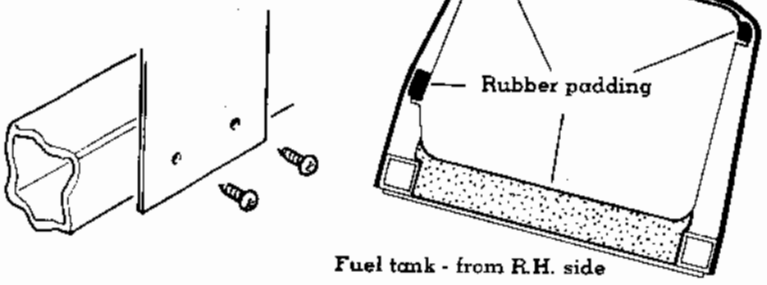
FINAL TIGHTENING

Fit the brake drums and wheels and lower the car to the ground. Adjust the ground clearance to 5"-6", using weight if necessary, and tighten all 16 suspension mounting bolts.
Whilst restraining the car, tighten the hub nuts to 180 lb ft. Raise the car from the ground and check for free play in the hub bearings. If necessary, continue to tighten the hub nuts until free play is nominal or just eliminated. Stake the nuts into the grooves provided.

FUEL TANK AND PIPES

FUEL TANK

Fit the fuel tank into the rear of the chassis using rubber strips to prevent direct contact with the chassis rails. The tank is retained using two aluminium straps, again with rubber strips. Attach the straps securely to the chassis with self-tapping screws.

