I-CAR NEW ZEALAND technical report

Body Repair Recommendations

This issue of Paneltalk is looking at some of the body repair recommendations from Suzuki for the SX4 WR series.

Suzuki NZ is very supportive of I-CAR and the collision repair industry in New Zealand, making sure technical information is available when any new Suzuki model is released.

We have chosen the SX4 as we had three requests in the last week from repairers seeking structural repair information for this vehicle (perhaps it's going to be a good seller for our industry, or is it the people who buy them?)

Technical information is available from a pay-site www.suzukitechnfo.com (however be sure to check the vehicle country of origin). I-CAR New Zealand does have some information, and a DVD for the SX4 and other models is also available from Suzuki for around $350 + GST

So let's look at a few procedures and recommendations we need to be aware of before repairing a SX4.

Model Awareness

The Suzuki SX4 RW series is manufactured in both Hungary and Japan. Some replacement structural parts like the front and rear rails are different, as these may come with or without some reinforcements attached.

So, check the country of origin, the repair DVD covers both models.

Suzuki NZ imports it's vehicles from Japan.

ELECTRONIC AWARENESS

- Never use electrical test equipment other than that specified
- Wait a minimum of 90 seconds after the ignition has been turned to the lock position and the negative battery cable is disconnected before working with electrical safety systems
- Airbag handling should only be by an authorised Suzuki dealer
- Don't expose any airbag components above 93c degrees
- Store below 65c degrees

STEELS USED AND PRECAUTIONS

Cautions with HSS, always replace with new, as cutting and heating where not specified will reduce the strength of the original performance

- A variety of steels and strengths are used, bumper beams 980 MPA
- All reinforcement panels are 590 or 440 MPA
- Most of the outer panels are 340 MPA
- All others defined as double sided galvanized steel

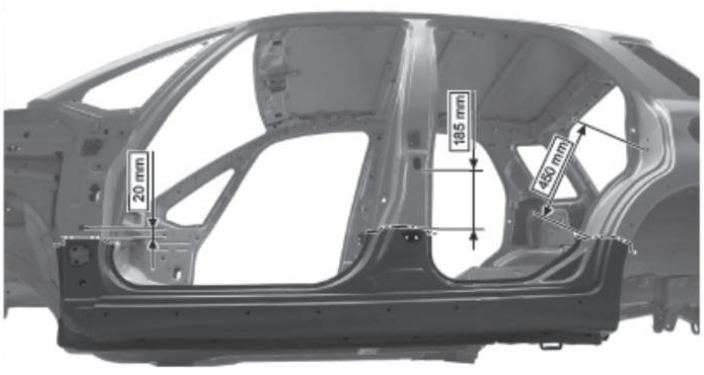
illustrations showing the sectioning locations available for the SX4 taken from Suzuki Repair DVD

SILL SECTION
Additional Cut Line Possibilities

• Possible cut lines (arrows) for sectional renewal

Removal

Mark out location with the dimensions given in the graphic and make cuts



for the Suzuki SX4

WELDING

Squeeze type Resistance Spot Welding (Inverter) is the preferred method however, Mig Plug welds are recommended when there is limited access or when the thickness of steel exceeds the spot welder machine performance rating.

- Inverter Spot preferred method
- Spot welds to be increased by 20% to 30% than from OEM (The repair manual diagrams show the exact number used at OEM)
- Open butt welds are used for partial replacement panels

PARTIAL REPLACEMENT OF PANELS

The SX4 has a good range of options for partial replacement; however this is for the outer panels only, all reinforcement panels because of the structural strengths are replaced at factory seams. The exceptions to this are the Front Rails, these are able to sectioned and the manual has good illustrations showing where and how.

Partial replacement panels include:

- Front Rails 1 option
- A Pillars 1 option
- B Pillars 1 option
- Sill Panels 4 options
- Rear Guard 1 option
- Boot Floor required when fitting a new rail

GLUES, SEALERS AND NVH

The repair specifications have good diagrams showing where Structural Adhesive is required, it also has good illustrations where the NVH Foam is located and Suzuki reinforces the need to replace this when repairs are being undertaken.

Although it does not state the brand of products required it does state that any repairs should be undertaken only by authorised Suzuki dealers and qualified service technicians, they in turn should be using good trade practices.

The need for Corrosion Protection such as weld through primers and cavity wax is also featured throughout all stages of any repair.

TORQUE SETTINGS

Like all vehicles being manufactured these days the Torque Setting of nuts and bolts or any mechanical fasteners plays a big role in the Passive Safety of the vehicle, this should be carried out during a repair and Suzuki does a good job highlighting these settings throughout the repair specifications.

SECTIONING LOCATIONS FOR THE HATCH MODEL

Additional Cut Line Possibilities

• Possible cut lines (arrows) for sectional renewal