SMALL TIPS
TO ENHANCE YOUR ELAN

(Some obvious, some not so)

When starting your restoration, take lots of pictures before you pull the car apart. Also look at and photograph as many other Elans as you can for reference and make notes where you can see improvements have been made. Do not be afraid to plagiarise good ideas!

- Buy a scalpel handle and a box of disposable blades (No. 11 are best). They are available from art supply shops or friendly surgeons. You will be surprised at how useful a fine blade will be for so many purposes.

- Do not throw a single part away until the restoration is finished. You may need it if sudden obsolescence strikes
- Handles, locks and hinges should always have gaskets between them and the glass- fibre. Most gaskets are still available. If not, cut your own from sheet rubber.
- Do make sure that the interior sides of doors are painted semi-matt black in the correct places. If you do not know where those correct places are, ask us .We will send pictures.
- Never use underseal or stone-chip schutz in the engine bay. It looks fine for about two minutes and then it collects dust. Use semi-mat black paint.
- Do, however, plaster a thick coat of underseal on the undersides of the top of the front wings. This will help to prevent the GRP being star-cracked by stones shooting up off the tyres.
- If your rocker switches have become dull, try wiping them lightly with a soft rag dipped in silicone brake fluid. Do this a couple of times a year. But do not use silicone fluid in the brakes- it may affect the rubber in your servo and master cylinder.
- Over-frequent use of metal cleaner will gradually strip the chrome from your window frames and wheel spinners. Wash with soapy water, then use ordinary car wax instead.
- The front bumper trim strip should be held in with body filler- that's the way it was originally done at the factory. Even mastic may not hold it and never, ever, trust the two end screws alone to hold it.
- You do need a bonnet spring, even if it fouls your fancy new fan bracket. In that case, trim the edge of the bonnet to accommodate the spring. And make sure that it is properly hooked . We have lost count of the number of Elan owners who have seen their bonnet sailing into the hedge because the front spring was left unsecured, either intentionally or by accident. And do not fit external racing –type clips- unless you are actually going racing. They look inappropriate on a road-going Elan. Spend time adjusting the spring clips properly so that the bonnet stays securely locked and will not suddenly pop up. The spring clip on very early Elans had an open back, which sometimes allowed the catch on the bonnet to become trapped behind it, making it difficult to release the bonnet without damage. If you still have these, change to later clips with a solid back to avoid this.
- Do not waste time trying to re-veneer your old dashboard; they rarely look as good as original. Buy a new one- it is cheaper and better in the long run
- Fitting the little high beam/ indicator transfers? Soak them in warm water until they just lift off the backing paper; then apply them to the steering column shroud. Do not leave them in the water a moment longer than necessary or they will wrinkle.

- Do not be afraid to ask, especially about the cosmetic aspect. We are by no means infallible, but enquiries. As for help with the mechanics and electrics- if we do not have the expertise ourselves to help we can often point you at someone who does.

PAINT COLOURS

While paint colour is a subjective choice, where possible use a genuine Lotus colour. The main (but not all) colours used were:
LO1 British Racing Green, LO2 French Blue ,LO3 Wedgewood Blue,LO4 Cirrus White ,LO7 Lotus Yellow, L10 Bahama Yellow, L11 Regency Red, L12 Lagoon Blue Metallic, L13 Pistachio Green, L14 Colorado Orange, L16 Tawney Metallic, L23 Burnt Sand. For bumpers use Ford Silver Fox or Talbot Aztec Gold.

When your paint supplier has identified the correct colour persuade him to mix a preliminary small amount, such as .10 litre in order to check the shade.

All Elans were originally painted in cellulose, which was ideal for the home user. It is now very difficult to find in the correct colours, having been superceded by isocyanate two-pack and then water-based paints. These paints are not suitable for amateur use because of the specialized conditions needed. It will also need care to match the colour exactly. Do not believe paintshop operatives when they say it cannot find the true colour – they can if they try hard enough.