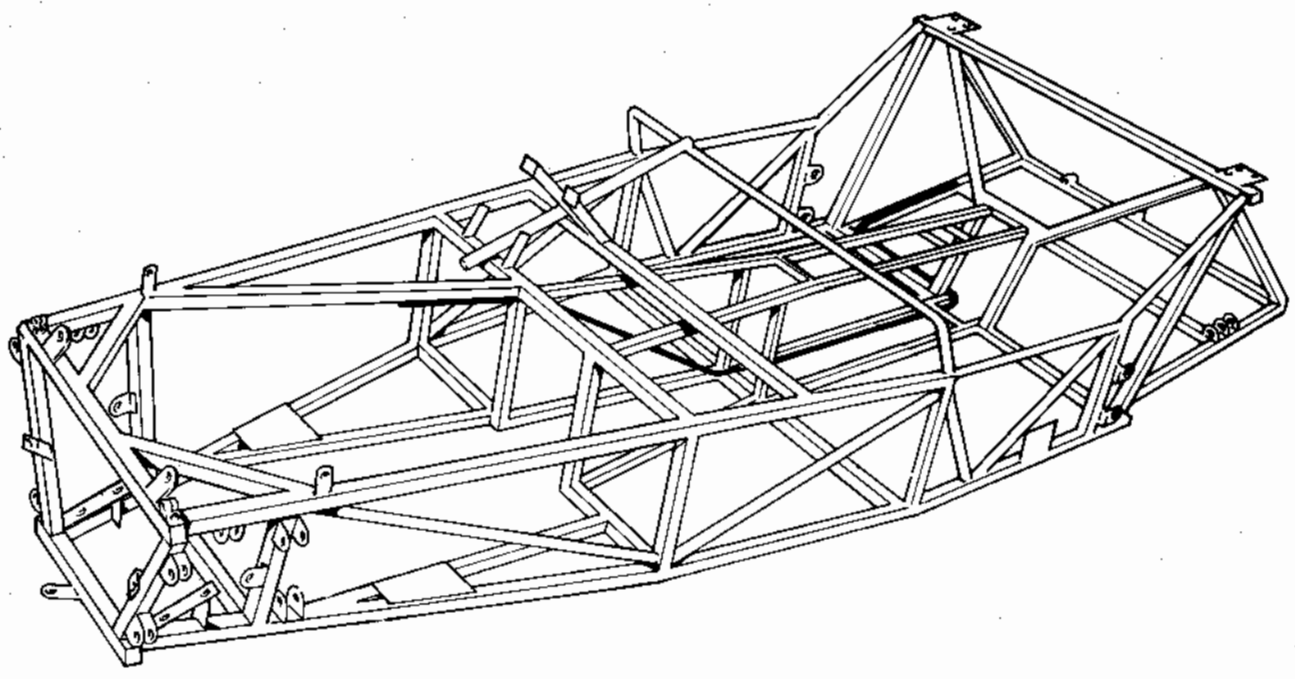


Fuel tank - from R.H. side

FUEL PIPE

The correct fuel pipe diameter will depend on engine size and fuel pump type. We recommend as follows; Up to 90 BHP use 1/4": up to 140 BHP use 5/16": up to 200 BHP use 3/8". If in doubt, it is better for the pipe to be too large than too small.
Run the fuel line from a point near the tank outlet, along the lower rear chassis rail, the lower seat back rail, forward along the lower right transmission tunnel rail, diagonally up to the engine bay brace and along the brace for 10" at which point it ends.
Secure the pipe along its length with ratchet straps and 'P' clips as appropriate.
Cut a length of flexible fuel hose to connect the fuel line to the tank outlet, incorporating an in-line fuel filter if required (highly recommended).

Finally undo the front of the tank retaining straps and bend them back sufficiently to remove the tank. It will be refitted when the bodywork is in place.

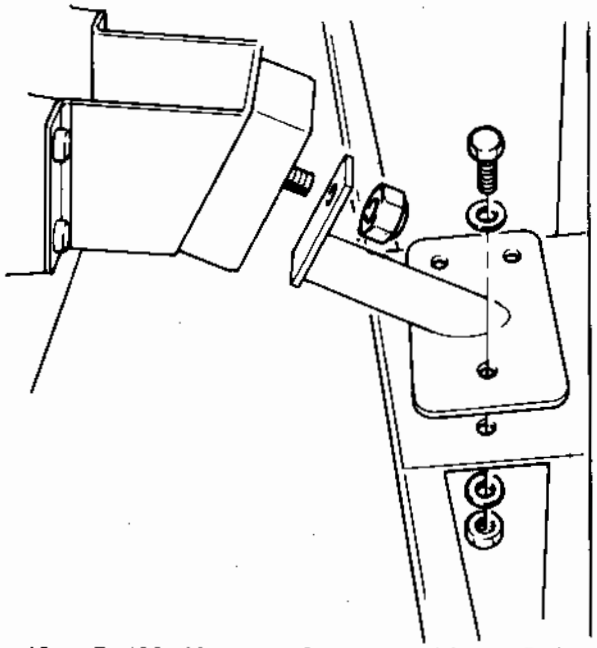


ENGINE GEARBOX, PROPSHAFT AND RADIATOR

PREPARATION OF ENGINE AND GEARBOX

Since access to the gearbox is limited after instalation, we advise that the speedometer drive is fitted and oil level checked first. Plug the propshaft bearing bore to prevent loss of oil during fitting. Attach the Ford gearbox and engine mountings.
We advise that the engine and gearbox are mated first for ease of instalation.

