

Words and photography by Jon Betts

# Hinge Benefits

If you want to really look the part, a set of Mk1 exterior hinges is the perfect finishing touch.

We've already covered fitting the Mk1 rear lights to your Mk1 and Mk111 bodyshell to get that retro look, but there's still something missing if you want an authentic replica. The Mk1 and Mk111 shells all had exterior hinges on the doors, similar to the boot hinges still used on the later models. These were changed to more conventional hidden hinges when the Mk111 version was introduced.

Converting a later Mini shell to Mk1 hinges isn't impossible, but it requires a large amount of fabrication work.

To start with you're going to have to replace the A-panels. We were lucky on our Mini as they were already rotten and were being

changed anyway, but if yours are in good condition then you have to decide whether the end result is actually worth the hassle. You'll also need to fabricate some custom-made brackets to help spread the load from the hinge mounting points on the door skin back to the original hinge mounting points.

The other major difference between the early and later Minis is the use of sliding windows as opposed to the wind-up variety. The former are much lighter, which could mean that our hinges will wear prematurely. One way to combat this is to drill a series of holes in the door and remove any unwanted metal from all the non-structural

areas. Perspex windows could also be fitted but these are susceptible to scratching. Only time will tell as to how the hinges will hold up, but I'm sure the visual impact will far outweigh having to replace the hinges every couple of years!

All the parts required for this conversion are readily available from most Mini specialists. We sourced ours from Hadrian Panels while the hinges themselves came from eBay.

This isn't a quick Sunday afternoon conversion and it will require considerable skill to get it looking right, but if you're going for that early retro look then it's sure to confuse a few people and make all the hard work worthwhile.

## TOOLS REQUIRED

MIG welder, grinder, tin snips, air saw, spanners, hammer, vice and spot welder.

## TIME TAKEN

It needs a good few days for each side, as you need to remove the wings and old A-panels, then you'll also need to paint the car!

## COST

Budget approximately £150 for parts plus paint.

## SAFETY

Always wear the correct protective clothing for any Mini job.



1. Our car required new A-panels anyway, so these were removed along with our rotten front wings. We'd already cut away the majority of the rusty A-panels and just had to use a grinder to remove the lip at the rear edge of the panel where it wraps around the hinge panel. It's also necessary to remove the door and the old hinges.



2. To convert your late model Mini to Mk1 hinges you'll need to buy a pair of Mk1 inner A-panels as well as a pair of Mk11 and Mk111 outer A-panels. The Mk1 outer panels have a different profile so these can't be used. All these panels are readily available from Hadrian Panels.



**3.** Before you start to fit the new inner and outer A-panels you need to ensure that the fitch panel is in good condition. Ours required extensive restoration work but, like most areas on a Mini, replacement panels are readily available, making the job much easier. Just remember to remove all the rotten metal before welding in fresh steel.



**4.** Prior to welding any of the panels onto your Mini, you need to ensure that everything fits together correctly. Use a selection of clamps and mole grips to attach the new inner A-panel to the fitch panel. Use the sill and the hinge post to line the panel up correctly.



**5.** With the door temporarily put back into position, use a straight edge to ensure that the inner A-panel lines up OK. If it sticks out at an angle or stands proud of the door then something's wrong and you'll need to make adjustments before it's too late. Also try the outer panel on and check that it fits properly before progressing.



**6.** Once you are 110 per cent sure that the panel lines up correctly it's time to fire up the welder. A good quality MIG welder is best for the job of welding the panel in position. You'll need to ensure that all traces of paint, grease and rust have been removed from the areas to be welded. On the front of the panel this is the two flat sections adjacent to the holes the hinge will mount through.



**7.** You also need to weld down the back of the panel where it meets the fitch panel. Use clamps to ensure that the two panels are held together and ensure that your welds penetrate fully otherwise you risk the panel falling off at a later date!



**8.** Before the outer A-panel can be fitted, grind down the welds near to the hinge mounting point. Use a grinding disc or soft pad to sand the welds flush with the panel. Do this at the top and bottom to allow the outer panel to sit flush.



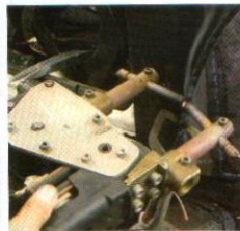
**9.** You will need to put the door back into position so that you can also line the outer panel up; if you checked this earlier then everything should be OK. Check the door gap as there is some degree of adjustment in the panel. Also mark on the panel where the four holes will need drilling for the hinges, then drill them out before fitting the panels to the car.