ELAN DOORS:IMPROVING THE FIT

Contrary to received opinion, most Elan doors actually fitted quite well. At least they did with the early models before the Sprint, when the fit became less good on some, but not all, cars. The later the car, the less likely it would be to have well-fitting doors.
Allowances must be made for the ravages of time; many cars whose doors now stick out once may have had much better-fitting panels. The car may have been left in a garage with a window where sun played on the same area for long periods, the heat thus causing distortion. The door hinge bobbins may have worn and be overdue for replacement. The owner may have been in the habit of grasping the door or window frame to heave himself out of the car.
Each door was made in two sections and the outer and inner panels were joined around their edges. f you open the door and look at the top inner edge you will see pop rivets where the two sections were joined, in addition to bonding with glass-fibre. Many people think that the rivets denote a somewhat clumsy repair, but they do not, as they were put in at the factory.
When we were restoring Elans we would sometimes get a customer who requested that we leave the doors protruding at the bottom because " if the doors stick out it's original". We ignored this instruction because all cars should have doors which fit well. After all, you would not ask a builder fitting a new door to your cottage to leave a gap" because it's what the Tudors would have done, would you?
What can be done to improve the fit? Here are some hints, starting with the simplest and leading up to the most complicated.

1. Firstly, when attempting a good door fit, use your new door seals. If you fit the door with the old seal, or no seal at all, the fit will not be correct when you put on the new seal. The original lip-seal is no longer available and a modern substitute is necessary. If you are having your car painted, supply the strip to the bodyshop and get them to correct the door alignment with it before the door is painted.
2. The next, and simplest, thing is to make sure that the catch is properly adjusted. Sounds obvious, but often a great improvement can be made by loosening the screws on the catch plate, moving
3. the plate and re-tightening the screws. You will find that the slot behind the cover plate is quite wide and allows a lot of movement.
4. The next move should be to fit new plastic door hinge bobbins. Your car will probably still have the original ones, in which case they will be worn.
5. Look at the metal cup bobbins in the sills; it is possible that they will have worn to an elliptical shape, allowing the plastic bobbins to move sideways.
   The easiest way to replace one of these is to cut out a section of the door-shut around the

bobbin about 2-3" square. Make up a flat square of mat, about 3 layers , then cut a hole in the centre of it and laminate in a new bobbin. Now fit this little panel into the square hole you have cut and laminate in. Sounds complicated, but it is easier than trying to cut out just the bobbin and replace it, and the new bobbin will not wriggle loose.

6. Next- to split the doors or not? There is much chatter about this by people who have never done it. It is possible to effect a good fit by doing this when the door only protrudes a small amount. A diamond wheel, or similar cutting tool, is run around the lower edge of the door and a little way
7. up the handle end. A small sliver is cut out as necessary, the door offered up to the body to check the fit, then the slit is bound together with masking tape and rebonded by laminating in glass mat strips on the inside. A useful product for such a job is bonding paste, which is specifically designed to hold two edges together, but may be difficult for the amateur restorer to source. This all sounds complicated, but is, in fact, well within the capabilities of most do-it-yourselfers.
8. However, there is a limit to how much the bottom edge can be cramped in- too much and it will be impossible to insert the window frame and will also give curiously curved shape. And it does not solve the problem of the diagonally opposite corner; for when one lower corner sticks out the opposing corner will be indented- i.e. the top front corner will not line up with the scuttle. There are several techniques we would employ, depending on the severity of the misfit. Some of them sound outlandish but they work.
9. Often we would approach the problem laterally and alter the body to fit the door. We would split the body along the door shut, following the crease made by the upstand which holds the door seal. We would then push the upstand in as far as required, holding it in place with a little wooden wedge, and laminate a strip of glass on the inside of the body to fill in the gap, finishing cosmetically on the outside with filler, with the seal covering the join. The door could thus be pushed further into the door aperture, creating a better line. This technique is quick, easy and surprisingly effective.
10. We would also pack out the body. We would laminate an extra layer of glass-fibre mat to the outer surface of the lower body. Smooth it, then finish with filler, tapering it out along the rear wing and down the sill. Filler can also be used top and out the top leading edge of the door and front wing to create a smooth line. This needs a heavy-grade filler, such as Isopon P.38, not a lighter easy-spread filler.
11. Do not be afraid of using filler in deep quantities- if the surface is firstly well prepared it will adhere. Some bodyshops make a feature of not using filler, but remember that the Lotus factory used it literally in industrial quantities. Applied and finished carefully you need not worry about using it in deep layers. Great lumps of filler will not self-detach and fall onto the road.

