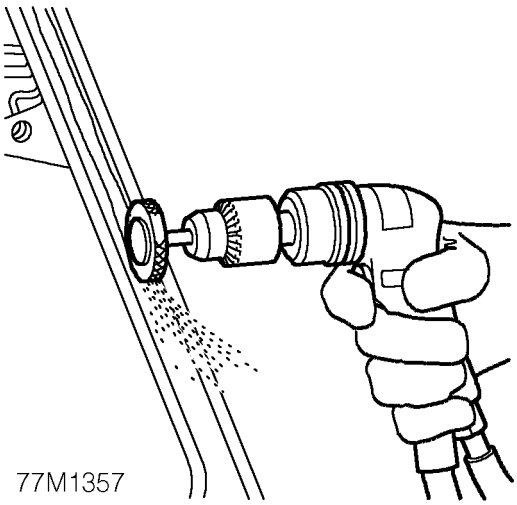
PANEL REPLACEMENT PROCEDURE

General

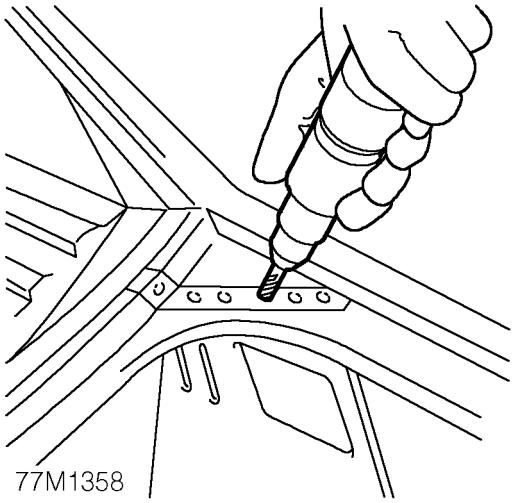
This information is designed to explain the basic panel removal and replacement method. This standard method might vary slightly from one vehicle to another. The main criterion in removal and replacement of body panels is that Rover's original standard is maintained as far as possible.

Remove Panel

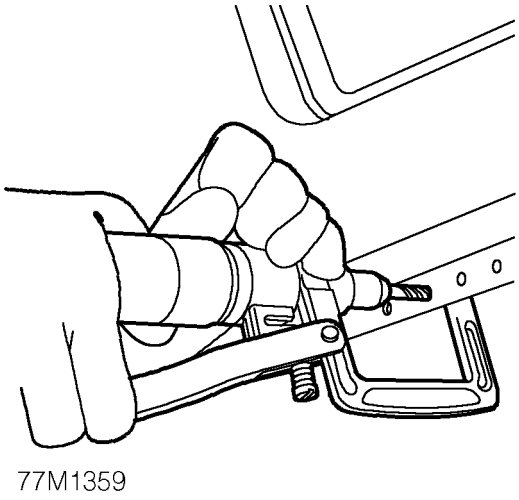


1. Expose resistance spot welds. For those spot welds which are not obviously visible, use a rotary impregnated wire brush fitted to an air drill, or alternatively a hand held wire brush.

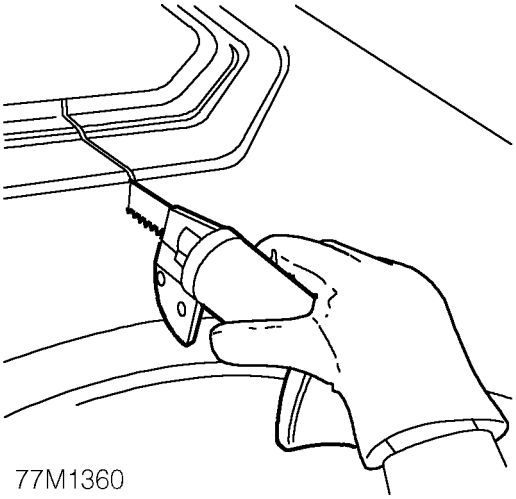
NOTE: In wheel arch areas it may be necessary to soften underbody coating using a hot air gun, prior to exposing spot welds.



