
QUANTUM ASSEMBLY MANUAL

SERIES I

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Series I length overall: 13'6" (4.115 m)

1. INTRODUCTION

The aim of this manual is to help you build your Quantum to a high standard. The kit has been designed so that it can easily be assembled into a car of production quality. The interior is pretrimmed above waist level. Below waist level Fiesta trim panels and carpet completely cover the fibreglass. All panels are prehung, flash lines machined and edges finished. All holes are machined for:- engine, suspension, steering, brakes, wiring, wipers, locks, catches, lights, cables, pipes and seat belts. In short everything is ready for you to start adding the Fiesta parts.

The time it will take you to assemble a Quantum will be anything between 100 and 250 hours, assuming the mechanics have already been reconditioned. Even if you work slowly you should be able to put the car on the road in 150 hours if you need to and do the finishing touches later. Do not make the mistake of setting yourself an unrealistic deadline. If you work at your own pace with no time constraint, you will enjoy the assembly much more and make no mistakes.

It is recommended that you buy Fiesta MK1 Haynes manual number 334 and read the sections that cover work you are going to have to carry out. This Quantum assembly manual does not repeat information which is already well written and illustrated in Haynes. Familiarise yourself with this manual and Haynes before starting assembly.

Your Fiesta will probably need some parts replacing. Because we specialise in Fiestas we can offer most new or used parts at very competitive prices. We can also supply many motor accessories, tools, oils and chemicals. When you order your kit we will send you our current price list. We would also be pleased to quote for items not on our price list. The items you wish to buy from us will be ready for you to collect with your kit.

Finally if you have any questions or problems, ring us and we will do our best to help you.

2. GENERAL NOTES

TOOLS. To assemble a Quantum you will need a standard set of garage tools:- metric spanners, socket set, screw drivers, pliers, hammer, drill, allen keys, hacksaw, electrical wire crimpers, jack, flat file, round file, safe axle stands. In addition to these the following would also be useful:- pop riveter, electrical wire strippers, bench with a vice, extra jack. When working on the car it is a good idea to keep all the tools currently in use in a tray by your side. This saves much time spent looking for tools.

MACHINING. Metalworking tools should be used to drill, file or cut fibreglass. Woodworking tools would quickly become blunt. When drilling fibreglass drill from the painted side. Start the hole with very light pressure and preferably with a slow drill speed. This will prevent chipping the gelcoat. To accurately position a large hole, first drill a small pilot hole. When filing or sawing do so from the painted side to avoid chipping the gelcoat. On the cutting stroke the tool moves towards the painted surface and on the return stroke there should only be light pressure on the tool.

In addition the tube of sikaflex should be purchased. This is a black sealant which sets to a black rubber and is invaluable during the build up (available to

BOLTS. The table below gives the bolt diameters used on Fiestas with the corresponding spanner size. Also the diameter of washer required to spread the load when bolting through fibreglass is shown.

Bolt diameter(mm)	Spanner size(mm)	Washer diameter(mm)
5	8	20
6	10	25
8	13 -	25
10	17	30
12	19	
gearbox oil plug	22	
axle nuts	24	

If in this manual a 5x25mm bolt is recommended, for example, this means a bolt of diameter 5mm and length 25mm. Referring to the table above it would need an 8mm spanner.

Shakeproof nuts or shakeproof washers or locking tab washers must be used to mount all suspension, engine, brake and steering components.

3. CHECKING FIESTA

Check as many components as possible before stripping them off the Fiesta. This saves the time spent fitting dud components onto Quantum and then removing them again. If you do not know how to check anything below it would be a good idea to seek advice.

1. Make a comprehensive check of all electrical components including instruments.

2. Check for any signs of brake fluid leakage at the master cylinder. If there is leakage the seals need replacing.

3. Front brake discs must be no less than 8.7mm thick across the whole surface. If the outer edge has worn/corroded away unevenly they need replacing. If the discs need replacing remove them now while the suspension is still attached to the Fiesta. They will probably need to be treated with WD40 and belted hard. Discs must be replaced as a pair.

With the brake callipers removed from the hubs check there is no sign of brake fluid leakage. If there is, new seals are required. Push the pistons in and out of the callipers to check they are free to move. Use brake pedal pressure to move the pistons outwards.

4. Steering. Check there is no play in the track rod end ball joints.

5. Do not worry if there is play in the track control arm ball joints; new Escort track control arms are supplied in the kit.

6. Bounce the 4 corners of the car in turn to assess the condition of the dampers.

7. Feel for excessive play in wheel bearings.

8. CV joints. Wear shows up as a clanking noise especially when accelerating under full lock. Normally the outer CV joint wears out first. *If any part of a Mk1 Fiesta 1300/1600 R.H.S driveshaft needs replacing it is best to swap to*

9. Radiators. With the engine running up to temperature look for leaks from either the main radiator or the small radiator in the heater. It is an awkward job to change the heater radiator once it is fitted to the car so be sure it is OK now. *a Mk1 Fiesta XRS 500 160*

10. Engine. Checking the compression will give a good indication of the condition of the engine. An experienced ear will be able to tell you if any reconditioning should be undertaken once the engine is removed from the car.

11. Transmission. A droning/whirring sound indicates that it is wearing out. If gear selection is difficult the synchromesh is probably wearing out. 5-speed gearboxes fit onto the older, OHV engines, but you need the 5-speed gear selector assembly as well.

6.7 LIGHTS

1. Tail lights. Apply sealant and bolt on as per Fiesta.
2. Reversing light. Bolt on as per Fiesta.
3. Fog lamps. Only the most common MK1 Fiesta type will fit.
Ford part number for the light:- 1595784.
Ford part number for the rubber gasket:- 6108492.

It is a legal requirement to have at least 1 fog light. Remove the 5mm studs from the lights; 5mm bolts are used instead. Drill two holes from inside the car symmetrically in the recesses as in fig 19.

4. Front indicators. Attach positive and negative electrical extension wires to the indicators. Plug the light into the aperture. Some lights will require the back corners rounded off.

HEADLIGHTS

1. Remove the top slide adjuster from the headlight by pulling upwards at the back.
2. Manoeuvre headlight into its aperture. Replace top adjuster locating the two prongs into the holes in the fibreglass and clipping back onto the headlight.
3. The side to side adjuster sits with its rubber foot on the fibreglass edge, fig 20.
4. Check alignment. There should be room for the rubber beading trim provided to fit onto fibreglass edge filling the gap around the headlight glass, fig 20. Note any filing necessary to perfect the fit.
6. Withdraw headlight and bond the rubber trim in position. The greater thickness of fibreglass at the top of the aperture may mean that the C shape has to be sliced down to a L shape in this area.
7. Perspex covers. Stick the 10mm wide by 3mm thick neoprene supplied around the edge. Use small stainless screws to self-tap the cover in position doing the 4 corners first. Do not over tighten screws. Only tighten sufficiently to just compress the neoprene leaving the perspex flush with the surrounding bodywork.