If this all sounds great deal of work.-it is. But it really does not take that long once you get started. Keep looking at the panels from all angles, including lying on the floor. Keep running your eye and hand over the side of the car to make sure that you create a smoothly tapered line with your filler. And remember, when sanding back the filler, to keep using a light guide coat with a black aerosol to accentuate the highs and lows.
If you can get the doors to fit well, the other panels will seem simple.

ELAN PANELS:FITTING THE BONNET AND BOOT LID

Boot lid:

The boot lid and the hinge recesses on the body both have elongated holes in order to allow the hinges bolts to be slid back and forth for adjustment to obtain a good fit.
We have a better way. We fitted the lid accurately when preparing the body, then did away with the adjustment, so that when the car was painted the lid could only go back into exactly the same place. Time taken at the pre-paint stage was compensated by time saved after respraying, with no worry of accidental paint damage.

This involves destroying your old boot hinges, but, on a proper restoration, you were not going to use them again any way, were you ?
First of all make good any damage to the boot lid and repair any crazed areas on both top and under sides. Now fill over with glass fibre (not just filler) the holes in the lid and body.
Drill out from the top the bolt in the hinge which goes into the body so that you have a hole right through the hinge.

Align the hinges onto the lid so that they sit perfectly over the recesses, putting a little paint on the two studs to mark where to drill. Drill holes exactly the correct size to take the hinge studs. Fit the hinges to the lid and fit and tighten the nuts. Now fit the hinge to the body as perfectly as you can, with equal gaps at the sides and making sure that the front edges align perfectly with the edges of the rear wings. Tape securely into place if you only have two hands. Then drill down through the holes in your hinges into the recesses on the body. As your new hinges will be exactly the same size as the old, when painted, or removed at a later date, the lid will go back in precisely the correct place.

Bonnet:

Unlike the other panels the final fit cannot be made until after painting and the metal support brackets on the body are in place and the front spring fitted., which is obviously after the body has been dropped back onto the chassis.
If you buy a new bonnet you should make sure that it has laminated into it the strengthening hoop which holds the bonnet fixing hook. The cars up to the very early S4 did not have this hoo , merely a small plate riveted on to take the hook. Consequently over the years many have become distorted. It is a good idea in this case to abandon originality and put in the strengthening hoop even for early car.
It is usually quite easy to attain an even gap all round. You may need to trim down the bonnet side edges a little more so that it sits well down , in order to get a smooth line against the wings. Please use the proper white plastic screws in the recesses, not number plate screws. The vertical adjustment is made by the addition and subtraction of small washers under the head of each plastic screw. A tiny washer can make a surprising difference.Do not forget to fit the stainless steel runners on the bonnet and anoint these and the screws with grease for smooth running. The final adjustment is made by the careful positioning and fine adjustment of the spring clips in the engine bay, which are held in place by self-tapping screws. This can take time to get it right. One further thing to note is the height of the engine and radiator in relation to the bonnet. Without sufficient clearance there is a risk of star-cracking the centre of the bonnet. You may need to file the slots of the engine mountings to drop the engine height fractionally to avoid the cam cover fouling the bonnet. Similarly, the radiator cap may need a judicious sideways thump with a rubber hammer. Do not forget the large foam strip on the bonnet over the radiator. It protects the bonnet and helps cooling by deflecting air through the radiator. The small foam strip on the ledge in front of the scuttle protects the leading edge of the bonnet and eliminates rattling; it should be stuck in place before the bonnet is fitted.

