



Archer's - replica Sebring Sprite Build Manual

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Jack Wheeler at Goodwood

Thank you for obtaining one of our body kits. We have tried to be as comprehensive as we possibly can with these instructions so that the fitting of the kit will go as smoothly as possible. If you do encounter any problems with our product we are only a phone call or email away.

All of these fibreglass panels have been produced with the generous help of owners with the original panels, allowing us in some cases to sympathetically restore them and then take a mould. Many of the original panels were hand made and our replicas may show some of the patina of the originals. Most of these small differences can be eradicated during preparation for paint if you wish.

These instructions assume that these and any other modifications are carried out on a sound and safe body/chassis unit, which we deem to be essential. If you are unsure about the condition of your shell then we suggest that you seek further advice, either from any reputable car restorer or us.

Notes on safety. When working with fibreglass that needs to be trimmed or drilled, it is essential that appropriate safety equipment be used. It is important that every care is taken whilst handling these panels, and we suggest that safety goggles and gloves are worn at all times. When you have to cut, drill, file or sand the panels an appropriate breathing mask is used, and the work is carried out in a well-ventilated area.

Modifications needed to donor model range.

Originally the Mk1 Sprite was the base model used, but it is possible to use any of the Spridget range, including the 1500 Midget. The Mk2 Sprite and Mk1 Midget are easily modified; the rear wings and shroud need to be removed and then the outer section of the inner wheel arches are removed and then replaced using Mk1 arches. Modifications are necessary to the boot floor as shown in diagram 4. It will also be necessary to alter the flanges on the front inner wheel arches, they need to be cut off or turned in as per Mk1 Sprite. The Mk3 Sprites and Mk2 Midgets, which are the first wind up window models and up to the 1500, require a little more work. The modifications are the same as the Mk2 Sprite but additionally the 'B' posts or door shut pillars will need changing to a Mk1 Sprite, also the inner frame needs either changing or modifying to Mk1 Sprite in order to accept Mk1 doors and lock mechanisms. You may also wish to alter the scuttle as per Mk1 Sprite, or replace the scuttle top, to alter the scuttle top to look like the early type involves adding a thin triangular piece on either side.

The 1500 Midget needs all the previous alterations but in addition the rear chassis extensions for the rubber bumper mountings must be removed or at least cut back so they do not interfere with the rear shroud. The front chassis legs for the front bumper require the same treatment so they do not interfere with the bonnet.



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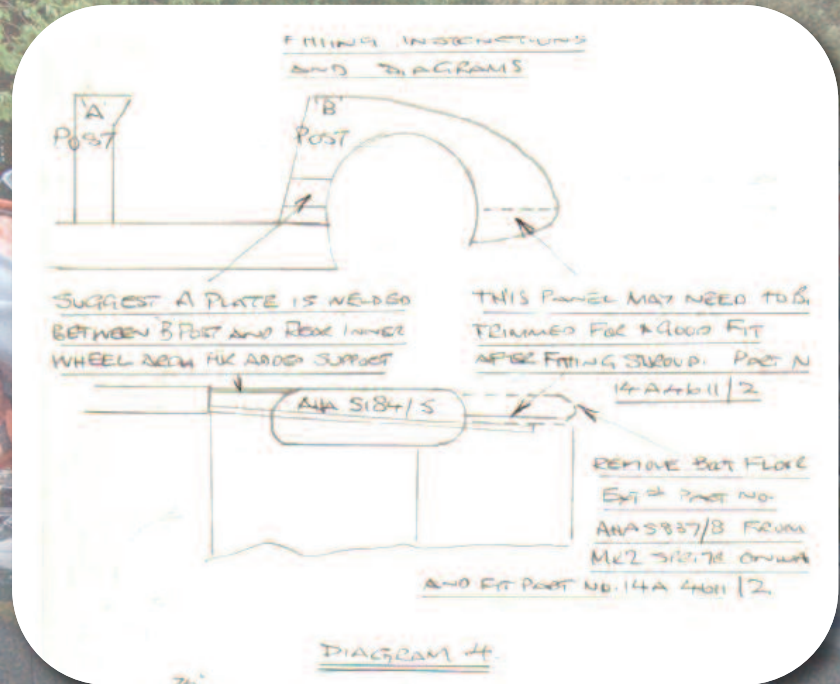
Rear Shroud.