FITTING ENGINE, GEARBOX AND PROPSHAFT

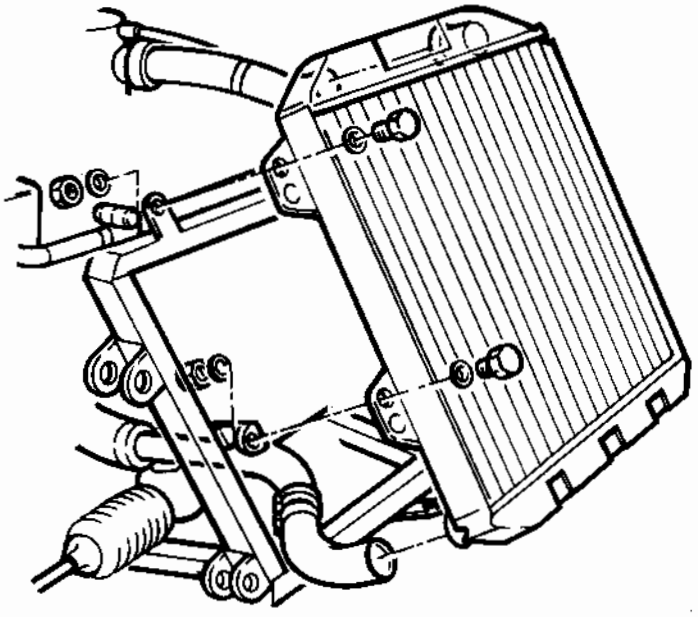


Place the engine and gearbox in the chassis and fit the propshaft using Nyloc nuts with plain shank bolts through the final drive unit flanges. Don't forget to remove your plug!
Attach the engine mounting legs (supplied with the kit) and lower the engine until they are in light contact with the chassis plates. Adjust the engine position to give adequate clearance around the bellhousing, gearbox tail housing and engine bay. The engine and gearbox are best fitted slightly to the left of centre to make room for the speedometer drive and offset the weight of right hand drive controls.
Clamp the engine mounting legs in place and drill, together with the chassis plate, for three 5/16" bolts; two behind the legs and one in front, taking care not to drill the chassis rails. Drill the gearbox mounting plate, to line up with the holes in the mounting. Attach with 5/16" bolts and Nyloc nuts.

GEARLEVER

Cut the lever ¼" above the circlip groove and 3" from the top. Weld the two parts together such that the lever leans 30° towards the rear. Ensure that the lever will clear the dash panel in its final position.

RADIATOR



Attach the radiator to the four brackets provided at the front of the chassis, ensuring that it will clear the nose cone. Connect to the engine using proprietary hoses and 1¼" aluminium tube (available from *Westfield*). The radiator presents an ideal mounting place for air horns which can be fitted at this stage.

CONNECTIONS

Allowing for engine movement, make and fit suitable leads to run from starter solenoid to motor and from an engine bolt to the earthing point at the rear of the engine bay.
Cut and fit a flexible petrol hose to join the chassis-mounted pipe to the petrol pump.
Bend the chassis-mounted pipe to give the hose a steady curve, allowing room for engine movement. Use suitable clips to secure.
Connect the speedometer, clutch and throttle cables and complete all wiring.

BODYWORK, COCKPIT PANELS AND EXHAUST SYSTEM

REAR BODYWORK

Temporarily fit the exhaust manifold and measure the position for the exit hole in the bodywork; the footwell end and lower chassis rail make ideal reference points.

Fit a pair of rear wheels and lower the bodywork onto the chassis, ensuring that the bottom flange springs under the lower chassis rail. Refer to the wheels and wheel arches for the best looking position. Ensure that the body clears all suspension components and is a good, square fit on the chassis; trim if necessary. Use your previous measurements to mark out the exhaust pipe exit hole, allowing at least ¾" clearance all round for engine movement.

Use clamps at the rear to maintain the position during the next phase.

SCUTTLE

Drill four equally spaced holes through the bottom flange of the scuttle; these will be used for mounting it to the chassis rail.

The rear bodywork has the scuttle position marked on the top flange. Align the lower rear corners of the scuttle with these marks and adjust the width of the rear bodywork to get the best fit. Temporarily fit the nose cone as a reference for the width of the bodywork at the front. Clamp the bodywork in place and mark through the scuttle mounting holes to establish their position.

FIXING BODYWORK

The bodywork can be mounted with large headed 5/32" pop rivets or with self tapping screws and large ('penny') washers; rivets are faster, whilst screws allow you to remove the bodywork more easily if required in the future.