Bumpers:

The rear bumper usually needs no adjustment; just make sure that the edges of a new bumper are properly trimmed down. If retaining the old bumper, make sure that it has not distorted and spread out over the years: nothing much can be done about that.
The front bumper is the most problematic panel to fit, apart from the doors; Lotus fitted the plastic trim strip to hide any discrepancy between body and bumper. However it is a much better idea to make a nice even gap in which to fit the strip. This will mean packing either or both the body and bumper with filler. The worst cases may even mean splitting and cramping it in, strengthening with glass-fibre mat on the underside. We have even on occasion had to cut a bumper in half and rejoin it to get a good line. Do not just offer up the bumper-actually bolt it into place. Then you can apply filler and sand it back with the bumper in situ. Incidentally, if you buy a new bumper, make sure it has the small middle panel holding a metal bobbin; this is to bolt the bumper centrally to the body. If the new bumper does not have this, cut it out of your old bumper and stick it into place.

Headlamp pods:

There is not much you can do about these as the bobbins in both body and pod are in fixed positions. The only time you might have fitting problem is to correct a former bad repair. Worst case scenario would involve moving a bobbin, but this is rare.

If you have new pods ascertain before painting that they have been trimmed enough to take the lamp bowls. Incidentally, if you have an original S1 or S2 body you will have noticed that the front of the car is not symmetrical- there is a larger gap between pod and front bumper on the left side than on the right. Leave it.

FITTING A NEW HOOD TO THE DHC ELAN

This is much easer to do with an assistant.
Raise the hood frame and fix the side arms into the nylon spigots on the top corners of the windscreen frame. Do not yet tension the frame.
Lay the hood over the frame in as near to the correct position as possible.
Starting with the two Tenax studs immediately behind the doors, press the hood material over the studs and mark with chalk or a white wax pencil, making sure that the sides match,
When you are certain that the marks are symmetrical make the smallest possible holes with a scalpel or very sharp craft knife and push the hood onto these studs.
Next measure and mark the centre of the back of the hood. Nick a tiny hole at this place and again push the hood onto the centre stud. Now do the same with the remaining studs as evenly as possible, You can either work from the centre back to the sides or vice versa.
You will have to enlarge the holes as the Tenax button shank needs a relatively large hole of 3/8", but, if you get a pucker, you can then enlarge a hole sideways to correct it. At ¾" the outside diameter of the Tenax button is forgivingly wide to accommodate small errors in hole-cutting.
Fix all the buttons onto the hood, using the little key normally provided to secure the flat nut on the back.
Snap the buttons onto the studs.
Tension the hood frame.
Pull the two top front corners forward as tightly as possible and mark as before over the stud fixings on the windscreen frame.
Relax the frame tension and remove the hood from the car.
Cut very small holes on the marks and push the top part of the press stud through.
Lay the hood on a clean bench. Fix the under part of the press stud securely by peening over with punch.
Lay the hood back over the frame and secure all fastenings, including those on the tabs around the frame. Re-tension the frame. Make a cup of tea in relief.

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When not in use the hood was originally designed to fold down over the frame, under the hood envelope. In this case the hood remained permanently attached to the centre five studs, the cups washers of these studs being fixed over the hood.
The disadvantage of this is that the hood windows can be damaged by folding. A better way,if you do not mind sacrificing originality and a little boot space, is to make the hood fully detachable by fitting buttons all the way round. Then you can lay the hood in the boot when not in use. An even further improvement is to use a bag of soft fabric in which to store it.