2. Cut out welds using a cobalt drill.

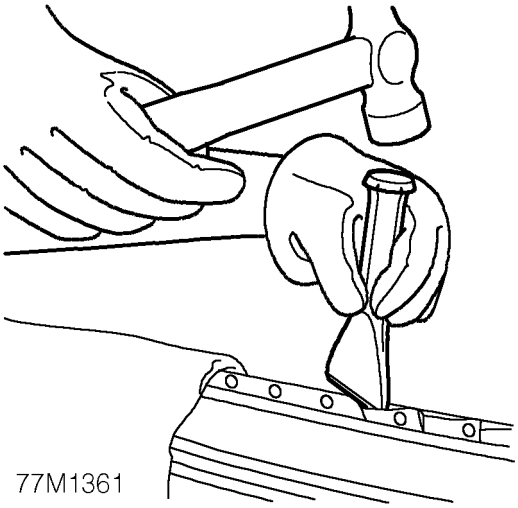


3. Alternatively use a clamp-type spot weld remover.



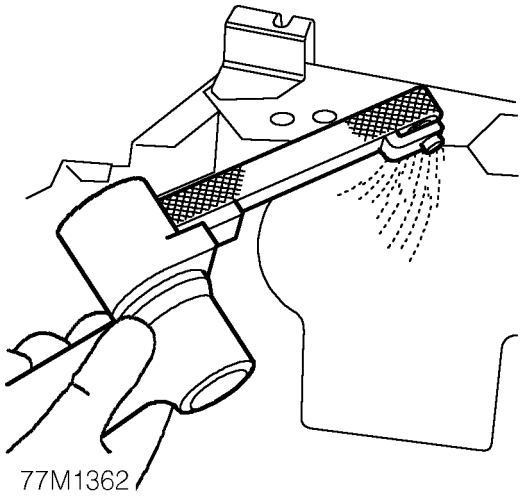
4. Cut away the bulk of the panel as necessary using an air saw.

NOTE: On certain panel joints MIG welds and braze should be removed using a sander where possible, before cutting out the panel bulk.



5. Separate spot welded joints and remove panel remnants using hammer, bolster chisel and pincers.

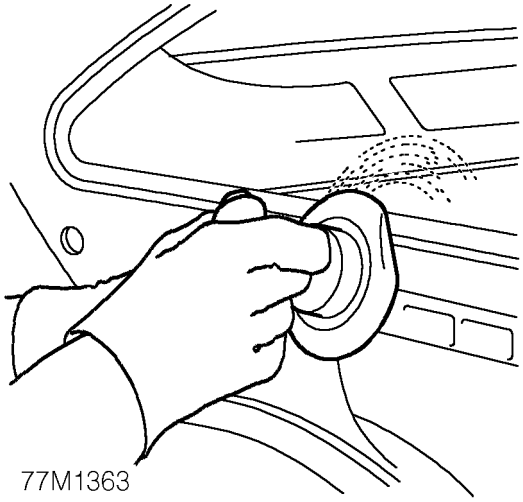
Prepare Old Surfaces



1. Clean all panel joint edges to a bright smooth finish, using a belt-type sander.

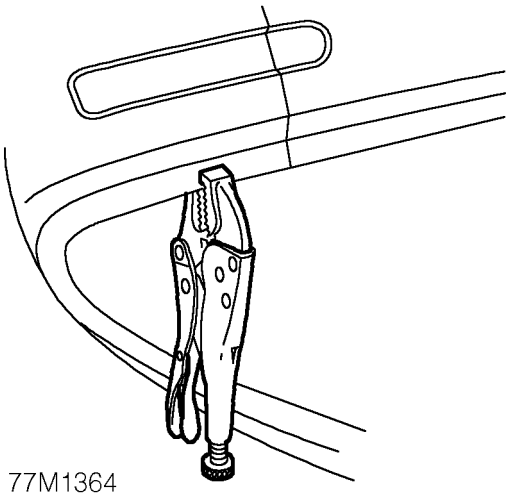
NOTE: Prior to sanding, remove remaining sealant using a hot air gun to minimise the risk of toxic fumes caused by generated heat.