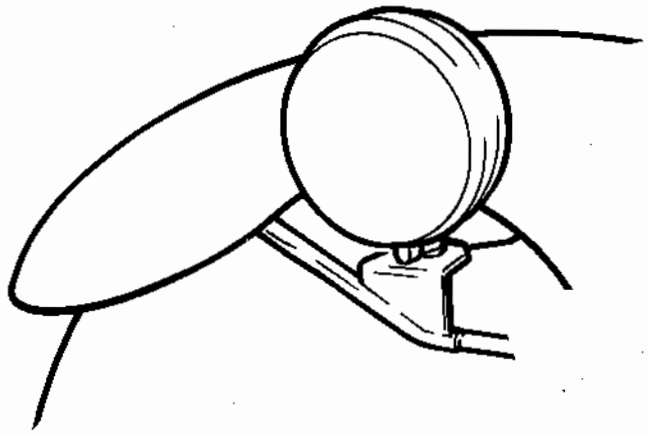
Drill two holes, to suit your rivets or screws, through the bottom rear flange of the bodywork into each of the mounting brackets on the rear chassis rail and fasten.

Drill the scuttle mounting holes in the body flange and chassis rail, using your markings as a guide and attach the scuttle . Drill and fix the bodywork, at 8" intervals, along the lower chassis rails and the top rails forward of the scuttle.

FRONT MUDGUARDS AND HEADLAMP BRACKETS

Fit the mudguard / headlamp brackets into the clamps on the front outside corners of the chassis, with the headlamp plinths horizontal.

Full length mudguards require five equally spaced ¼" holes to be drilled in the mounting flanges before offering them up to the body. Adjust the mudgards and brackets to your satisfaction, ensuring that both sides are the same: the brackets are made long, to allow for differing requirements, and may need shortening. The wheels may be used as a guide, but ensure that there is sufficient room for suspension travel. The top front edge of the mounting flange is typically 2½" below the top chassis tube and 7" behind the centreline of the suspension unit, with the top rear edge 8" above the bottom of the chassis.



Mark and drill the mounting holes in the bodywork and attach with ¼" bolts and 'penny' washers. Finally drill and fit the wing to the brackets, again using 'penny' washers.

Cycle mudguards are fitted to the suspension uprights using the special brackets provided. Adjust the headamp brackets, shortening if necessary, to a satisfactory position.

(continued)

NOSE CONE

Place the bonnet and nose cone in position, using a 'G' clamp on the front mounting bracket to retain the nose cone. Trim the front edge of the bonnet if required to obtain the best fit, ensuring that the Dzus fastener brackets on the chassis line up with the overlap between bonnet and nose cone.

Use the three mounting brackets to mark the position for the Dzus fasteners on the nose cone, drill to accept the Dzus fasteners and attach them with pop rivets. Remove the nose cone and drill pop rivet holes in the mounting brackets to attach the Dzus spring clips.

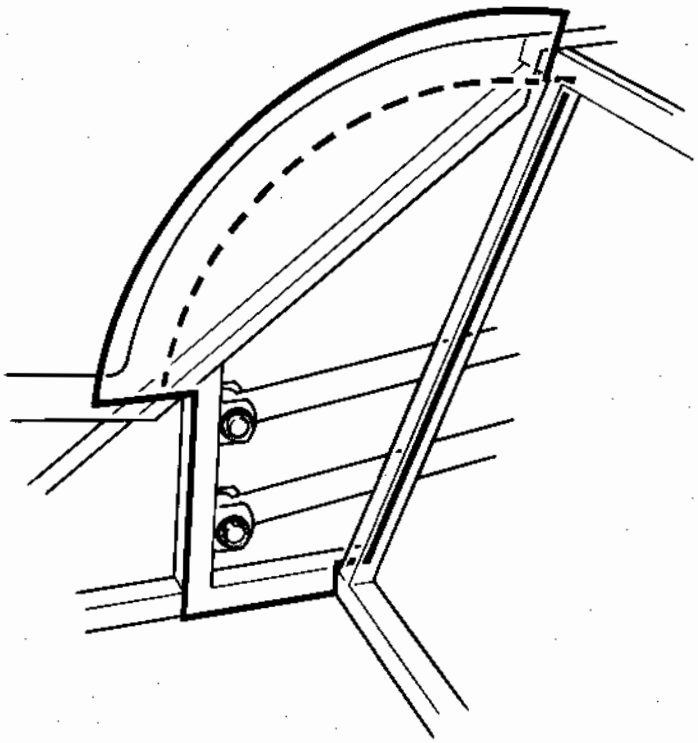
BONNET

Some carburettors may require a clearance hole to be cut in the bonnet. In that event we suggest that the position is measured by placing a straight edge over the problem area, marking scuttle and nose cone, and measuring the distance from the scuttle.

