

Interpreting Body Repair Manual

After some 16 months of receiving technical requests from auto body repairers across the country, it is perhaps time to reflect on the most popular vehicle enquiries that we respond to, and draw attention to some of the challenges that the auto body repair technician, and business owner alike are faced with in interpreting Body Repair Manual (BRM) information on a daily basis.

In this, the first of several articles, we will look at the "Top 3" vehicles that we receive technical requests for.

Without a doubt, Suzuki features the most predominately in requests received - with most enquiries for the early model, current platform, Swift (2004 to 2011).

Interesting to note that the "new model" is unmistakably a Swift, but no exterior body panels are carried over from the previous model.

The most popular (for the want of a better word) damaged area is the rear structures with rear quarter,

rear panel and floor replacement procedures being the most common requests. We also receive a large number of enquiries for other panel replacements on the Swift, in addition to numerous requests for information on other Suzuki models, such as the Vitara and SX4.

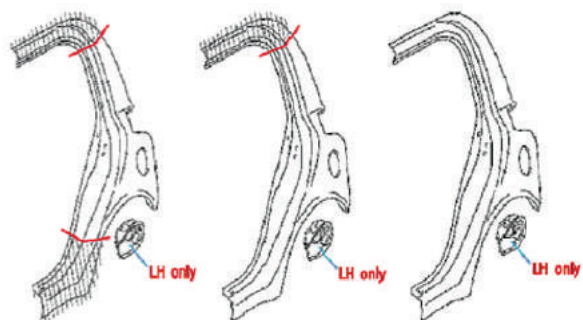
For those that are not aware, Suzuki New Zealand have appointed I-CAR NZ to disseminate the appropriate information on the repair of their vehicles and there is a dramatic difference in how this data is provided and formatted - this can lead to some confusion and frustration within the industry when there is often a dramatic change in how body repair information is supplied.

To provide some clarity around this - The early Swift and Vitara model platforms information is supplied in a CD format with numerous videos showing repair operations, arguably not the best way to complete a repair in the workshop environment. All of the listed procedures also require the technician to have a sound understanding of Suzuki's welding guidelines / recommendations.

REAR QUARTER OPTIONS (SWIFT)

The illustrations show cut locations for the early model Swift rear quarter.

The video showing this procedure shows structural adhesive and spot welding (weld bonding) when fitting this panel.



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SUZUKI CAUTION:

The number of spot welded points should be increased by 20 to 30% in number from the original welding points. Although the spot welding is recommended in the repair procedure, you shall adopt the plug welding when the panel thickness for welding points exceeds the performance of your spot welding device or the panel stack thickness exceeds 3mm.

SUZUKI RECOMMENDATION FOR SPOT WELDING:

Adjust the welding equipment and follow the manufacturer's demands.

(Inverter Squeeze Type Resistance Welding - STRSW)

Always test weld with segments of the same material and thickness. Make a peel test and measure the nugget size. Compare with the manufacturers demands. Weld the spots at the same distance as on the removed panels. But do not put them exactly at the same spot if a remaining panel is used.

MIG WELDING:

Spray weld primer before next layer of panels.

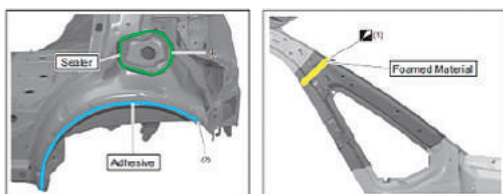
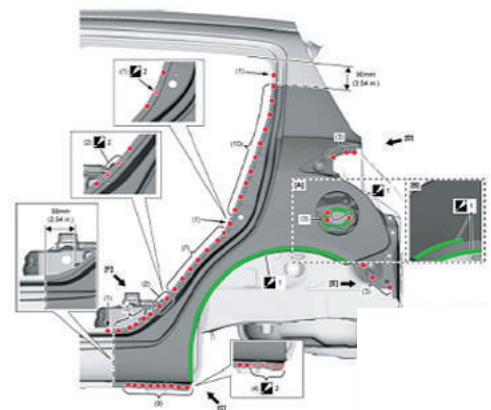
Drill panels for MIG/MAG plug welds where spot welders cannot be used.

When welding the plugs move the nozzle in a circle and finish in the middle.

Sectioning Joints are performed using Open Butt Welds, unless otherwise stated in the manual.

The later model Swift, SX4 and S-Cross vehicles have a more intuitive format - the diagrams are easier to follow with appropriate text and measurements supplied.

Much use is made of symbols that are described at the beginning of the manuals.



Symbol	Definition	Symbol	Definition
○	Spot Welding	●	Detach Welding Spot
□	Plug Welding	■	Drill Hole for Plug Welding
	Continuous MIG-Welding	- - - -	Make Cut
~~~~~	Brazing	~~~~~	Adhesive
x	Temporary Welding	~~~~~	Sealer
( )	The Number of Welding	~~~~~	Foamed Material

Further to all of this, is the fact that there are other popular Suzuki vehicles on NZ roads that we receive enquiries for (Aerio / Ignis / Jimny / APV van)

- these vehicles do not have any specific body repair information available

- it is therefore suggested that the repairer follows Suzuki's welding recommendations and use other Suzuki sectioning / replacement information as a reference.