FIG 19 FOG LIGHT RECESS

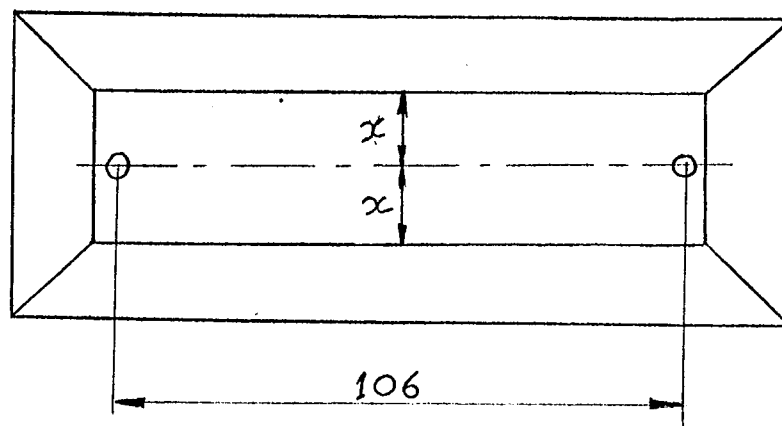
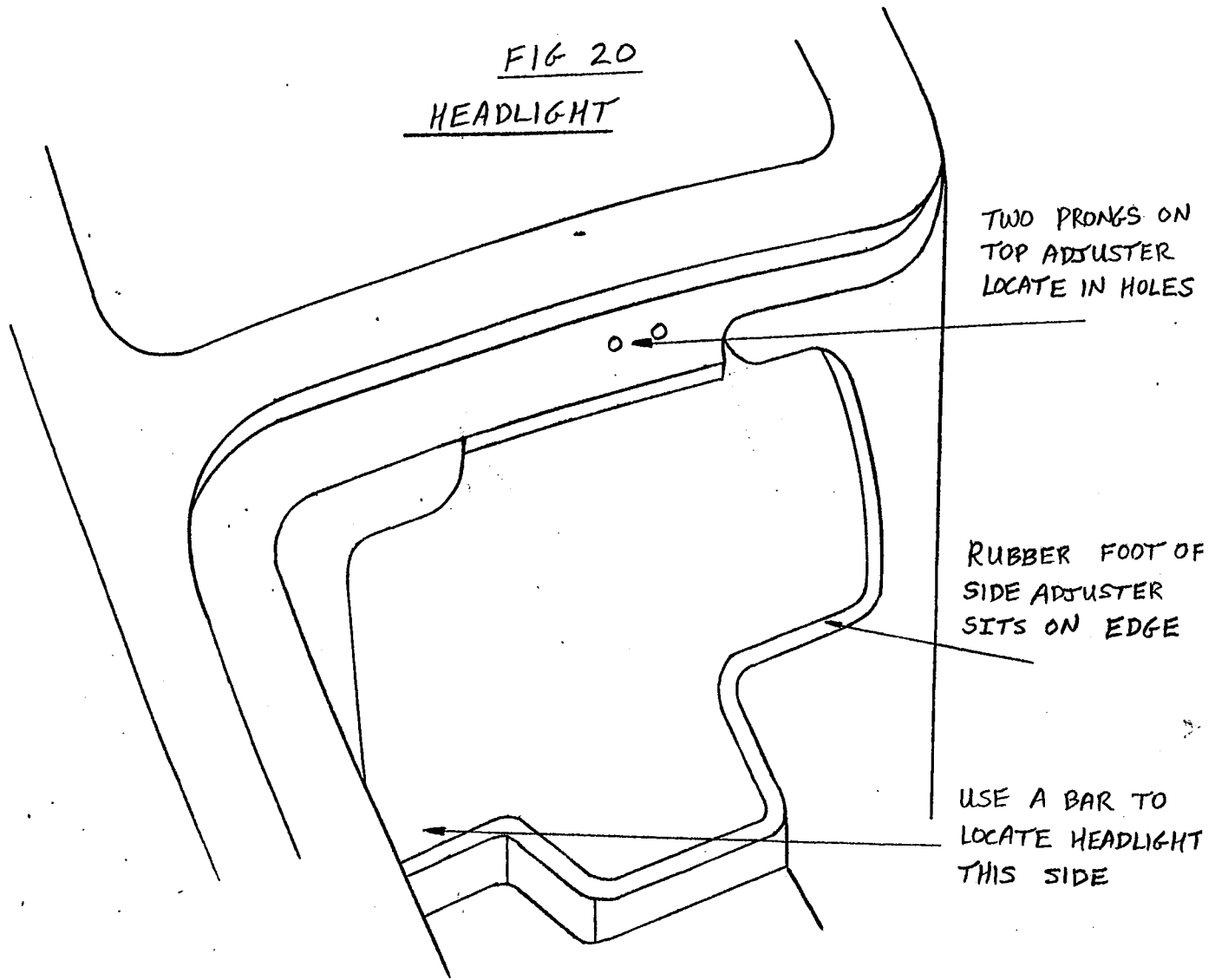


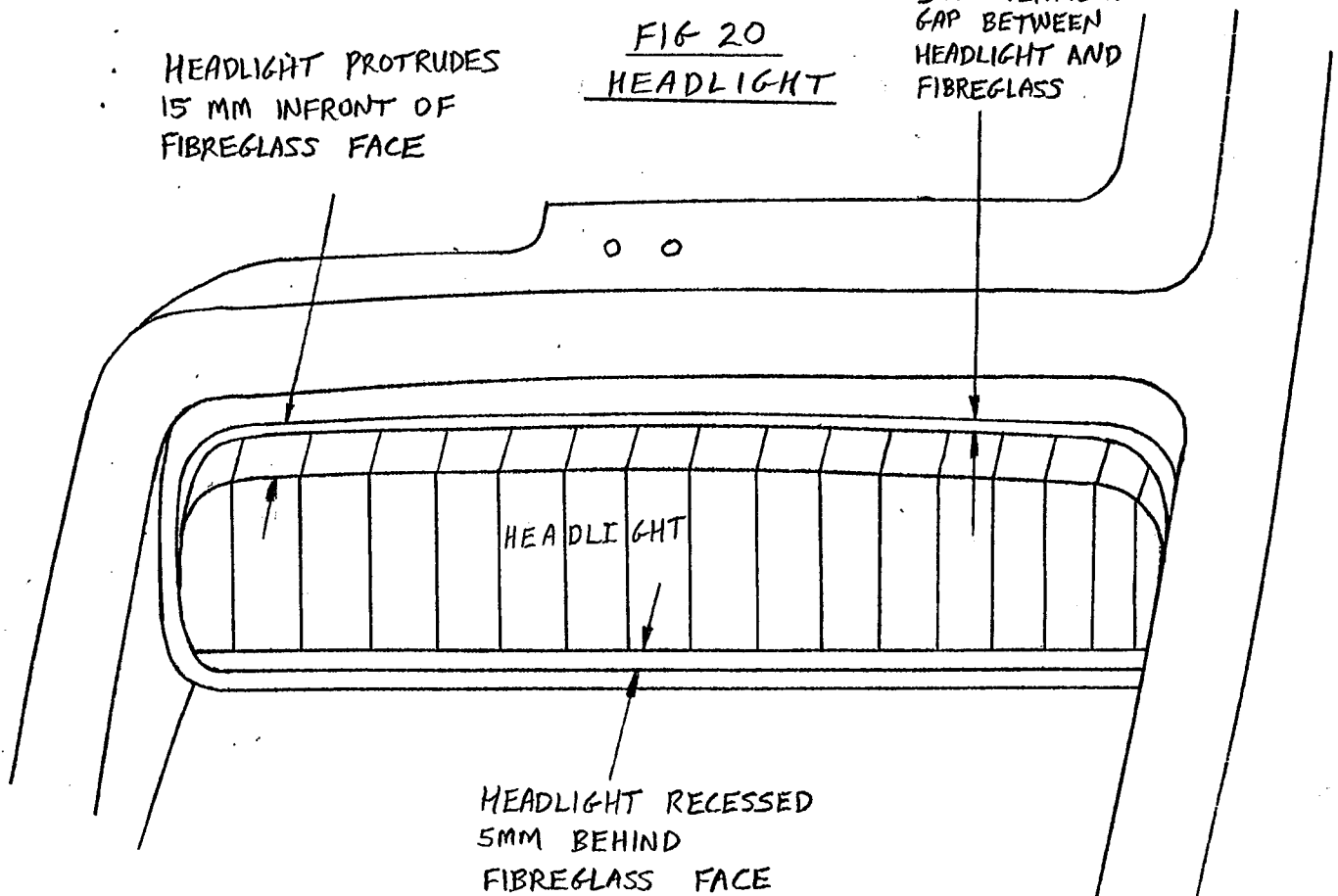
FIG 20
HEADLIGHT



HEADLIGHT PROTRUDES 15 MM INFRONT OF FIBREGLASS FACE

FIG 20
HEADLIGHT

5MM VERTICAL GAP BETWEEN HEADLIGHT AND FIBREGLASS



The coiled up wiring loom may look a bit daunting, but once it is positioned in the car most connections fall to hand. The rear wiring loom passes through the right hand sill, over the rear wheel arch between inner and outer skins and finally through the rear bumper to the left hand tail lights. First you need some lengths of string passing through these tubes to act as pull cords.