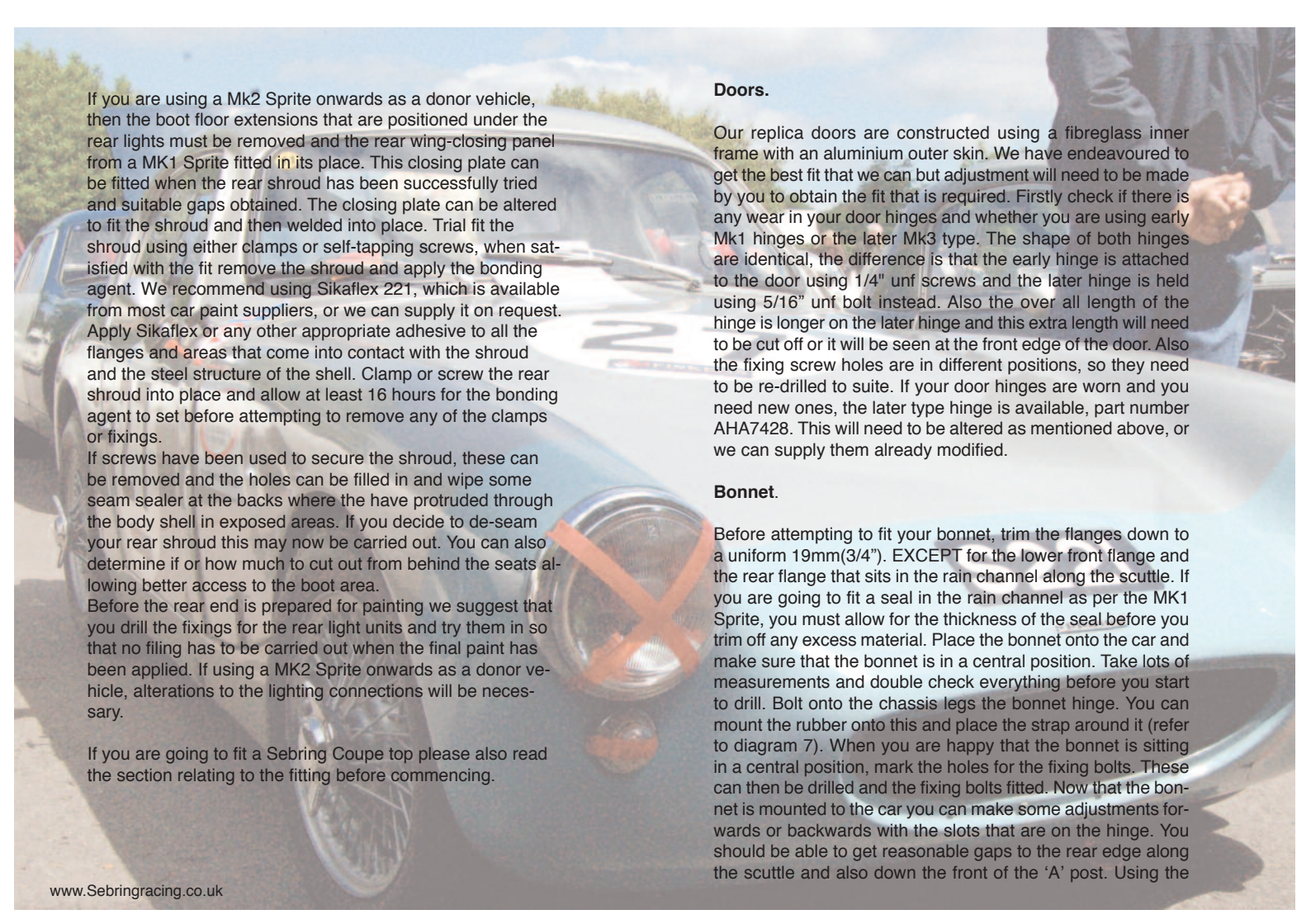
We strongly recommend that you fit the rear shroud in conjunction with the doors you intend to use, so that an acceptable fit can be obtained. This is essential if you are replacing the 'B' posts. Fit the doors to the 'A' posts and set the gaps that you want, trying to get the gap even along the front edge of the posts and also along the length of the sills. Once you are happy with this you can then start to fit the rear shroud. If you are carrying out modifications to a Mk3 or onwards car please refer to the previous section on Modifications needed to donor model range. If new 'B' posts are being fitted, you can temporarily secure them in place with either self tapping screws or pop rivets as it may take a couple of attempts to get the post in the correct position.