CAUTION: CARE MUST BE TAKEN TO AVOID EXCESSIVE HEAT BUILD-UP WHEN USING THIS EQUIPMENT.



2. As an alternative a disc sander may be used. Straighten existing panel joint edges using shaping block and hammer.

Prepare New Surfaces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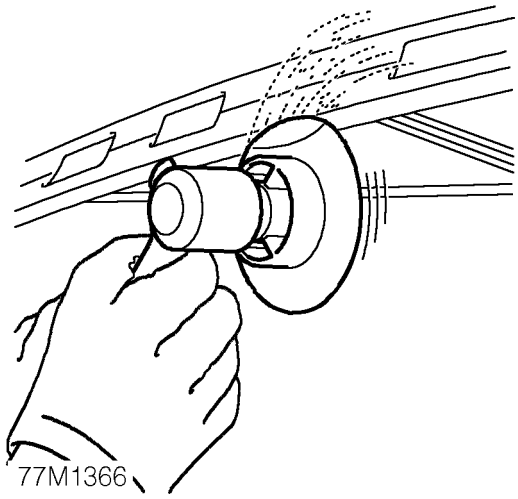
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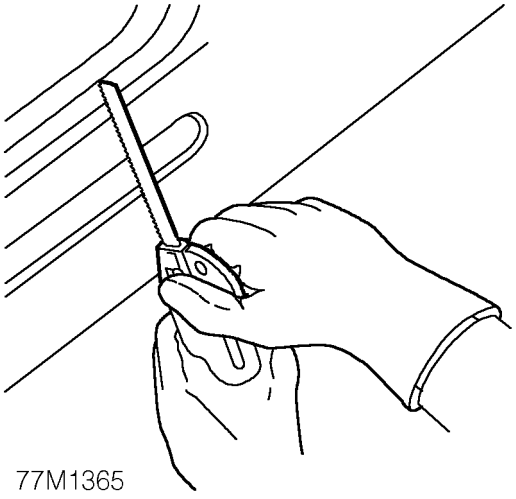
1. Mark out bulk of new panel and trim to size, leaving approximately 50mm overlap with existing panel. Offer up new panel/section, align with associated panels (e.g. new rear quarter aligned with door and tailgate). Clamp into position.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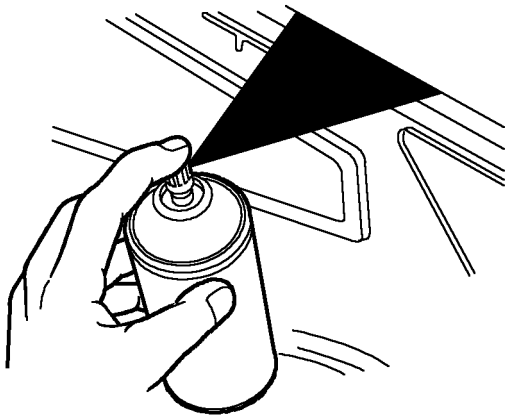
2. Cut new and existing panels as necessary to form butt, joggle or brace joint as required. Remove all clamps and metal remnants.

3. Prepare new panel joint edges for welding by sanding to a bright finish. This must include inner as well as outer faces.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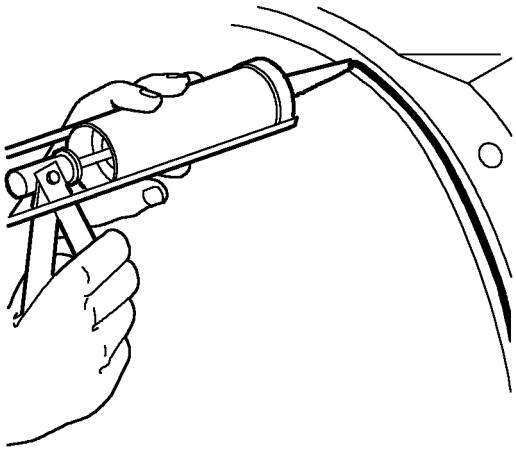
4. Apply suitable weld-through primer to panel joint surfaces to be welded, using brush or aerosol can.