1. Tie a length of string to the end of a piece of hose pipe and push it down from the hole near the dashboard through the sill. Retrieve the end of the string from the hole near the rear seat and secure the ends. Repeat for the other two tubes.
2. You need to decide how many extra front/back electrical wires are required. Here are some examples:- 17a common earth (essential), fog light, rear window heater, two for rear wiper, speaker wires, positive supply. Some looms will already have most of these. However many you require, add 1 for good measure, *plus an aerial wire.*
3. Tie the end of the string near the dashboard round the end of the wiring loom and the extra wires. Pull the loom through to the hole near the rear seat. Wires for the petrol tank and speakers terminate here.
4. Pull the rest of the loom through to right-hand tail light hole. Wires for tail light, number plate light, wiper, rear window heater and fog light terminate here. Extend number plate light wire.
5. Pull the end of the loom through to the left-hand tail and fog lights.
6. Plug in all rear lights. The reversing light wire is pulled out through a hole in the recess for the reversing light.
7. The tailgate comes fitted with a 6-core cable and separate wires for the rear window heater. 5-cores are normally needed for:- common earth, wiper(2), number plate light, rear window heater. Make these connections to the wiring loom near the right tail light.
8. Connect rear window heater wires inside the tailgate to relevant wires in the 6-core cable.
9. Decide how many extra wires are required passing through the bulkhead; eg:- 17a common earth, wash jet, intermittent wiper, rev counter, cruise control, oil pressure gauge, ammeter gauge. Tot up the number and add 1 for good measure. Feed them through the bulkhead rubber grommet.
10. Feed the engine bay wiring loom through the bulkhead and seal the grommet on the inner skin. The hole in the outer bulkhead skin can be sealed by bonding on a spare headlight grommet.
11. Figure 21 shows the extra earth wires that are required. They follow the route of the main wiring loom. Points where the loom was screwed to the Fiesta shell are earthing points. There are normally 5 of them:- 1 each side close to tail lights, 1 under dash on right-hand side, 1 each side close to the headlights. These points have to be connected to the extra earth loom. USE 5MM DIAMETER EYELETS AND BOLT TOGETHER WITH 5MM BOLT
12. In addition to this certain components relied for their earthing on the fact that they were bolted directly to the Fiesta bodyshell. They are:- horn, petrol tank, door courtesy light switches, ignition solenoid, steering column. The extra earth wires for these are drawn on fig 21. The best way to connect the earths is with 5mm loop connectors. Use a 5mm bolt to fasten them all together.
13. Courtesy light and door switch wires are already fitted to the bodyshell. The ends of the wires protrude into the car under the dash area ready to be connected to the main wiring loom. Crimp a spade connector to the door switch wire and plug to the back of the door switch. Screw switch in position with a 5mm bolt into the captive bar behind the fibreglass, fig 22.
14. A 3-core cable runs from the courtesy light to under the dash on the driver's side; 1 earth, 1 permanent live and 1 switched live. Connect to the main loom.
15. Attach speaker wires to the bulkhead

16. Attach the thickest part of the wiring loom under dash to the bulkhead by the tab on the loom.
17. Plug connections onto the steering column and heater.
18. Work systematically around the engine bay connecting the loom to:- coil, wipers, oil switch, distributor, carburetor, extend 17a positive to battery, right-hand headlight, right-hand indicator, water temperature sender, fan switch on thermostat, alternator, ignition solenoid, fan, reversing light switch on gearbox, horn, left-hand indicator, left-hand headlight, wash bottle motor, brake fluid level sensor.
19. Connect thick positive from battery to ignition switch and then from ignition switch to starter motor. Connect thick negative from battery to engine. Leave connections off the battery for the time being.
20. Spot lights and air horns must be wired up through relays. If higher than standard power halogen headlight bulbs are being fitted then the headlights also need wiring up through a relay. Run all extra wires along the main wiring loom route.
21. When all the wiring has been completed and checked, wind electricians tape around the loom together with extra wires in a spiral. This will make the wiring look neat and tidy.

FIG 21
EARTH WIRES

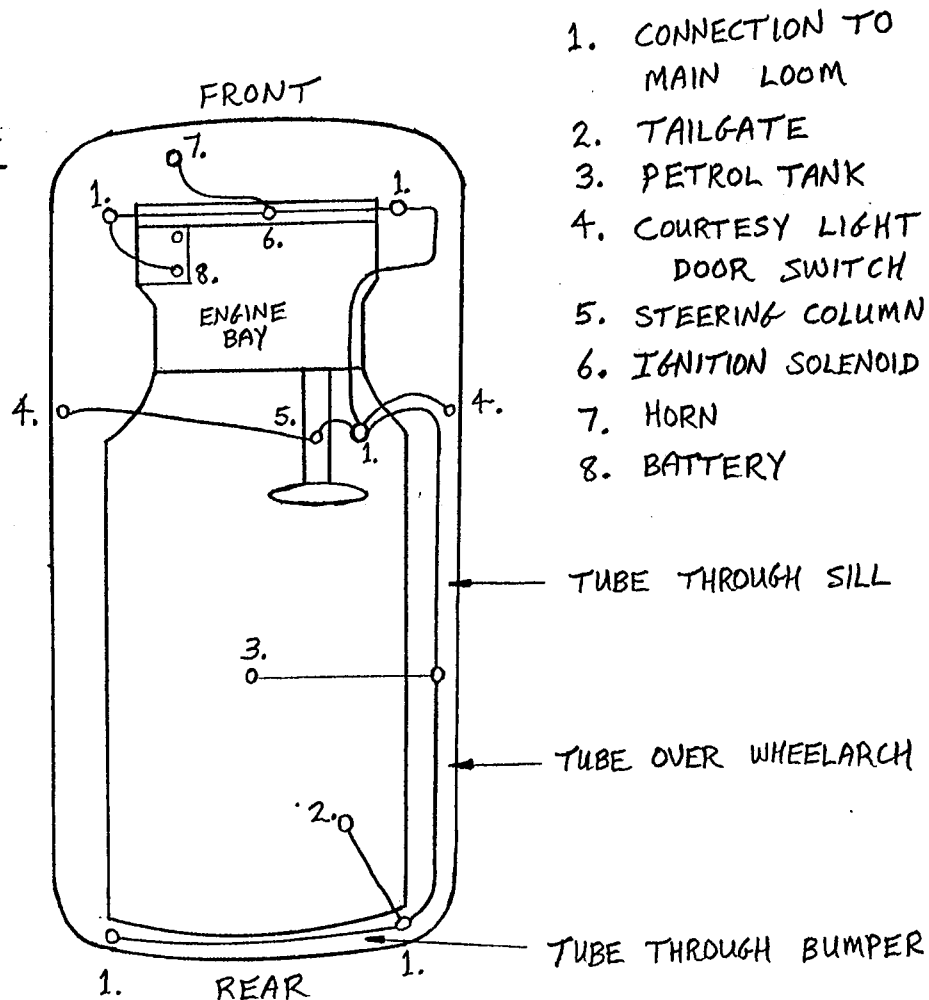
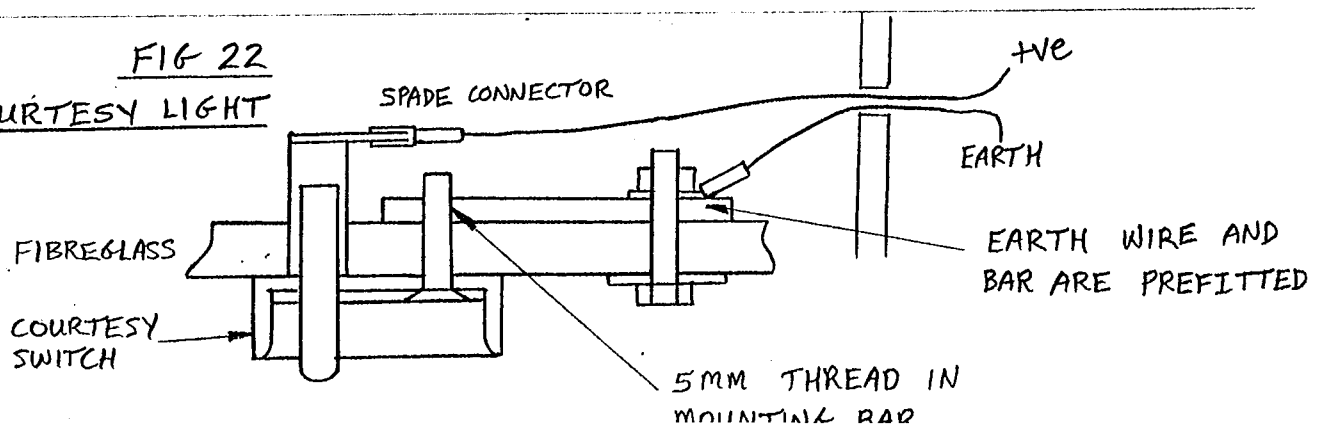