Trim the flanges that sit on the 'B' post's down to 13mm (approximately 1/2" wide), and the wheel arch flanges to either 16mm or 19mm (5/8" to 3/4") wide, whatever you prefer. Turn the rear shroud over so that you are looking at the underside of it. Then using an angle grinder, fitted with a new disc, carefully take off the radius that is at the rear of the 'B' post flange. This will allow the outer edge of the shroud to line up better with the edge of the door, when the door is closed. Joggle the outer edge of the 'B' post to allow more clearance between the rear edge of the door and the front edge of the rear shroud, especially as the fibreglass is thicker than the steel wings that originally fixed to it.

We suggest that the return flange around the edge of the wheel arch is retained and that the flange that is on the metal wheel arch is removed and the edge ground to suite the fibreglass rear shroud. Keep clamping the shroud and looking at door gaps until the front edge of the shroud is parallel to the rear edge of the door, and that the height of the shroud is the same as the door.

We recommend that a plate is attached from the rear wheel arch to the 'B' post to give the door post extra strength and also an extra place to bond the shroud onto. See diagram 4.





If you are using a Mk2 Sprite onwards as a donor vehicle, then the boot floor extensions that are positioned under the rear lights must be removed and the rear wing-closing panel from a MK1 Sprite fitted in its place. This closing plate can be fitted when the rear shroud has been successfully tried and suitable gaps obtained. The closing plate can be altered to fit the shroud and then welded into place. Trial fit the shroud using either clamps or self-tapping screws, when satisfied with the fit remove the shroud and apply the bonding agent. We recommend using Sikaflex 221, which is available from most car paint suppliers, or we can supply it on request. Apply Sikaflex or any other appropriate adhesive to all the flanges and areas that come into contact with the shroud and the steel structure of the shell. Clamp or screw the rear shroud into place and allow at least 16 hours for the bonding agent to set before attempting to remove any of the clamps or fixings.

If screws have been used to secure the shroud, these can be removed and the holes can be filled in and wipe some seam sealer at the backs where the have protruded through the body shell in exposed areas. If you decide to de-seam your rear shroud this may now be carried out. You can also determine if or how much to cut out from behind the seats allowing better access to the boot area.

Before the rear end is prepared for painting we suggest that you drill the fixings for the rear light units and try them in so that no filing has to be carried out when the final paint has been applied. If using a MK2 Sprite onwards as a donor vehicle, alterations to the lighting connections will be necessary.

If you are going to fit a Sebring Coupe top please also read the section relating to the fitting before commencing.

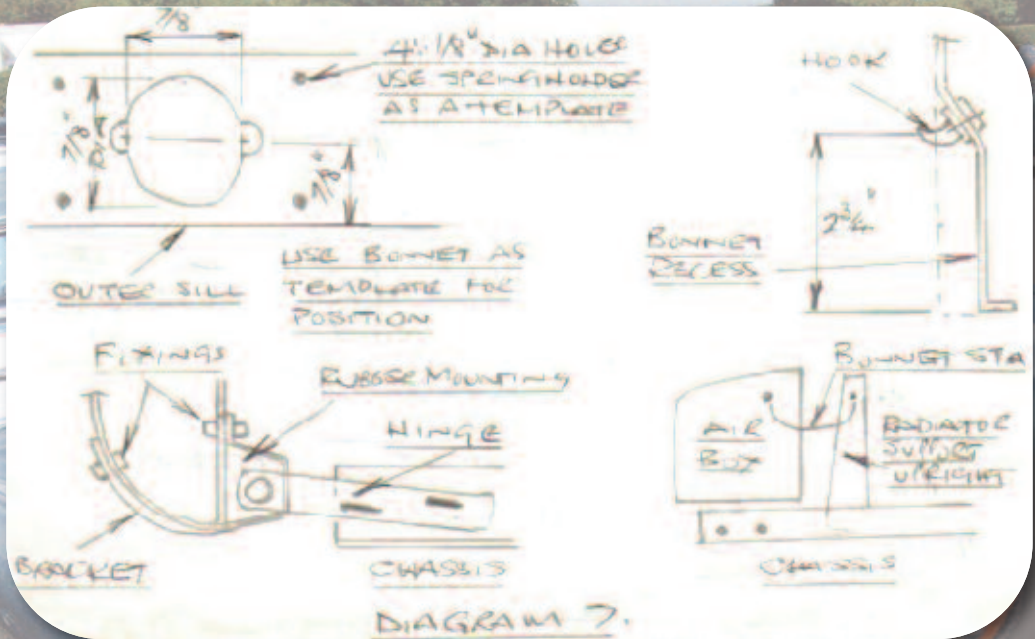
Doors.