The bonnet can then be fitted and the position marked using straight edge and tape. Remove the bonnet and start with a small hole, replacing the bonnet to check for accuracy. Mark bonnet and bodywork with the position for the bonnet catch attachment holes, 2" from the front and rear of the bonnet, and at height to suit the catches when tensioned. When using full length mudguards the front catch is best fitted with its lever upwards to avoid fouling the mudguards. Drill the holes and attach the catches.

COCKPIT REAR QUARTER PANELS

Test the panels for fit and trim if required. Drill four equaly spaced holes down the leading edge for the rear deflector panel rivets, and fix the quarter panels to the seatback and bodywork using rivets at 3" intervals. Position the deflector panels to give a close fit to the wheel arch, then mark, drill and fit them. *Don't forget the sealant.*



TUNNEL TOP AND DASH PANEL

Cut the rear panel to accept the handbrake gaitor. Fix with rivnuts or self tapping screws at 4" intervals, preferably using a thin foam rubber strip to seal the joint.

Cut the front panel to accept the gear lever gaitor, remembering to centralise the gear-lever when measuring the position. Fit as for the rear panel, including fasteners in the overlap between panels.

Fix the dash panel to the scuttle using at least 5 evenly spaced bolts, 2BA or similar.

EXHAUST SYSTEM

Fit the exhaust manifold and tighten to the engine. Check and, if necessary, correct the clearance where it passes through the bodywork.

Attach the rear pipe and silencer, using the tailpipe bracket to identify the correct position for a rubber 'cotton reel' type mounting. Drill the bodywork and chassis bracket acordingly and attach the mounting.

WINDSCREEN AND WIPERS

WINDSCREEN

The windscreen pillars can be used as cast, polished, or painted, according to personal preference.

Drill five ¼" holes in each of the windscreen pillars using the cast dimples as a guide and attach the pillars loosely to the windscreen using the countersunk screws provided. Carefully position the screen in the moulded groove on the scuttle, and centralise the pillar bases within the moulded outline on the scuttle.

If side screens are to be fitted, we recommend that these are used to check and obtain the best screen angle before the mounting holes are drilled.

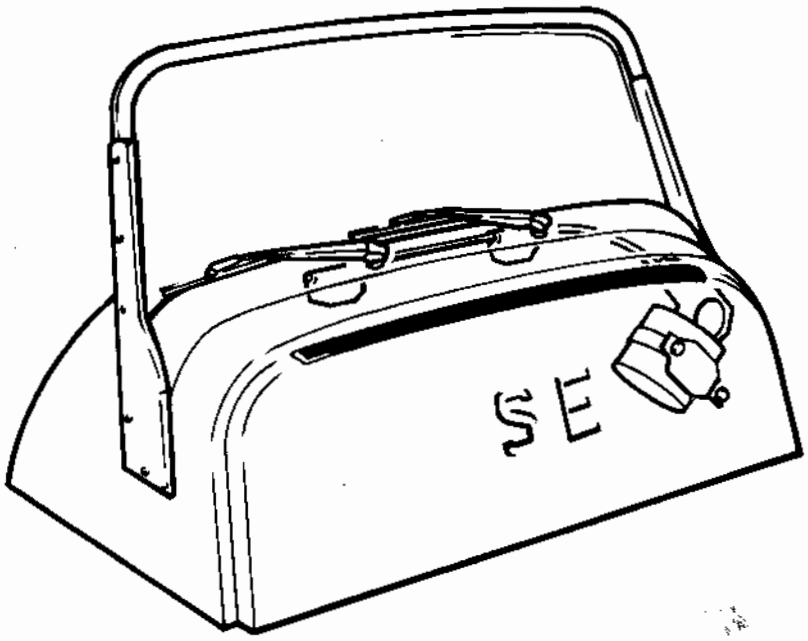
Drill two ¼" mounting holes in the bodywork on each side, using the screen pillars as a guide. Use bolts to temporarily retain the pillars in place.