FIG 22
COURTESY LIGHT



6.9 GLASS

If you need to buy a new windscreen or tailgate glass make sure that you get the right size to suit the rubber gasket. Newer Fiestas have wider rubber gaskets and correspondingly smaller glasses than earlier cars. However, the aperture size in the body is the same.

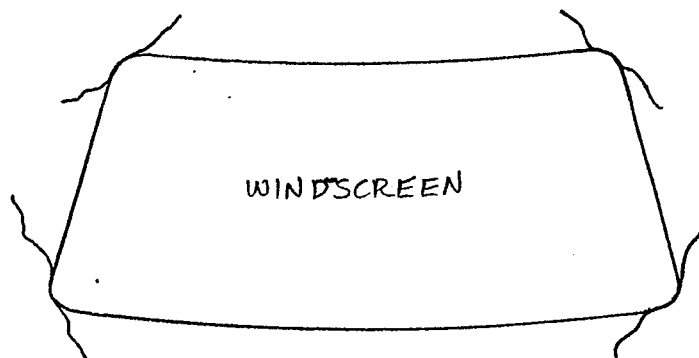
Read the cautionary notes in Haynes page 200 and below before attempting to fit the screen. The job is not as difficult as made out in the Haynes manual, especially if re-using an old gasket. The secret is to apply no point loads onto the glass.

A second person is required to apply weight onto the screen while the gasket is fitted from the inside. The weight should be applied onto a cushion. It is particularly important with laminated screens that the weight is not applied close to an edge. If necessary most of a man's weight can be applied onto the cushion.

1. Cut 4 lengths of string and fit them into the groove in the gasket that fits onto the fibreglass flange. Overlap at the corners as per fig 23.
2. Apply sealant into the groove in the gasket for the glass and a smear onto the bodyshell aperture. Fit gasket onto the screen.
3. Press screen into the bodyshell aperture with string ends hanging inside.
4. Pull the string ends to lip the gasket over the fibreglass flange, pressing from on top at the same time.
5. Lip over all 4 corners first and 10cm either side. Then do the sides, followed by the bottom and finally the top.
6. Fit tailgate glass in the same way.
7. For the rear quarter glasses use 1 piece of string overlapped at the sharp corner.

6.10 DASHBOARD

1. Fit 30mm wide x 6mm thick neoprene supplied along the ledge and down the sides where the dashboard fits to the body. Stick it on so that it touches the windscreen gasket.
2. Instrument pod should not be attached to the dashboard at this stage.
3. Feed dashboard into the car from the passenger side. Locate on the heater.
4. Bolt either side near the doors with 8mm bolts into the captive nuts. Self-tap the central mount behind the air vent.
5. The dash also attaches to the heater via a bracket and onto the steering column with a small screw.
6. Fit the 2 plastic trim shrouds onto the column and adjust the position of the steering column support brackets so they line up with the dashboard.
7. Tighten all bolts on the steering column and support brackets.
8. Clip electrical connections onto all dashboard switches.
9. Clip speedo cable and electrical connection plug onto instrument pod and screw pod to dash.
10. Screw fuse box to the underside of dash on driver's side.
11. Connect battery and systematically check that all electrical components work.
12. Make a thorough check of all fluid levels and check that everything has been connected to the engine. Pour in some petrol and start the engine. It will take about 30 seconds of firing for the petrol to get through to the carburettor.
13. Check the car moves in all directions, steers and stops. When the engine is up to temperature look for coolant leaks.

FIG 23

6.11 DOORS

The doors are prehung with holes machined to accept the Fiesta locks, catches, handles and winder. The mechanism has 4 operating wires. Look at the diagram on page 202 Haynes to see which wire goes where.

1. Lock barrel. Because the fibreglass is much thicker than steel, a new groove needs to be sawn in the barrel for the retaining clip.
2. The wire to the interior door handle will need to be extended.
3. Fit the items in the following order:- catch(longer 6mm bolts), outer handle(longer 5mm bolts), lock barrel, lock button, inner handle.
4. Fit anti-rattle rubber bush half way along wire to inner handle as on Fiesta.

WIND-UP WINDOWS

1. Lengthen the wind-up arm with the bar provided. Drill out the pin retaining the nylon bush and refit bush onto the extension bar, fig 24. Bend the arm as dimensioned in fig 24.
2. Front Vent. Put sealant in the groove in the rubber gasket for the front vent glass. Fit gasket onto the glass.
3. Smear sealant around aperture on the door and push glass forwards into position.
4. Slide wind-up window glass carefully right down into the door. Locate it in the rear channel.
5. Slide Fiesta front channel down into the door locating it over the glass. Do not push it down too far and then pull it up again; this would scratch the black paint.
6. Push the top of the Fiesta channel forward so that it locates over the front vent gasket. It needs to be held forward in this position using a 5x15mm bolt with a countersunk head, fig 25.
7. Pull window up to the top of the channel and fit the bracket supplied to support the rear channel, fig 25. This should be spaced to suit so that the glass is held firmly.
8. Locate the bush on the wind-up arm into the groove at the bottom of the window. Rotate the winding spindle until the mounting holes line up and bolt on with 5mm bolts.
9. Check the door panel fit. A small amount of adjustment can be made by tightening or loosening the door hinge mounting bolts. More adjustment is obtained by adding or subtracting shims under the door hinges.
10. Carefully measure the position for the striker pin. Bolt on using Fiesta backing plate and adjust.

