

The repair of aluminium components is comparable to the repair of steel ones.

Due to the design-related increase in panel thickness of 1.2 ... 1.4 times relative to steel, the material is convenient to handle and work with.

In the following section, attention is drawn to the differences involved in working with aluminium and steel.

2.0 Parts identification

Material can be identified clearly by using a magnet.

Note:

In addition, the Service Information bulletins draw attention to differences.

Externally, there is virtually no way to distinguish aluminium parts of a vehicle from steel parts.

2.1 Finishing

Special tools should be used for finishing operations.

Always clean tools contaminated with metal particles.

Refer to the relevant section of the Repair Instructions for information about the finishing of components.

2.2 Knocking out dents

Special measures	Reason
Work with wood, aluminium and plastic hammers. Note: Do not use tools with sharp edges.	Avoid elongation and cracking.
Press out dents from behind center of dent and smooth with gentle blows from behind. Note: With slight, small dents (e.g. hail damage) this is possible without damage to the paintwork.	Avoid material buildup.
When reshaping pointed, sharp-edged dents, only apply heat to severely distorted areas (gas burner). Note: From just 200 °C (slight brown discoloration of paint surface), desired level of convertibility is reached.	Avoid local compaction and excessive elongation.
Do not heat or overheat large areas! On uncoated panels, insert thermocouple pins to check temperature at a distance of two finger-widths from the flame. Draw in protruding material at 150 °C...200 °C. Note: With dents which can only be accessed from outside, no procedure can at present be recommended. In this event, if cracking occurs, the component must be replaced.	Avoid irreparable damage to the component (distortion).

2.3 Replace

Special measures	Reason
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Always work with suction.	Danger of explosion!
Always replace grinding wheels when machining steel. Replace steel wire brushes with stainless steel wire brushes.	Risk of corrosion!
Reduce motor speed of grinding tools and replace scrubber discs with surface grinder discs.	Material surface heats up too much.
Machine away paint residue and oxidised areas: only use abrasive paper approved for use with aluminium - grain size 80/100.	Effect of lubrication.

2.4 Paintwork

Clean surfaces with BMW silicone remover.

Surface treatment, preparation for painting and selection of paint products follows a similar procedure to steel.

For further instructions, please refer to BMW Paint Handbook/Paint Brochure.