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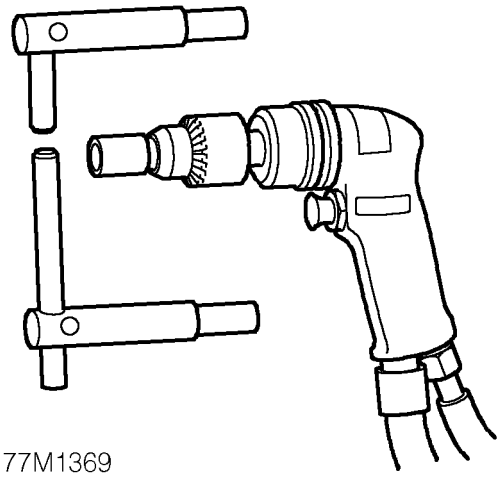
5. Apply adhesive sealant to panel joint surfaces. ***See INFORMATION, Sealing and corrosion protection.***

Offer Up and Align

Offer up new panel and align with associated panels. Clamp into position using using welding clamps or Mole grips. Where a joggle or brace joint is being adopted, make a set in the original panel joint edge or insert a brace behind the joint.

NOTE: In cases where access for welding clamps is difficult, it may be necessary to use tack welds.

Welding



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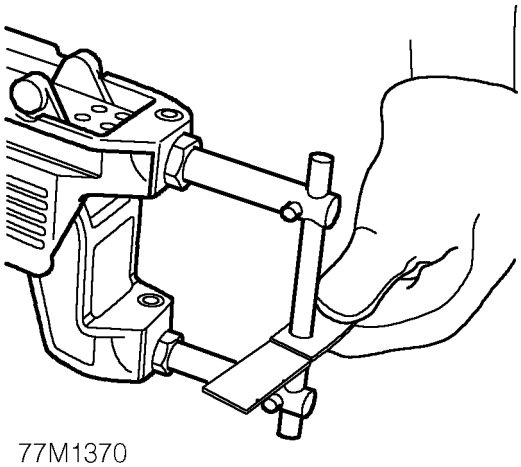
1. Select arms for resistance spot welding and shape electrode tips using a tip trimmer.

NOTE: To maintain efficiency, the tips will require regular cleaning with emery cloth.

CAUTION: Use arms not exceeding 300mm in length.



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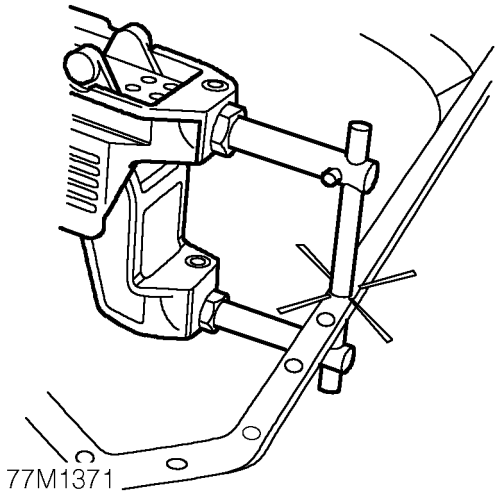
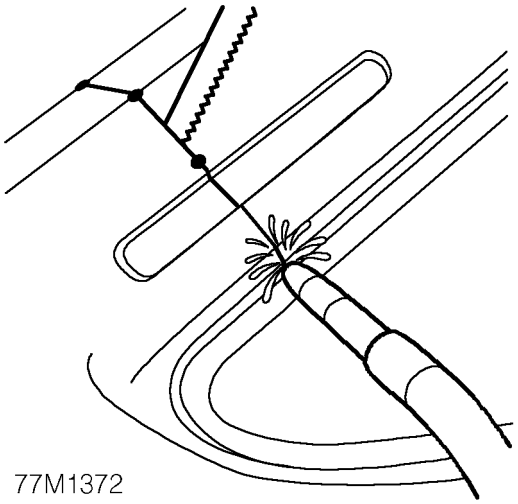
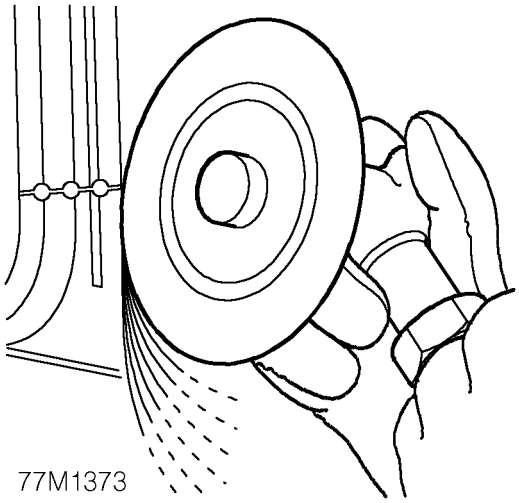
2. Fit resistance spot welding arms and test equipment for satisfactory operation, using test coupons. Where monitoring equipment is not available, verify weld strength by checking that metal around the weld puddle pulls apart under tension during pulling.