FIG 24 WINDOW WINDING ARM

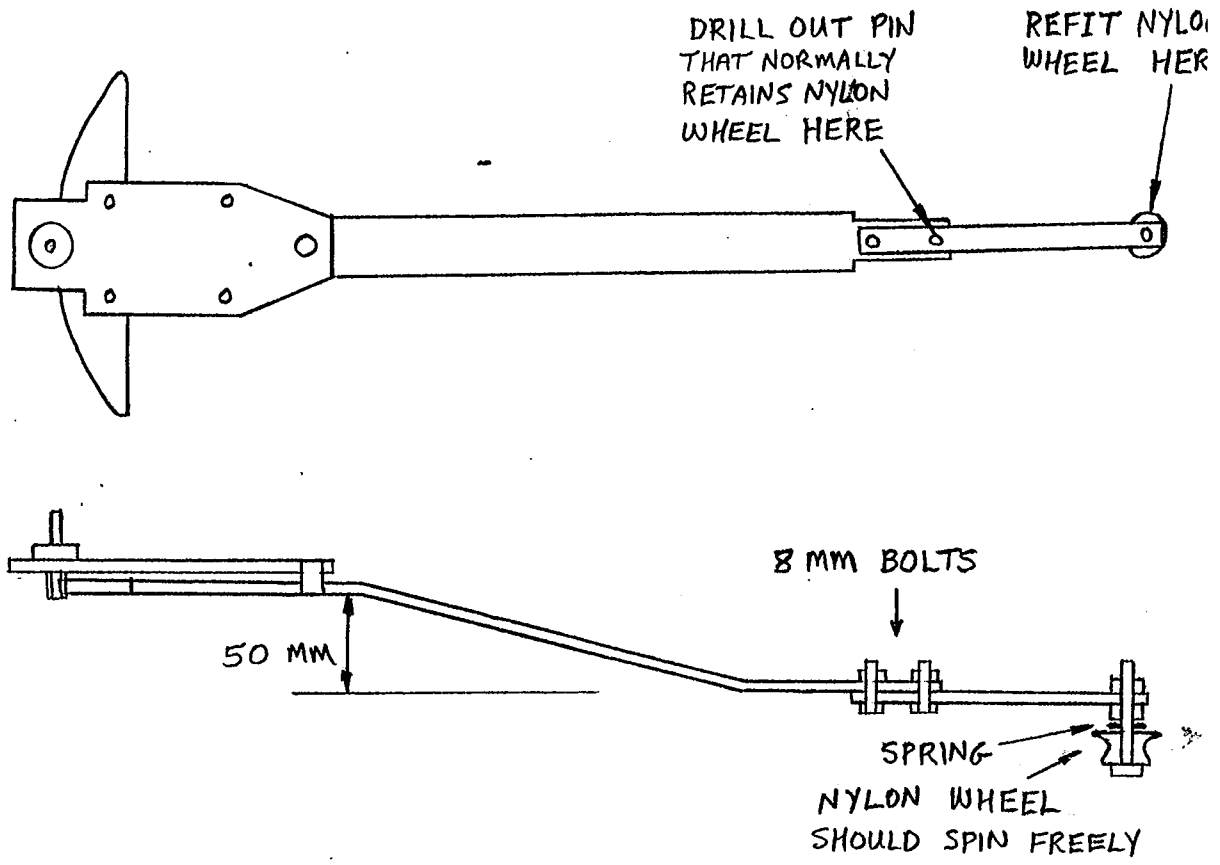
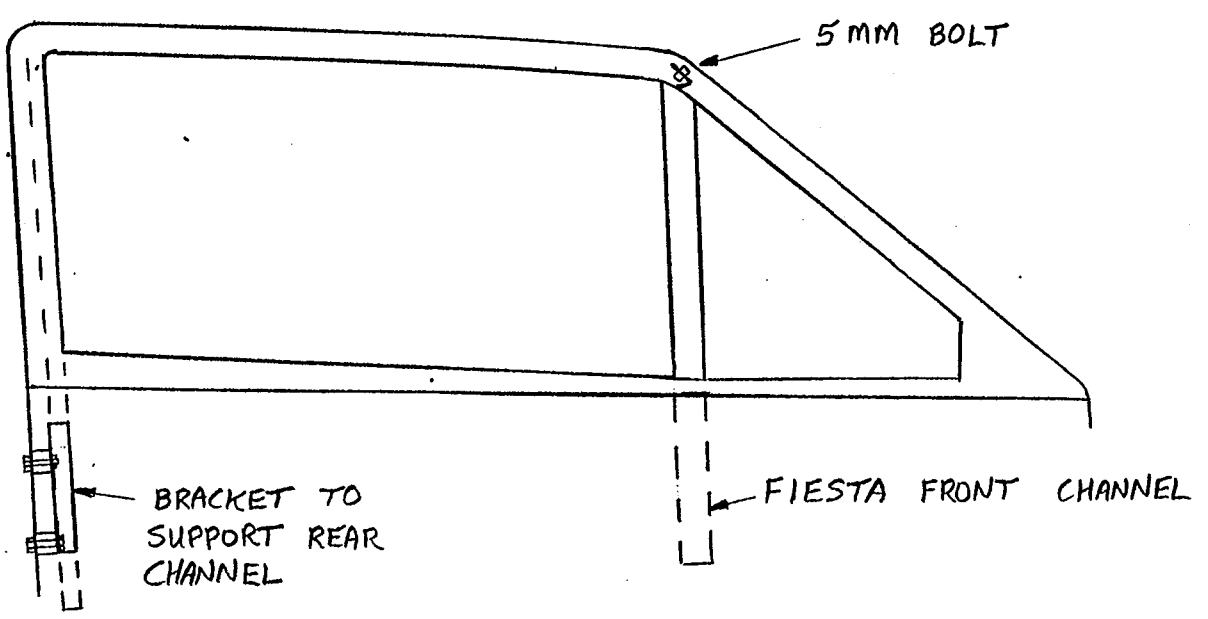