FITTING THE HEADLINING ON THE FHC

As with the DHC it is easier with two pairs of hands. Note that the three tubes which hold the headlining all have slightly different curves and lengths, so when removing the old headlining from the car be sure to mark them appropriately. If you have lost the tubes you will need to craft some, following the line of the roof- it is a good idea to use 8mm. copper plumbing tubing as a substitute for the originals-easy to bend and will not rust.
With an assistant holding up the opposing side, insert the tubes into the channels on the lining and it offer to the roof, each person standing in the door opening .Secure the tubes into position using the wire clips which are fixed with small self-tapping screws- the holes where these go should be apparent. Secure the lining roughly into place using small bulldog clips- you will need at least twenty of these. Gradually work round the door and screen apertures, pulling the lining taut and moving and adjusting the clips as necessary.
When you are that there are no wrinkles left, stick the headlining to the glass-fibre, using a contact adhesive .Apply it to each surface and leave to dry before mating together. Try to stick only to the outside, using small amounts. Do not to get too much adhesive on the inside of the car as the adhesive may eventually work through and discolour the face of the headlining. When

the glue has set, trim back any excess headlining. Fit the door and screen rubbers, which will then hide the edge of the headlining.

FITTING THE FRONT BUMPER TRIM STRIP

We have seen the trim strip held in with self-tappers mastic, Araldite, pop-rivets, hairgrips, chewing gum or simply will-power. The best way, the way we used to do it, and the way the factory originally did it, is with body filler.
It helps to have two pairs of hands for this job but it can be done adequately on ones own, in two stages, one side at a time. The strip comes in a two-metre length, which is about 20 cm. too long, but do not trim it before fitting.
Fit the bumper to the car and mark the centres of both body and bumper by attaching a small piece of masking tape to each and pencilling the centre mark on that.
Note that the back of the strip is asymmetrical ; the narrower side above the protruding tag should be on top, enabling the strip to go round the corners more smoothly.
Mark the centre of the strip and push it into the gap between body and bumper, lining up all marks.
Warm the strip gently- a hairdryer is safer than a hot-air gun; then carefully push the strip well down, pressing tightly against the glass-fibre and pulling tight sideways. Now bind it down tightly with masking tape and leave to cool.
It will not take perfect shape, but will retain much of the shape. Remove the strip. Place strips of 2" masking tape all round on either side of the gap between body and bumper, still retaining the centre marks.
Mix up a large wodge of ordinary body filler using rather less hardener than normal and push the filler evenly into the gap. The masking tape is to protect the paint.
Then put the strip back in, aligning the marks and pushing down evenly, especially on the curves. Bind in tightly with masking tape and leave to set fully fro several hours.
Remove all masking tape. Drill a small hole about 3/8" in from each end of the strip and fit a self-tapping screw . Black was used riginally, but zinc-plated looks better
Trim off the ends of the strip flush with the body. They can be finished by filling in the end cavities with more body filler, which can then be brush-painted with either body or bumper colour- whichever you think looks less obtrusive.

It does not work to try to bend the end of the strip round and fix it under the wing without trimming off the excess . (Unfortunately we have seen this too many times)
The strips now available are not quite original, being rather too shiny, but they are more pliable and therefore easier to fit.

FITTING THE WINDSCREEN RUBBER

Do not try to fit this the old classical way with the rubber onto the screen and a piece of string in the rubber. This does not work with the Elan.
Instead, put the rubber around the frame first, fitting it well into the bottom corners and holding it onto the top with masking tape or by getting an assistant to support it. The rubber is rather heavy.
Fit the windscreen into the rubber, bottom corners first. Judicious slapping with an open palm helps. Do not panic. You will be extremely unlucky if the glass breaks.

