

Repair of the Sedan's A Pillar {A Post}

To save our Midgettes [MG ZA/ZB] we must cut out the cancer of rust as we find it. Some places are naturally more prone and critical than others and should not be ignored. The lower

section of our sedan's 'A' pillar can be a case in point and is discussed here.

Externally the A pillar may or may not look to have problems but looking into this factory access reveals terminally advanced corrosion. Figure 1 Shows, in this situation, corrosion to: carrier extension, cavity walls, and top of inner sill.

Referring to Service Parts List AKD688; pages 130 and 131 illustrate panel relationships and defines the 'A' pillar [my preferred term] as the 'A' post



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Fig.1 From inside the car - Opening to bottom of A pillar



Figure 2 Lower A Pillar – Part outer skin being released from spot welds to access rusted carrier

The A pillar needs to be well scrutinised before commencing any repairs. The reason being:

-Its external shape is fairly complex and includes; captive nuts to align the mudguard adaptor, plus a recess to adapt the door's hinge.

-Internally the A pillar contains a door hinge bolting plate that is held captive in a carrier. Additionally the carrier contributes to the strength and load bearing required to support the door.

-the A pillar is welded to the body side panel, inner sill and outer sill; all of which must be checked for corrosion /repair

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Fig 3 Alternative view of initial area to be sectioned out

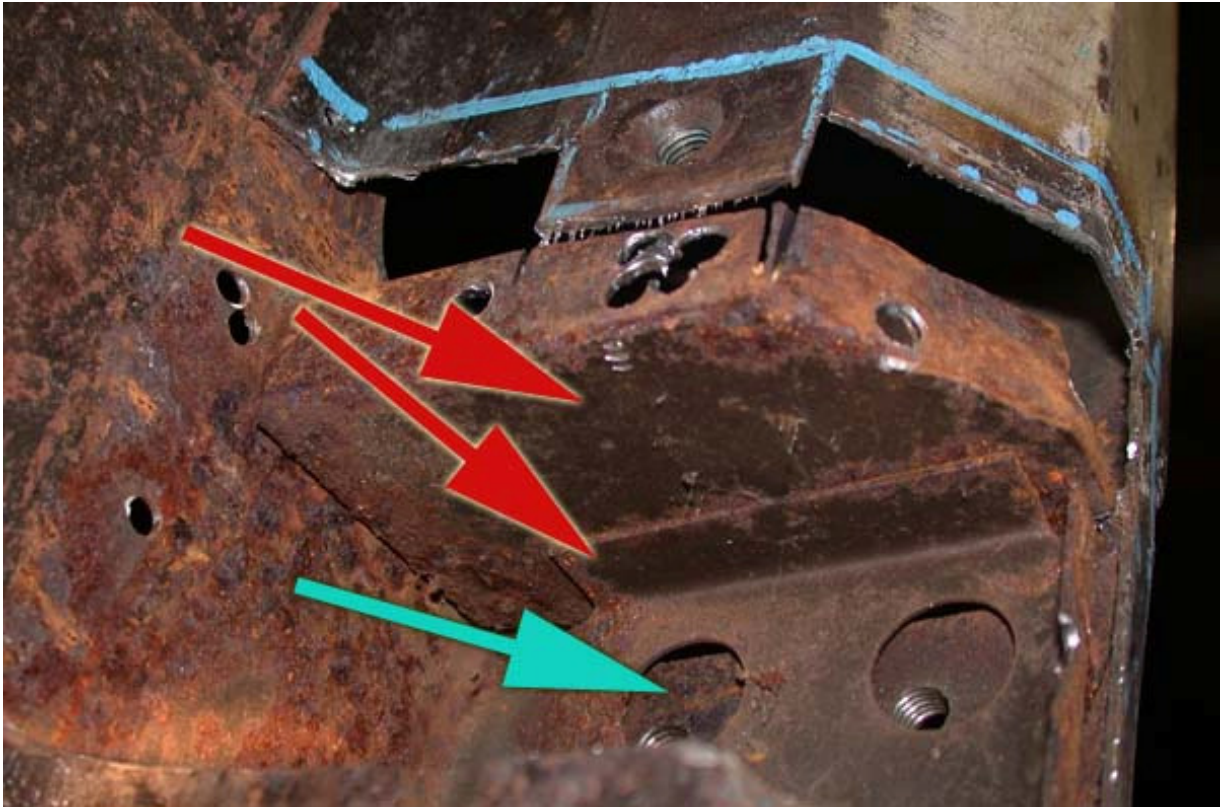


Figure 4 Shows the removed section is badly pitted. With access gained the final spot welds can now be released [drilled out] from the internal wall. Internal cavity can now be better assessed

Fig 5 gives a better view of the carrier's reinforcing top.

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Fig 4 Access and horror



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Fig5 top portion showing construction and function of carrier; including its captive fixing plate.

Comparison view of original and fabricated replacement carrier is shown later at figure 7.



Figure 6 gives a different view of internals with wall removed.

Three main items of interest are. **One;** carrier has had all of its upper spot welds drilled out. More spot welds need to be drilled out before the carrier's lower extension can be extracted.

Two; Revealed is one of four access holes in the hinge recess. Installation of a new carrier must align with those of the hinge recess.

Three; Partially shown is the fabricated multi sided replacement wall section.

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Fig6 Carrier has been partially released



Fig 7 Fabricating the Carrier to take the original fixing plate

To fabricate a new carrier it is necessary to take cardboard patterns and measurements from the original. Plus it must be emphasized that the rusted carrier was removed very carefully to retain as much as possible of its original form with minimal distortion; even though the corrosion caused it to be reclaimed in two pieces.

Re-drilling the original pattern of four holes need to be executed accurately. Perhaps of interest is the original was used to reverse engineer the location and centre of the through holes. To this end a thin piece of paper was overlaid to gain a rubbing of [the four through holes] circumferences; and a drafting technique called the 'Chord Method', employed for finding the centre of each circumference [circle].

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Finally the replacement carrier was fabricated in three pieces and welded into its unitary form. Original captive fixing plate [shown in Fig.7] was perfect and re-used in the new carrier.



Figure 8 Finalising the A pillar fabrication

The outer repair of the A pillar had to be done using a sequence of fabricated replacement sheets. Of note is the progress of the A pillar repair had to halted part way through, to allow the outer and inner sills to be cut a way and replaced. Once new sills were in place the replacement sections and sills could all be welded together.

As a trial the door [front passenger side] was remounted and tested for full adjustment and movement.

Only hasten to add that repairing the corroded 'A' pillar was neither quick nor simple to bring to a conclusion.

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