STATIC NEUTRALIZATION

The hidden danger in surface preparation

To provide the perfect finish you must first have perfect preparation as the foundation to work on. The wrong grade of sanding paper, the wrong colour selection, a poor choice of materials will result in an increased risk of failure.

"Fail to prepare and prepare to fail"

Plan your repair process effectively and you will increase the chances of success. Standard operating procedures (SOPs) aid this process and provide a process for understanding why things go wrong and, therefore, are invaluable to the shop that wants to continue to improve to stay ahead of its competition.

But there is a relatively modern SOP which is too often ignored.

As more vehicle manufacturers move to composite parts, a hidden danger exists that needs to be addressed if a perfect paint finish is to be achieved: **STATIC ELECTRICITY**.

What is static electricity?

As you prepare any surface to be painted you add a static charge to the panel being prepared. In the past this has not been a serious issue as most vehicles were manufactured in metal; metal is a good conductor of electricity so the charge that is built up dissipates fairly quickly. However, the use of composite parts is becoming more common and because these materials are poor conductors of electricity, any static charge remains in a localized area for a relatively long time. This is something which cannot be ignored.

Why should we worry about static electricity?

It does not affect the paint system, does it? Well, the answer is yes. It affects the metal flakes. As high static charge passes through the metal flakes in the paint it causes these flakes to settle in a different manner (random orientation versus flat orientation) when compared to that of an area with low static charge, resulting in a colour difference. This effect is more pronounced on lighter metallics with a high contrast between the face and side tones.

Have you ever painted a composite (plastic) bumper at the same time as the car and noticed the bumper colour looks darker than the paint on say, the mudguard? This is due to a difference in the static charge between the different parts being painted. Equalize the static charge on these parts and the colours will be more alike.

To make a perfect finish you must understand what the foundation is you are working on and the difference it can create in the refinish.

Even though you cannot see static electricity it is nevertheless a major cause of colour differences when painting the same colour on substrates made from different materials.

When the SN (Static Neutralisation) System is added to a Junair QADs auxiliary air movement system it reduces the static charge produced during the finishing process. The static neutralisation system operates during cleaning, flash off and curing cycles.

So, what does all this mean?

Reducing the static charge on the item to be painted improves the cleanliness and reduces metallic distortion which aids colour matching.