Fit the fibreglass fillet piece under the lips in the pillars and drill holes to suit the windscreen wiper boxes using the moulded bosses on the fillet as a guide.

Remove the screen assembly and position the wiper wheel boxes using the standard angled distance pieces. Place the fibreglass fillet piece (trimmed to length if necessary) under the lips in the screen pillars, and fit the assembly to the scuttle using ¼" countersunk bolts and penny washers. Tighten the pillar to screen surround screws and extrude a small bead of sealant into the gap between pillar and surround. Wipe off any excess sealant before it cures.

WINDSCREEN WIPERS

Fit the wheelboxes from the inside using angled spacers. Cut and flare the wheelbox connecting tube and a further 8" tube for connection to the motor. Gently curve the 8" motor tube until the motor can be bolted to the scuttle without strain. Fit and connect.



SEATS, BELTS, LAMPS AND OTHER FITTINGS

SEATS AND SEAT BELTS

The seat belts are mounted on three 7/16" threaded bushes for each side. They are located either side of the seat base, towards the rear, and on the roll over bar. Follow the belt manufacturer's instructions for fitting.
The optional *Westfield* seats may now be fitted. Other seats must be firmly located by means of an accurate fit or fasteners.

SPARE WHEEL CARRIER

Drill the rear face of the bodywork, in line with the retainers on the rear chassis rail, to take the carrier. Fit the carrier, number plate mounting upwards, and adjust to suit the spare wheel width. Drill through the retainers and fix with ¼" bolts and Nyloc nuts. The spare wheel is retained by the use of suitable straps passed through slots, to suit your wheels, cut in the rear bodywork. Reinforce with aluminium plates riveted in place.

FUEL FILLER

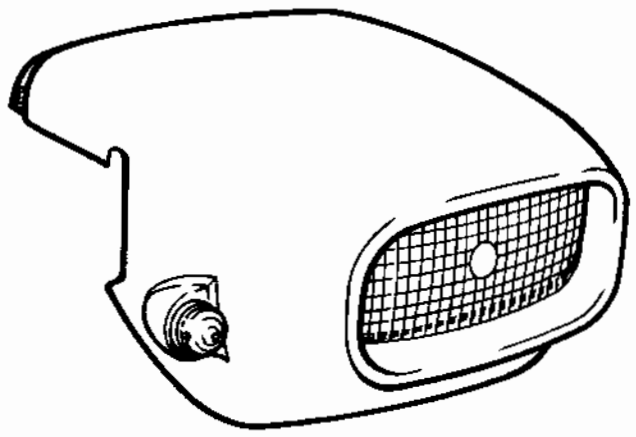
Slide the connecting rubber into contact with the body and draw round it to mark the position of the filler neck hole. Adjust the size to suit the filler and cut out. Fit the filler using suitable hose clips.

NUMBER PLATES

Make two small brackets to hold the front plate at the lower edge of the nose cone and attach with suitable rivets or bolts.
Cut an aluminium plate to carry the rear number plate and light. Mount them onto the spare wheel carrier with suitable rivets or bolts.

LAMPS

Attach the headlamps to the pre-drilled holes in the brackets and refer to the wiring diagram for connections. Most types, including the optional *Westfield* headlamps, supply mounting nuts which also act to secure the adjustment.
Position the front indicator pods on either side of the nose cone, to cover the wiring outlet holes marked in the moulding. Adjust the position to your satisfaction and drill for at least 5 mounting rivets. Drill the wiring holes, then mount the pods and indicators, not forgetting to connect up first.
Drill the bodywork to accept the wiring and four 2BA screws which mount each rear light cluster to the moulded plinths. Fit and wire with reference to the diagram.
Drill the bodywork for wiring, then mount and connect the number plate light above the number plate.