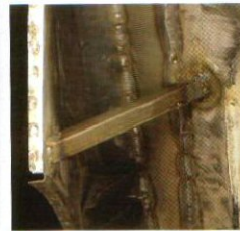
**10.** Before the outer panel can be fitted properly you'll need to fold over the rear edge where it bends round the hinge pillar. Rest the panel on a block of wood and gently ease the edge of the metal over. Don't close it up fully though — this will be done once the panel is in the correct position.



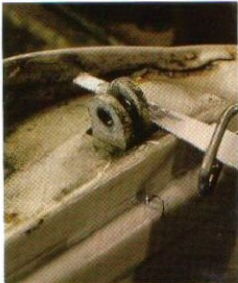
**11.** Refit the outer A-panel and clamp it back into position. You can then finish folding the rear edge around the hinge pillar. Special clamps are readily available to do this job. If you don't have any to hand you could use some mole grips, but take care not to mark the outside of the panel.



**12.** Luckily we had access to a spot welder, which was used to weld the inner and outer panels together on the forward edges. If you don't have a spot welder then drill or punch a series of holes in the lip on the inner panel and use the MIG welder to plug the holes.



**13.** This is not strictly necessary, but as we're also fitting a removable front end we've had to add some supports into the rear of the inner A-panel. If you're welding the wings back on then this won't be necessary as they'll give ample strength to the A-panel.



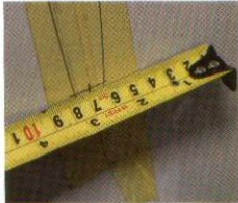
**14.** With the A-panels now in place we can turn our attention to the doors. First, remove the bracket which held the original doorstop in place. The door opens on a slightly different arc and this will catch if left in place. Once the door is finished you'll need to fit a check strap on the inside of the car.



**15.** For this next part you'll need to fix the hinges to the A-panel; just do them up loosely for now as you may need to adjust them to get everything lined up correctly. Also apply some masking tape to the door and the hinge itself. Make two small marks on the hinge where the threaded holes are.



**16.** With the door in position, draw around the hinges on to the masking tape (once the hinges and door gaps have been lined up correctly). Then transfer the marks from the hinge to the door to give you an indication of where the bolt holes will need to be drilled.



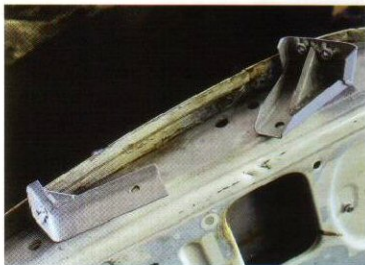
**17.** Measure the centre of the hinge on the outline you've made on the door, in line with the marks previously made. This will give you the position of the bolt holes which will be used to attach the hinge to the door.



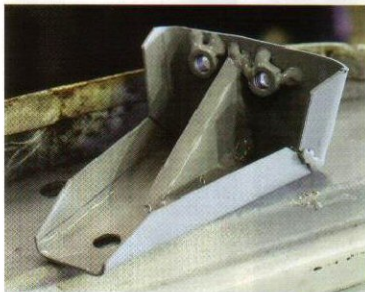
**18.** When you're happy with the position of the holes you can drill them out. Use a small pilot drill first, then use an 8 mm drill to give the correct size hole for the hinge bolts. On our hinges these were an M6 thread size, but yours may be different.



**19.** To allow access to the two hinge bolts which pass through the door skin you need to cut an access hole in the inner doorframe. Use tin snips or an air saw to cut a small hole in the door. Don't worry though, this will be covered by the door panels.



**20.** To provide some strength to the hinge mounts we fabricated these simple brackets, which will fit between the end hinge fixing and the conventional fixing points on the side of the door.



**21.** Use a cardboard template to mock up the brackets which are then cut out of steel and bent into shape. We also added a small gusset on the upper bracket to give it more strength. Once made, spray them with primer to prevent them from rusting.



**22.** The hinges can then be removed from the A-pillar and fitted to the door. The brackets that we made earlier are also fitted at this point (the cutaway made in the door earlier makes access much easier).



**23.** We welded a couple of nuts to the brackets which line up with the original hinge mounting points. After drilling a clearance hole through these, an M6 bolt is used to secure the bracket to the door frame. We also used a large washer to spread the load further.



**24.** The other fixing for the hinge passes through the outer part of the door skin, so we fitted another washer and nut here. The use of stainless steel fixings will stop them from rusting in the future, and it's also advisable to use nyloc nuts or spring washers where possible to prevent things from working loose.



**25.** With the hinges fixed to the door you can now lift it into position and refasten the hinges to the A-panels; again washers and nyloc nuts are required. Any adjustment can be made once the door is in situ. All that's left to do now is to repeat on the other side then strip it all down and paint everything, and you now have a late model Mini with classic MkI styling.