Our replica doors are constructed using a fibreglass inner frame with an aluminium outer skin. We have endeavoured to get the best fit that we can but adjustment will need to be made by you to obtain the fit that is required. Firstly check if there is any wear in your door hinges and whether you are using early Mk1 hinges or the later Mk3 type. The shape of both hinges are identical, the difference is that the early hinge is attached to the door using 1/4" unf screws and the later hinge is held using 5/16" unf bolt instead. Also the over all length of the hinge is longer on the later hinge and this extra length will need to be cut off or it will be seen at the front edge of the door. Also the fixing screw holes are in different positions, so they need to be re-drilled to suite. If your door hinges are worn and you need new ones, the later type hinge is available, part number AHA7428. This will need to be altered as mentioned above, or we can supply them already modified.

Bonnet.

Before attempting to fit your bonnet, trim the flanges down to a uniform 19mm(3/4"). EXCEPT for the lower front flange and the rear flange that sits in the rain channel along the scuttle. If you are going to fit a seal in the rain channel as per the MK1 Sprite, you must allow for the thickness of the seal before you trim off any excess material. Place the bonnet onto the car and make sure that the bonnet is in a central position. Take lots of measurements and double check everything before you start to drill. Bolt onto the chassis legs the bonnet hinge. You can mount the rubber onto this and place the strap around it (refer to diagram 7). When you are happy that the bonnet is sitting in a central position, mark the holes for the fixing bolts. These can then be drilled and the fixing bolts fitted. Now that the bonnet is mounted to the car you can make some adjustments forwards or backwards with the slots that are on the hinge. You should be able to get reasonable gaps to the rear edge along the scuttle and also down the front of the 'A' post. Using the

bonnet as a template, mark the position where the cut outs are in the side of the bonnet, this is where the bonnet retaining tubes and springs will be fitted. If you mark the centre of the cut out and draw a line to the edge of the sill, this will give you the centre of the retainer. Measure from the outer edge of the sill 22mm (7/8") and mark where this is on your centre line. You then need to drill a 22mm (7/8") hole. Clean off any sharp edges and slide in the sill tube. Line up the edge parallel with the sill and mark the 4 holes around the top and drill them using a 3mm (1/8") drill. Remove the sill tube and assemble the spring inside the tube. Where the head of the bolt and the nut stick out from the tube, file little slots opposite each other to allow the tube to go into the sill. (See diagram 7) The sill tubes can now be finally fitted and secured using the self-tapping screws provided. In the recess in the bonnet the retaining hook needs to be fitted. Using the centre of the recess, that was used to mark the position of the sill tubes, measure up 69mm (2 3/4") and put a mark. This will be the centre of the hook. Ensuring that the hook is mounted straight, mark the fixing holes. Drill the fixing holes and using the bolts and reinforcing plate mount the hook onto the bonnet. These can be removed afterwards so that the bonnet can be painted. Position the sill buffers onto the sill, one towards the front and one towards the rear. Depending on how wide you have trimmed the flange on the bonnet, position the sill buffers so that the outside face of the bonnet will sit flush with the outer edge of the sill. To stop the bonnet opening too far forward when opening it, we supply 2 wire cables that we secure to the radiator air intake ducting and the radiator



mounting stations. You need to set the cables so that the bonnet will open far enough to stay open while you are working under the bonnet. But they also need to prevent the bonnet going too far forward and allowing the headlamps to touch the floor (diagram 7).

Before you paint the bonnet, we suggest that all the lights and badges are trial fitted and any necessary drilling and filing carried out.