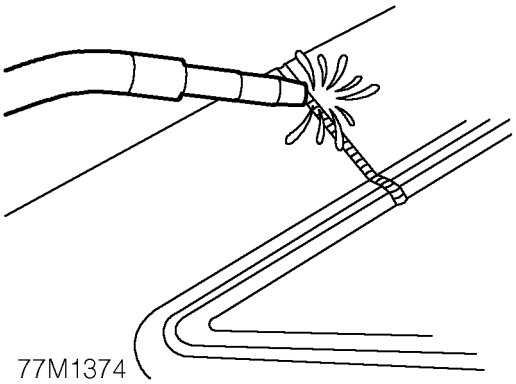
3. Use a resistance spot welder where access permits. Try to ensure weld quality by using a welding monitor where possible.



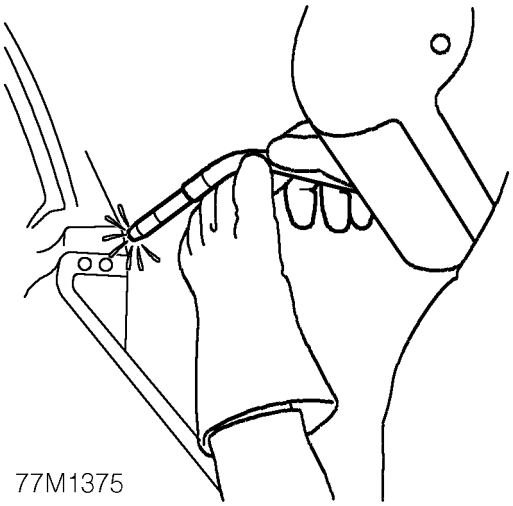
4. MIG tack weld butt joints and re-check alignment and panel contours where necessary. Ensure that a gap is maintained to minimise welding distortion, by inserting a hacksaw blade as an approximate guide.



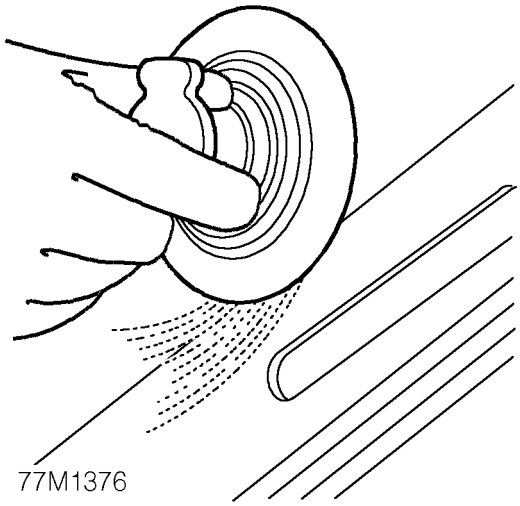
5. Dress MIG tack welds using a sander with 36 grit disc, or a belt-type sander where access is limited.



6. MIG seam weld butt joints.



7. Always use MIG plug welds where excessive metal thickness or limited access make resistance spot welding impractical. Make plug welds either by using holes left by the spot weld cutter, or through holes punched and drilled for the purpose.



8. Dress all welds using either a sander with 36 grit disc, or a belt-type sander and/or impregnated wire brush.

NOTE: Brazing operations, if required, must be carried out at this point.