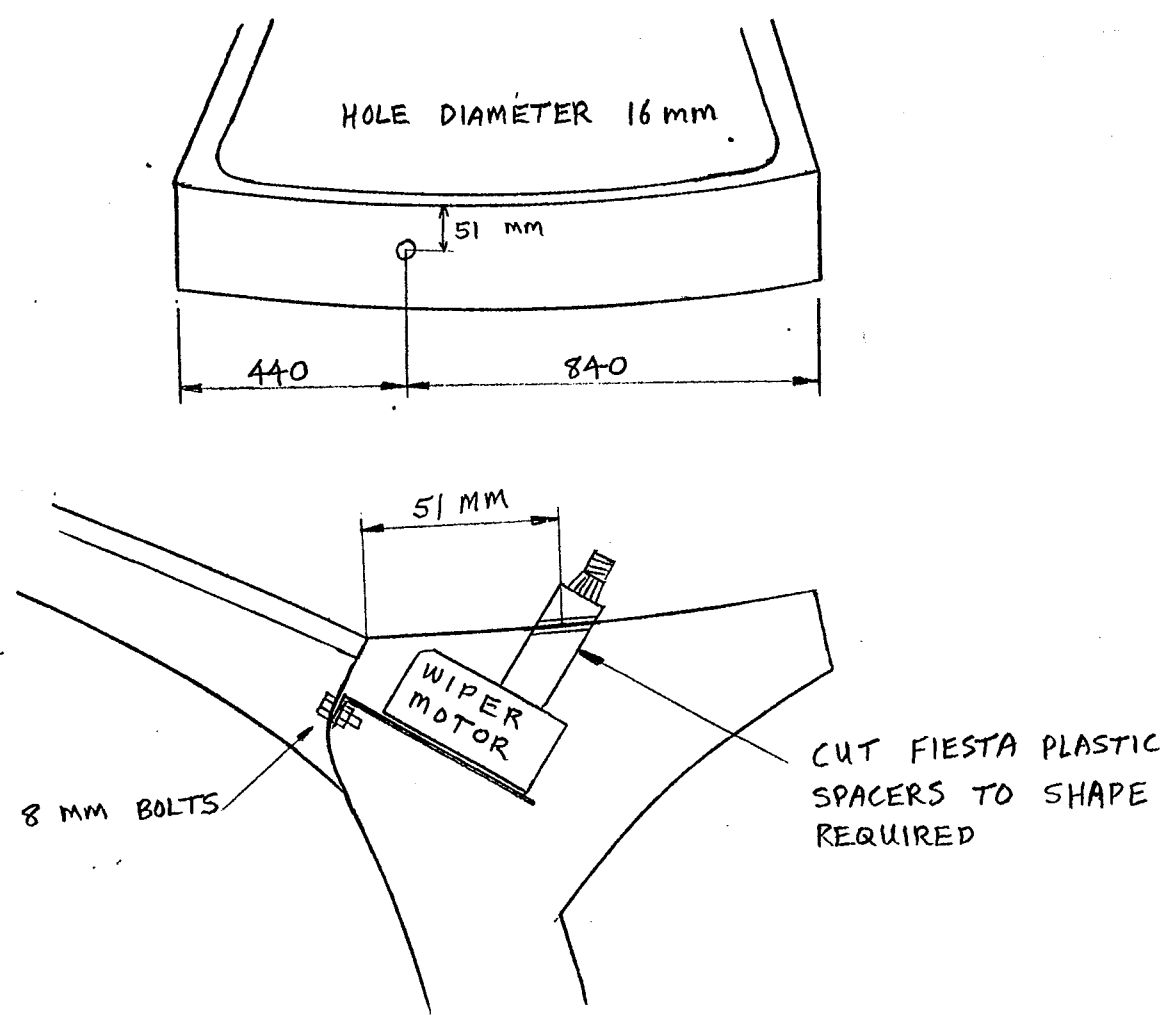
FIG 25 DOOR FRAME



6.12 TAILGATE *Enlarge the eyes at both ends to 12mm to allow the sleeves from the Fiesta bolts to be used.*

1. New gas rams are provided because the Fiesta ones are too powerful. Bolt the gas rams to the brackets on the bodyshell and to the tailgate.
2. The Fiesta tailgate striker bolts to the bodyshell with 8mm bolts into captive nuts. The striker has large mounting holes in it to allow for adjustment.
3. Bolt the Fiesta catch to the tailgate with 5mm bolts. Space the catch downwards at each bolt with two washers.
4. Shorten wire between lock barrel and catch. Clip on lock barrel and wire.
5. Screw on number plate so that it is equi-distant between the bottom edge of tailgate and bottom crease of spoiler. Front number plate fits on below air intake.
6. A rear wiper is not as necessary as on the Fiesta because Quantum's rear window stays clean. If you wish to fit one, drill the hole as dimensioned on fig 26.
7. Manoeuvre the motor into the tailgate. The bracket attached to the motor may need to be removed to do this and then reassembled once inside.
8. Hold the motor in position and note where to drill the 2 holes for the mounting bracket and the size and shape of plastic spacers required on the wiper spindle.
9. Cut the Fiesta plastic spacers to suit, bolt on motor and connect to the relevant wires in the 6-core cable.

FIG 26 REAR WIPER MOTOR



One of the great strengths of the Quantum design is that the interior can quickly and easily be trimmed to the standard of the Fiesta production car. If your Fiesta is a Ghia or XR2 model, you are unlikely to want to change the specification. If your Fiesta is an L model you may at some stage want to uprate the interior. The interior can be transformed by changing the front seats to XR2 spec and having the rear seat and 4 trim panels retrimmed in matching material.

Most of the leather textured pieces of trim from your Fiesta will probably look a little aged. They can be made to look brand new again by dying with Humbrol PVC upholstery paint. It has a very thin consistency and should be applied thinly. Second coats can be applied after 4 hours. It is available in a number of colours which can be mixed to the shade required. Paint the following:- trim panels, door pockets, dashboard, door handles, rear shock absorber covers, vinyl parts of seats, centre console, gearstick gaiter, mirror, steering column trims, sun visors, steering wheel.

SOUND DEADENING

Quantum with just carpet and no sound deadening is remarkably quiet, but it is worth reducing noise further.

1. Fit the 2 Fiesta pieces of sound deadening under the dashboard.
2. In the passenger compartment glue pieces over the tunnel and onto the lower half of the bulkhead. Use a contact adhesive of paste rather than treacle consistency such as Dunlop Formula 1; it is much easier to work with (available from Q.S.C.)
3. Lay pieces on the floor of the passenger compartment.
4. In the boot lay pieces behind the rear seat and on the boot floor.

CARPET SET

A complete carpet set is supplied. As with the sound deadening this is glued in position on vertical surfaces and laid on the floor. Start from the top and work downwards.

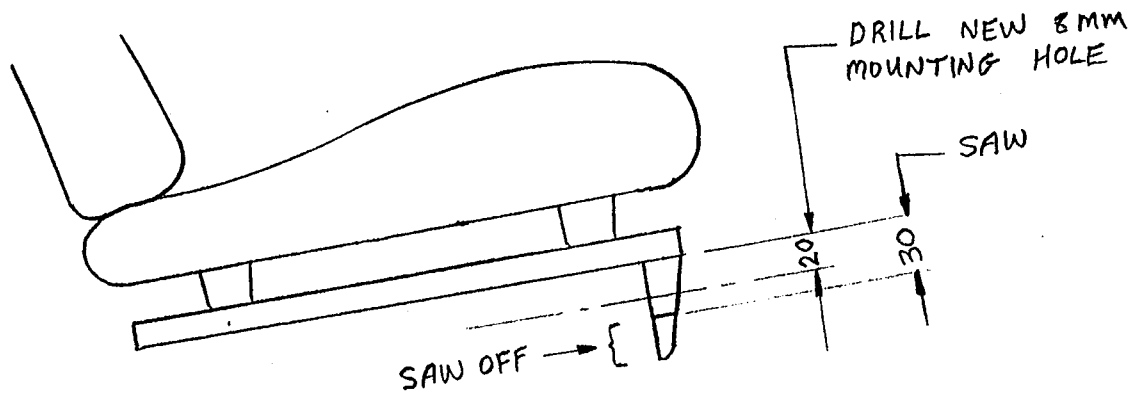
1. Glue the piece to the tailgate.
2. In the boot, glue pieces to the sides (cut holes for the rear seat belt bolts if fitting them) and over the axle hump. The front end of the piece that goes over the axle folds up to hide the back of the rear seat squab.
3. Lay the piece on the floor and glue it where it folds upwards at the back.
4. In the passenger compartment glue the 2 side pieces under the dash, the rear seat squab, the tunnel and the 2 sills (cut holes for seat belt bolts). Lay the floor pieces.

SEATS

1. Rest the rear seat squab in position and secure at the front with self-tappers.
2. The upright part clips into recesses moulded into the rear wheelarches as per the Fiesta. With older seats the back will now just fold back and clip onto catches moulded in the wheelarches. On newer seats the striker loop from the Fiesta has to be bolted onto the wheelarch.
3. Check there is no gap between the squab and the upright part. The squab may need chocking up at the back under its wire frame.
4. Stitch the fold of carpet that hides the back of the rear seat to the squab.
5. On each front seat saw the front mount closest to the tunnel as per fig 27.
6. Check that seat runners move freely and it is important that they are exactly parallel.
7. Use 8mm bolts to fit the front seats.