Hardtop

Before attempting to fit the hardtop, it is advisable to trim the front flange that sits on the front of the scuttle down to a uniform 19mm (3/4"). Also run the edge of a new grindstone in a hand grinder along the back of this flange that you have just trimmed down. This is to remove any irregularities with the fibreglass that may cause the top to sit high or too far forward. (See diagram 8) Carefully file the 'V' shapes that are at the rear edge of the hardtop that sits on the top of the 'B' posts (diagram 8). By filing out these 'V's it will allow the back of the hardtop to get closer to the rear shroud. If you are using an original steel rear shroud that has got the wing beads in, you will need to mark where these are to the hardtop and either grind them off where the hardtop sits on them, or alternatively file a small groove in the bottom flange so that the hardtop sits nearer to the shroud. On the original cars, they had aluminium rear shrouds that were made without any seams in them. If you want to achieve the same look as the originals then the seams can be taken off and filled to look the same. At the front of the hardtop we advise that you mark the centre of the scuttle and also mark the centre of the hardtop. You should be able to use the centres of the wiper wheel boxes as a guide, but double check all dimensions before you start to drill or file anything. Once you have achieved a nice snug fit between the top and shroud, using some clamps to hold the top in place, mark the position of the wiper holes and where you want to fit any screen washer jets. The hardtops are pop riveted through the front flange into the front edge of the scuttle, just above the rain gutter, and then bolted around the back flange into the rear shroud. Measure the radius of the back of the hardtop and decide how many fixings you want and how close together they will be. Mark out where you want the fixings to go and then drill the holes needed. Place the bolts through the holes and put the nuts on loosely. We provide a plastic beading that needs to be fitted around the rear of the hardtop, where it sits on the shroud. Start from one side and insert the beading un-

derneath the hardtop. The flange on the beading needs to be trimmed down at the front edge where there is an inside flange that sits on the top of the 'B' post. Once past this flange the beading can be just slid in, it may be necessary to cut a few 'V' shapes out of the bead as it follows the curve of the hardtop and to miss the fixing bolts. As you go around the hardtop you can start to tighten down the bolts so that the beading is prevented from slipping out. When you reach the opposite side from where you had started from, cut the beading to length. Try to get the beading as tight to the hardtop as possible. When you are happy with the look of the beading you can then start to fix the hardtop down permanently. We advise that a sealer or bonding agent be used around the front and rear edges to prevent any ingress of water. On the original cars the seam on the 'A' post was visible (diagram 8); you may decide that you wish to blend this in so that it is not visible. When the hardtop is fixed permanently the front and rear screens can be fitted, either before or after painting. To fit the screens you need to file the aperture enough to give adequate clearance for the glass and the screen rubber. As a rough guide you will see faint lines in the flanges of the hardtop, these are where the original screen fitted in the top that we used as a pattern. If you measure the glass and the width of the screen rubber, this can be double checked with the lines on the top. If this dimension is the same as the aperture file off the excess material.

When the aperture is to size, start to fit the screen rubber ensuring that the rubber is firmly on and tight against the flange. Where the two ends meet, cut the ends of the rubber as squarely as possible and slightly oversize, this is to ensure a good tight joint to prevent any water leaking in. We advise that you try to get the joints at the bottom of the aperture and in the centre. You can if you wish Super Glue the ends of the rubber together, which will help seal the rubber. The screens can then be fitted, starting at the bottom edge, slide a corner in first and start to work around from there. Make sure that the bottom is

in fully first before trying to get the sides in. Fit one side in up to the top corner and then fit the opposite side in before getting the top edge in. When the screen is in the chrome insert can be fitted. There is a special insert tool to fit it; this can be obtained from a reputable parts supplier. Using some washing up liquid, apply it to where the insert fits in the glazing rubber. Starting from your joint in the rubber put the spreading tool in the rubber and push the insert in. Carefully push the tool around the centre of the glazing rubber applying pressure to the insert as you go around the aperture. When completely around the aperture cut the end to length and fit the chrome jointing finisher.

It would be advisable as well to trial fit the side screens, as there fit will depend on the rear shroud position, the doors and the hardtop. Any adjustment can be made with the drilling of the side screens as they come un-drilled so that the adjustment is down to the individual owner. Alternatively you can make your own side screens to suit.

Painting

Before painting it will be necessary to lightly flat the surface until the shine has gone from the gel coat. We strongly recommend that a universal etch primer is used before any primer fillers are added. Follow all the safety precautions recommended by the paint suppliers and manufacturers if you are painting the vehicle yourself.

Note

We wish you every success with your project, but if you experience any difficulties please do not hesitate to contact us, we will be only too pleased to help. However if you feel that from your experiences that additional information would help others, we would be very pleased to receive your comments and ideas.

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