When fitting the chrome plastic infill leave it too long. Use a proper fixing tool. This consists of a piece of thickish wire bent into a diamond shape with the two end fitted into a handle. These can be bought, borrowed or home-made.
The chromed plastic filler strips, both front and rear, should be fitted in a continuous length- do not cut and mitre in the bottom corners.
Thread the end of the strip through the wire diamond and push the tool along the groove of the rubber. The two side corners of the wire diamond will push open the groove, allowing the strip to slip in.
Do not try to push the strip in with a screwdriver as it may slip and damage the paintwork.
Start and finish at exactly the lower centre of the windscreen. Cut the ends of the strip accurately at 90 degrees, making it at least ¼" too long. Then force the ends in to meet. This is because the filler strip will eventually shrink a little over time and by doing this you will lessen the gap.
The Elan windscreen rubber should not normally need mastic or sealant to make it water-tight.
The rear screen should be fitted in a similar manner. The rear rubber only comes now in a straight strip which needs to be cut, mitred and joined in the bottom corners.

FITTING THE SPRINT DECALS

These decals are obligingly wide, probably to disguise any discrepancy in the line between the two colours when the cars were first painted.
1back corner ¾" above the rear bumper. The horizontal centre of the decal should be on this line. The decal is 2" wide.
Fit the decals with the front bumper correctly in place but with the rear bumper removed. The rear wing decal is always plain gold, without white stripes.
Run a line of 6mm fine-line low-tack masking tape right along the car parallel to the join and 1 " above it, making sure that the tape is completely taut.
Cut the tape on either side of the doors and remove them from the car. It is much easier to fit the door decals with the doors removed.
Lay the doors on a bench (or dining table if allowed.) Attach the decals to the doors using the masking tape as a guide and peeling off the backing paper as you go.
You may find it easier to use some water with little detergent in it under the decals.
When the decals are in the correct place smooth out any wrinkles with a soft cloth, pressing from the centre outwards.
Turn the surplus decal round the edge of the door and press down. Do not be tempted to trim the decal off flush with the door edge. Two reasons: firstly,it looks as original when turned over, and secondly, the decal will not start to peel away first time you wash the car and catch the edge with your sponge.
Now refit the doors to the car, aligning and adjusting them correctly.

Attach all other decals, lining them up with those on the doors and using the masking tape as a guide. You will need either to trim the bottom rear edge of the plain strip or nick it and tuck neatly between the body and the bumper.
Remove the masking tape strips.
N.B. If you are not repainting and just need to remove old decals before fitting new, then pick up a corner of the decal with a blade and gently peel off, heating carefully with a hair-dryer. (not hot-air stripper). Any adhesive residue can be removed with a fluid special to the purpose or with a small dab of petrol (never thinner) The area can then be wiped clean with a soft cloth prior to fitting new decals.
Fit the rear bumper. There is no adjustment – unlike the front bumper the rear is normally a good fit.

ROUTING THE VACUUM PIPING

Both pipes enter the engine bay through the LH bulkhead just under, and to the inner side of, the commission plate.
LH pipe goes at the side of the engine bay, under the washer bag, under the bonnet support bracket through to the LH vacuum tank.
RH pipe goes under the bonnet support bracket then bends to fit into the chassis T-piece.
From the other side of the T-piece the pipe goes along under the radiator and then curves upwards to connect into the brass fitting in the cylinder head.
The connecting hose between the tanks goes straight across the nose, behind the front grille.

IN ADDITION.....

- Our carpet sets are cut as original; the footwell mats are properly bound and have rubber heel mats both sides. All mat fixings are included. On the DHC the slots for the seatbelts are bound as original. The boot floor mat is also edged to stop fraying. (it never was originally) We even supply a chart showing how to fit the pieces and helpful notes for doing so.

- We also supply underfelt kits, ready to fit, also with a location chart.

- Similarly, our door and seat re-trim kits are all you need to make a professional job, and come with full instructions, in the original materials.

- Seatbelts are refurbished with re-chromed fittings and new webbing.

- Most, if not all, of our trim parts are ready-to-fit, with minimal adjustment. For instance, our centre consoles come with the correct size aperture for the gear lever gaiter pre-cut.

- We have a good selection of the specialized nuts, bolts and washers etc. you may need to perfect your restoration.

- As well as supplying parts, we can arrange services such as excellent quality powder-coating re-chroming and bright-zinc plating.