HOOD AND SIDE SCREENS

Screw the seven 2BA 'Tenax' male studs into the screen frame. Fit the middle female stud to the front edge of the hood and fasten it to the mating screen frame stud.
Pulling the hood taught across the screen frame, mark and fit the remaining studs, working outwards on alternate sides and clipping each to the frame as you progress.
With the front edge fitted, pull the hood taut and squarely over the hood sticks. Starting from the centre, mark the body through the hood and attach each body fixing in turn using ⅛" pop rivets on the body, with the two part fasteners on the hood. The hood fasteners are normaly fitted with a special tool, although a soft wood anvil and a centre punch to flare the tube rivet can be equally effective.

FINISHING, CHECKS, SETTING-UP AND DATA

FINISHING AND CHECKING THE CAR

Lower the car to the ground, set shock absorbers to lowest rating (if adjustable) and adjust the ride height (see DATA). Tighten all suspension mountings and check that every fitting, hose, wire, pipe and cable is secure.

Fill and bleed the brake system, check rear brake, handbrake and clutch adjustment.

Ensure that brake hoses cannot foul wheels, tyres or chassis members at any suspension or wheel position.

Top up or fill all remaining oil and fluid points, start and warm up the engine and check for leaks throughout.

SETTING-UP

The table below sets out the optimum figures and reasonable variations for setting-up the car. The caster angle is non-adjustable, and included for reference only. The expert may wish to reset camber and toe-in to suit personal preferences; we suggest that the figures below are used as a starting point. The ideal ride height will depend upon the proposed use of the vehicle, and the type of engine and/or sump fitted. Measure ride height to the lower chassis rails at the front and to the lower seatback rail at the rear. Adjustable shock absorbers are worth a little experimentation to suit your needs and expected road conditions. *We advise against extreme combinations of soft front and hard rear settings.*

Ensure that ball joints and rod ends are locked in a central position, ie. not rotated. Failure to observe this could result in high wear or even breakage.

For accurate results ballast or lower the car to the normal, loaded, ride height before setting camber and toe-in. Adjust toe-in equally on each side at the front and, on the *SEI* (independant rear suspension) model only, use string or a straight edge between front and rear wheels to equalise the toe-in on each side at the rear.

DATA

SETTING	OPTIMUM	VARIATION	YOUR NOTES
FRONT:			
TYRE PRESSURES			
eg. 185 x 60 x 13 tyres	20 psi	+5psi to -3psi	_ _ _ _ _ _ _ _ _ _
RIDE HEIGHT	5"	+1" to -2"	_ _ _ _ _ _ _ _ _ _
CAMBER	0° 0'	+0' to -30'	_ _ _ _ _ _ _ _ _ _
TOE IN	1/16"	+1/16" to 0"	_ _ _ _ _ _ _ _ _ _
CASTER	5° 30'	+30' to -30'	_ _ _ _ _ _ _ _ _ _
REAR, ALL MODELS:			
TYRE PRESSURES			
eg. 185 x 60 x 13 tyres	20 psi	+5psi to -3psi	_ _ _ _ _ _ _ _ _ _
RIDE HEIGHT	5¼"	+1" to -2"	_ _ _ _ _ _ _ _ _ _
REAR, *WESTFIELD SE* Beam axle models ONLY:			
NON-ADJUSTABLE			
REAR *WESTFIELD SEI* Independant rear suspension models ONLY:			
CAMBER	-0° 15'	+15' to -15'	_ _ _ _ _ _ _ _ _ _
TOE IN	1/32"	+1/32" to -1/32"	_ _ _ _ _ _ _ _ _ _

YOUR *WESTFIELD* IS NOW READY FOR ACTION. IF OUR INSTRUCTIONS HAVE BEEN FOLLOWED, YOU HAVE A VERY SPECIAL MOTOR CAR. - PREPARE YOURSELF FOR AN EXPERIENCE OF QUALITY!.....

Westfield Sports Cars Ltd. Kingswinford England.

ENDS