and in ref wheel arches

FIG 27 FRONT SEAT



CAPTIVE NUT FOR TOP MOUNT

FIG 28

FRONT SEAT BELT MOUNTS

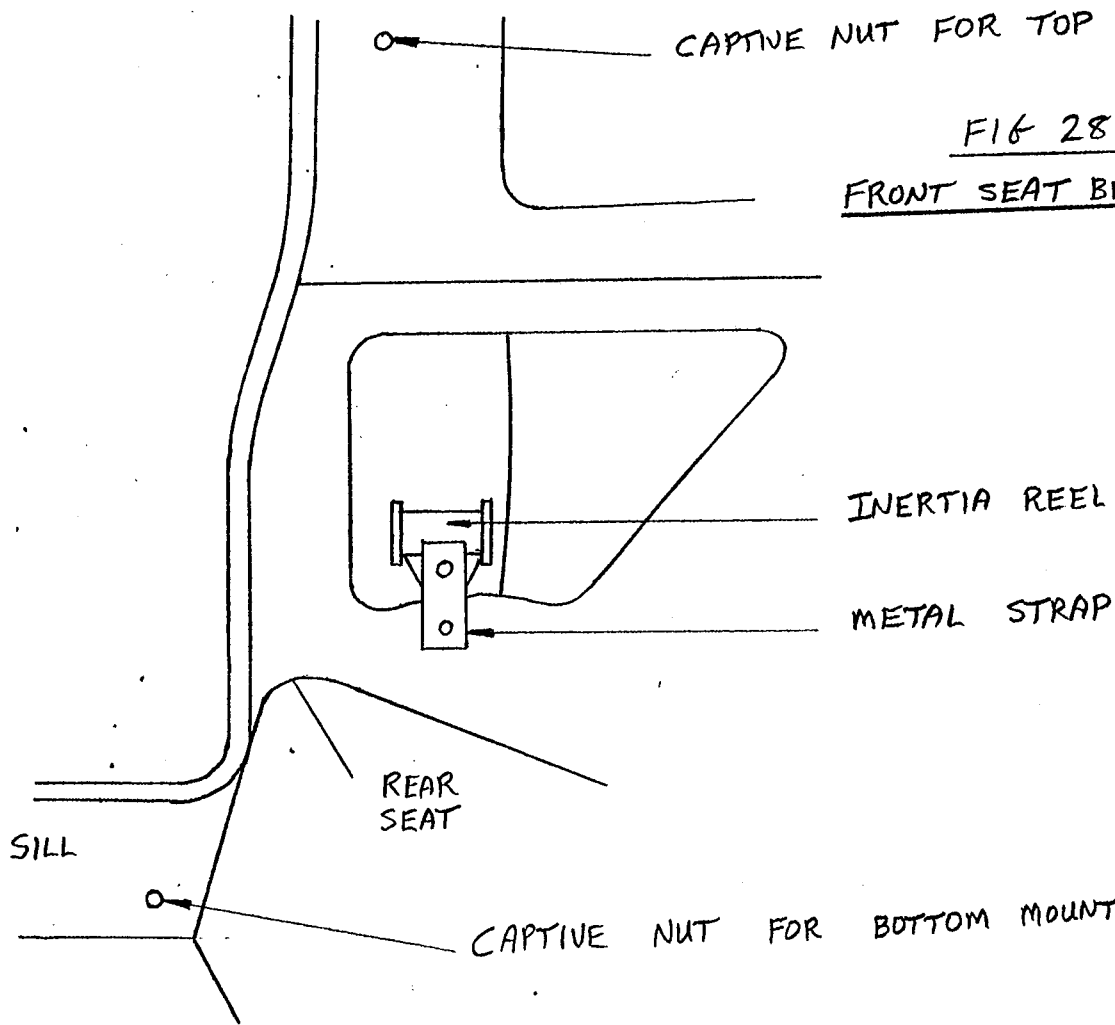
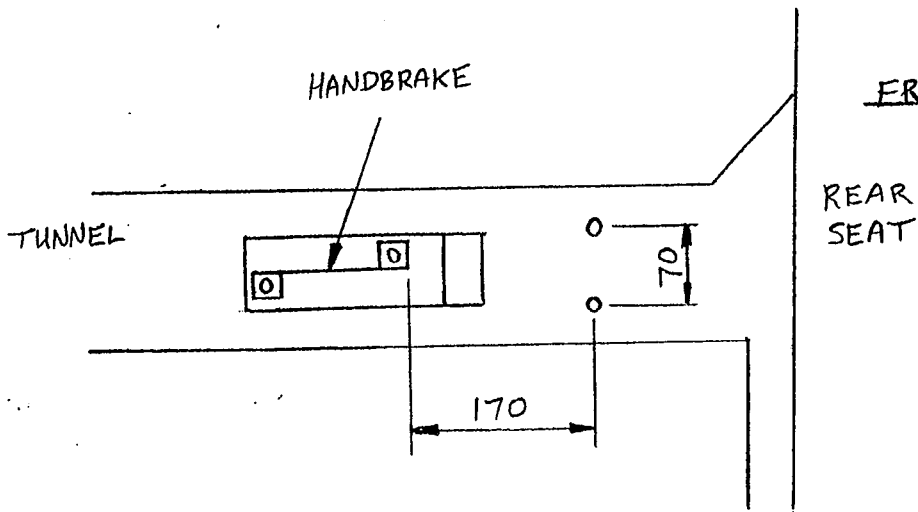


FIG 29

FRONT SEAT BELT STALK MOUNTS

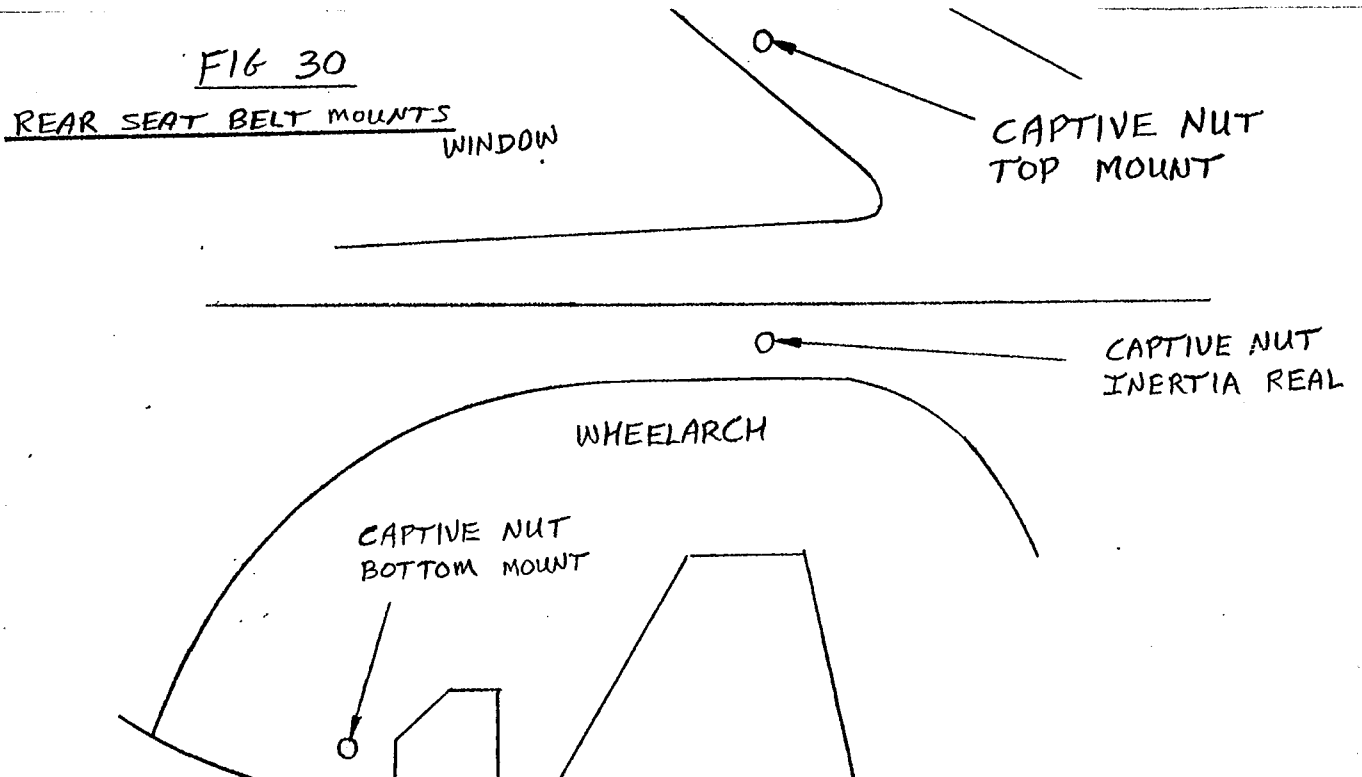


TRIM PANELS

1. To determine where to drill the holes for the door trim panels, paint the ends of the poppers and press the panel onto the door in the correct position. Do this for the top left and top right popper first. The panel needs to be fitted far enough forward to clear the rubber door seal as the door shuts.
2. Drill holes for the poppers. They should be a tight fit but not too tight or they will break. Fit the panel, door handle and winding handle.
3. Rear trim panels need to be reduced in size. Hold in position and mark where they need to be reduced. Peel back the vinyl, cut the fibreboard to the marks and glue the vinyl back down again.
4. The seat belt needs to be bolted on and fed through the rear trim panel before it is fitted.
5. Also attach speakers to the trim panels before fitting them. Route the left speaker cable under the rear seat squab from the main wiring loom.
6. Sunvisors bolt through the roof panel water gutter in the same way as the roof panel hinges are fitted. They should be fitted as far outwards as possible whilst still allowing them to fold upwards into the roof aperture to eliminate buffeting. Fill the bolt holes with sealant.
7. Quantum side transfers. Two people are needed to line the transfer up along the side of the car and cut it into three pieces (behind door, door, in front of door). Cut the front and back ends to the wheelarch shape. Thoroughly clean and degrease car. Carefully peel off backing paper. Line up and smoothly press onto the car. Peel off the masking paper. Check transfer is firmly stuck. Polish over it carefully the first time.

