

Let's look at the Kia Soul



In this issue we will look at some of the recommendations for repairing the Kia Soul, and thank Kia NZ for providing the information, not just for the Soul but for all vehicles in their current Kia fleet. We will endeavor to get this developed into an I-CAR NZ collision repair awareness program as soon as we are able.

So what is different with this new age looking vehicle?

The first observation when reading through the Soul collision repair manual is the break away from the current trend of most vehicle repair manuals, as this vehicle has very involved procedures for partial replacement of body sections and reinforcements. For this reason it will be difficult showing the full procedures of many of the repair options in this technical report.

However we will give an overview of the different options where panels maybe sectioned and if you are required to use any of the methods we urge you to get the full procedure before undertaking the repair.

Steels used

- Although the specifications show very detailed diagrams of the different structural panels and a cross section view showing where reinforcements are used, it does not give any grades of the different steels used.

Welding

- The following is taken from the Kia Soul specifications.

SPOT WELDING

1. Commercial spot welding machines do not perform as well as the machines used in the manufacturing process. When spot welding, increase the number of spot welds by 30% (1.3 times the original number of welds).
When Mig plug welding to replace spots use the same number as OEM
2. When spot welding, weld in the middle of the joint.

MIG. WELDING

All repairs in this manual require the use of a Metal-Inert Gas (MIG) welder, Gas (oxyacetylene) welding must not be used. Both high strength steel and mild steel can be welded using the MIG welder. **The I-CAR recommendations for welding should be followed.** The shielding gas should be 75% Argon and 25% CO₂.

The recommended welding wire size is 0.23" and the wire should satisfy the American Welding Society standard code AWSER70S-6.

Using heat

- Oxy acetylene eating is not recommended for any stress relieving.

Torque settings

- Torque settings are not shown in the collision repair specifications but are available from the dealership workshop department.

Electronic awareness

- Cautions given by Kia
1. Work must be started after approximately 30 seconds or longer from the time the ignition switch is turned to the LOCK position and the negative (-) terminal cable is disconnected from the battery. (The airbag system is equipped with a back-up power source so that if work is started within 30 seconds of disconnecting the negative (-) terminal cable of the battery, the airbag may be deployed.) When the negative(-) terminal cable is disconnected from the battery, memory of the clock and audio systems will be cancelled. So before starting work, make a record of the contents memorized by the audio memory system. Then when work is finished, reset the audio system as before and adjust the clock.
 2. When using electric welding, first disconnect the air-bag connectors under the steering column near the MULTI-

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FUNCTION SWITCH and the passenger's side crash pad before starting work.

3. Store the air-bag modules where the ambient temperature remains below 93 C (200 F), without high humidity and away from electrical noise.
4. WARNING/CAUTION labels are attached to the periphery of the air-bag components.
Refer to the SOUL SHOP MANUAL.

Corrosion protection

- Kia has a full section relating to the corrosion protection and sealing of the body structure with some procedures requiring the sealer to be applied prior to a new panel being fitted. However it does not specify the product that should be used, so general trade practice should apply by comparing the product used at OEM to after market products available.

Adhesives & NVH foams

- Kia makes reference that product manufacturers should be consulted for the correct product to use. Although the manual mentions some areas where these products are

used I'm not sure it shows all areas where you are likely to find them in the vehicle. So watch out for any adhesives or foam and replace these during any repairs.

Where can we section?

- You will see we are showing some regular outer panel, plus front and rear rail partial replacement options for the Soul but they also have other options for replacing inner reinforcement panels and extended sections for the A pillar, Sill, and B pillar. These are very involved and should be researched before undertaking any repairs on or around these areas.

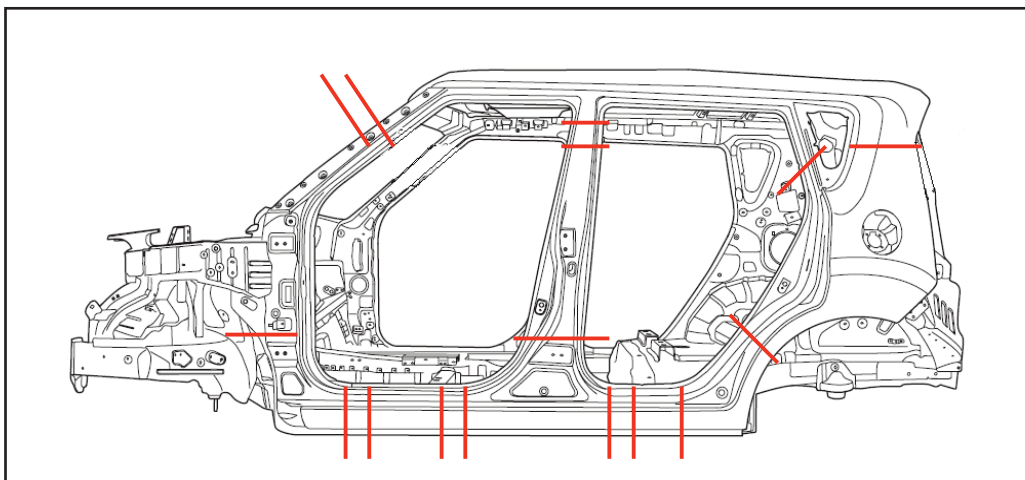
THIS IS A STATEMENT FROM THE KIA REPAIR MANUAL.