SEAT BELTS

1. Bolt the front inertia reel to the metal strap supplied and bolt the strap to the predrilled hole, fig 28.
2. Feed the belt through the hole in the trim panel.
3. Bolt the belt to the captive nut in the 'B' pillar. Make sure the bolts are long enough. After the thread starts to bite, the bolt should wind in a further 10mm.
4. Bolt the belt to the captive nut in the sill.
5. Drill holes for the seat belt stalks as dimensioned on fig 29. Make sure the bolts miss the handbrake cable.
6. Captive nuts are provided for rear seat belts, but only 1mm holes are drilled for them in case they are not being fitted. Enlarge these 1mm holes to 12mm being careful not to damage the captive nuts behind. Bolt the rear seat belt on as shown in fig 30.



6.14 CONVERSION FROM OHV TO CVH ENGINES

Mk1 Fiestas were all fitted with the OHV (Overhead Valve) modified Kent engine. Mk2 Fiestas of 950 and 1100cc are also fitted with this type, but 1300, 1400 and 1600cc variants use the more modern CVH engines, also fitted to Mk3 Escorts and Orions. All engines can be fitted to any gearbox from a Mk1 or Mk2 Fiesta, Mk3 Escort or Orion. We recommend the use of a 5 speed gearbox.

PARTS REQUIRED:-

1. CVH engine fully dressed with oil level indicator, plugs, leads, inlet manifold and carburettors or injection equipment, air filter assembly, alternator, starter motor, oil pump, fuel pump, water pump, clutch.

2. Distributor. There are two systems:
(a) Escorts and some Fiestas use a distributor with a remote control box, usually mounted at the rear right hand side of the engine bay.

(b) Most Fiestas use a distributor with an electronic control module attached to it.

If your distributor requires a remote control box you will need the control box plus the wiring between the distributor and control box including the correct plugs at each end. If you have not got these with the engine it is cheaper and simpler to swop the distributor for type (b) above. Ford part no. 1635640.

- 3. Mk2 Fiesta engine cradle assembly consisting of:
 - cradle 1 off 1632525 (saw off the towing eyes)
 - support 1 off 6162536
 - support 1 off 1619150
 - bush 1 off 1619064
 - insulator 2 off 6049904
 - support 1 off 6137137

2 off cradle mounting plates from QSC.

4. Mk2 Fiesta top engine mount. Do not use the Mk3 Escort one which is very similar.

- bracket 1632524
- insulator 1637005

5. Exhaust. If your engine has an Escort manifold this must be swopped to a Fiesta one. In this case consider a large bore exhaust (e.g Janspeed, Peco) which should cost no more than a standard Ford one.

6. Fiesta Mk2 coolant expansion tank, 6173709 and cap unless there is a radiator type cap actually on your engine in which case the MK1 Fiesta tank can be mounted high up on the bulkhead instead.

7. 2 off "Y" shaped water hose connectors, 6085829.

8. Coil and coil-to-distributor wiring. Wiring part no is 6153322. This assumes the recommended distributor, 1635640, is used.

9. Top engine mounting bracket from Quantum Sports Cars.

10. A temperature sender unit from a Mk1 Fiesta.

11. The brake connecting bar which transmits braking effort from the pedal box on the RHS to the servo on the LHS needs extending by 100mm. Bring this with you when collecting your kit for us to exchange.

You will not need a new radiator as a MK1 950/1100cc radiator gives sufficient cooling to a 1600cc engine installed in a Quantum.

the cradle onto the gearbox

FITTING ENGINE

1. With some CVH engines a hole needs cutting in the fibreglass to give clearance to the alternator. If your alternator mounts as per fig32(d) a hole needs cutting as per fig 32(a). The side to side dimensions are given from the centre of the curve as shown in fig 32(b). If the alternator hangs down as in fig 32(c) there is sufficient clearance.
2. Install the engine/gearbox unit into the car as per section 6.4
3. Fit the expansion tank above the servo and make all water connections as per fig 33. For the RHS hose cut the metal part of a Mk1 Fiesta bottom hose as shown. Note that the water flows into the bottom and out of the top of the radiator. While this is not the normal way it will not give cooling problems. Fix all hoses so they cannot chafe. Fill the system with water and 33% antifreeze via the radiator and expansion tank fillers. Once the radiator is full the cap should never be removed again, the system being filled via the expansion tank.
4. Alter the ignition wiring as per fig 34. The ballast resistor is found at the top right hand rear corner of the engine bay and consists of a length of wire about 700mm long. Extend all other wires to suit the new positions of electrical components.
5. Swop the temperature sender unit to one from a Mk1 Fiesta.
6. Connect the fuel lines. Blank off the return fuel pipe on the carburettor.

ALTERNATOR CLEARANCE

FIG 32(a)

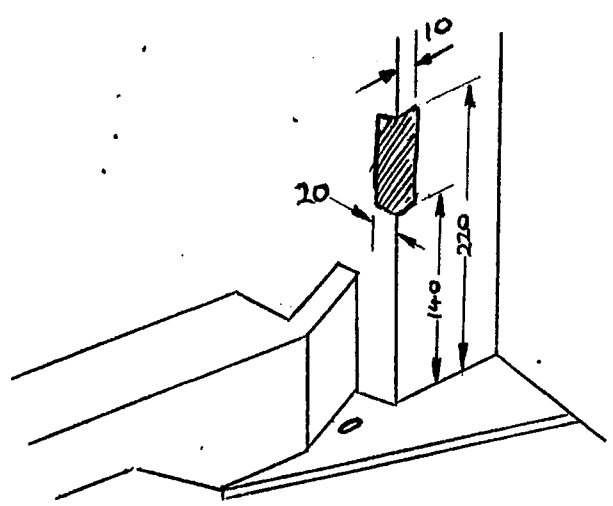


FIG 32(b)

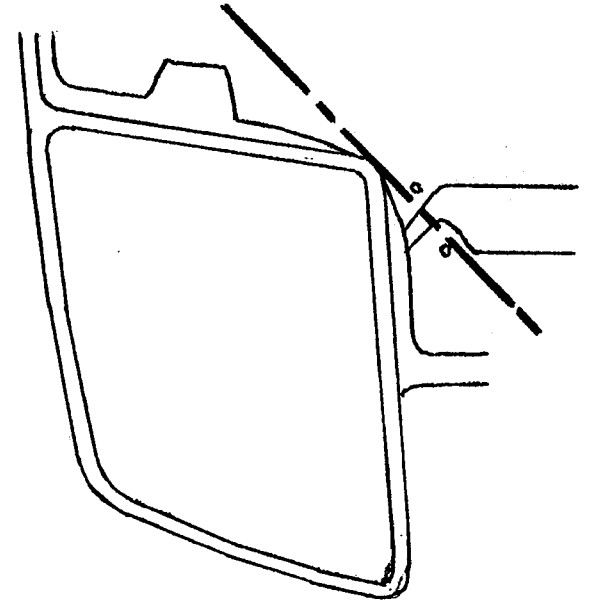


FIG 32(c)

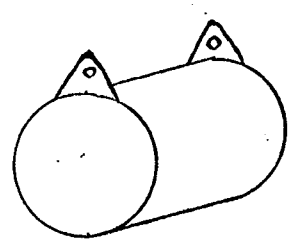


FIG 32(d)

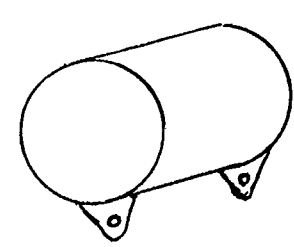


FIG 33

CVH COOLANT CIRCUIT