Repair procedures illustrated in this manual were developed to simplify body repair in order to reduce insurance costs, and indirectly, cost of ownership.

The vehicle should not be sectioned in locations other than those illustrated in this repair manual. Furthermore, these repair procedures **DO NOT** apply to any other vehicle. The individuals performing the work must assume full responsibility for the quality of their workmanship.

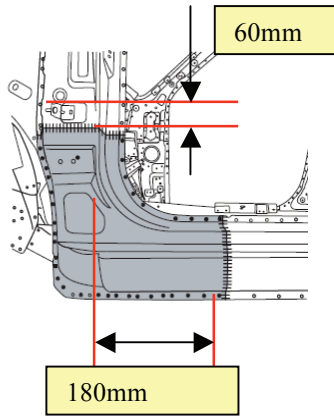
What options are available?

The illustration below shows where outer panel partial replacement joint locations are available.
Note; these are not to scale so be sure to check for the correct measurements.



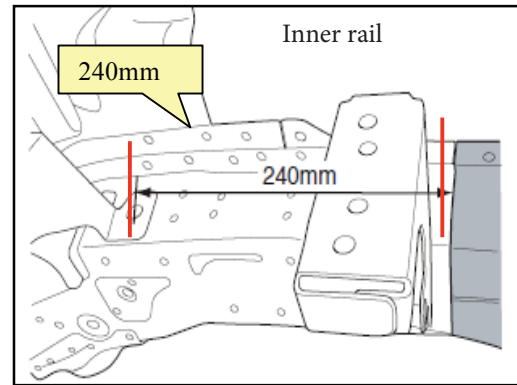
A Pillar Lower Section Replacement

Good methods that eliminates unnecessary part removal.

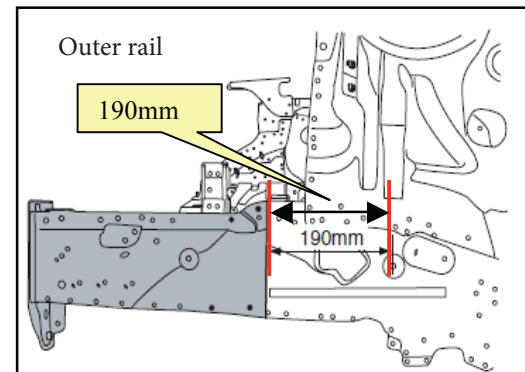
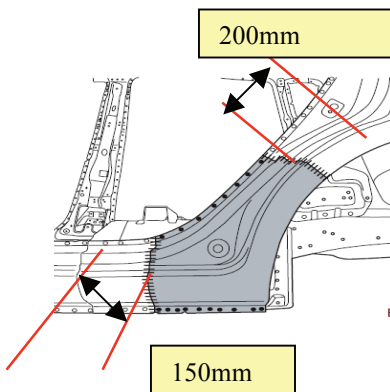


Front Rail Partial Replacement

Done using an open butt weld.

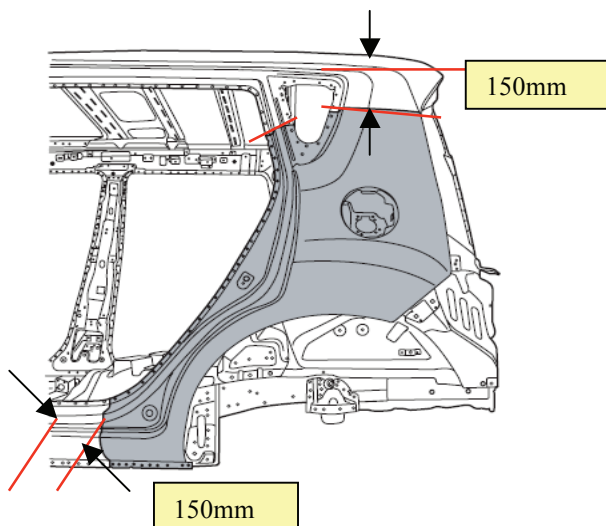


Rear Wheel Arch Lower Replacement



Rear Guard Replacement

Done using an open butt weld, spots and glued around wheel arch.



Rear Rail Extension Partial Replacement

