TECHNICAL REPORT



In this edition of PanelTalk we look at the new Hyundai Veloster. If like me, after you read this brief overview, you might also wonder how we will be repairing vehicles in five years time.

We thank Hyundai for sharing this and all their current fleet information with I-CAR NZ, to enable us to develop a Hyundai Collision Repair course. This course is now complete and ready for delivery in the near future, you will be advised once dates are confirmed.

So what is different about the Veloster? Perhaps the greatest difference and the one that makes repairing this vehicle a little different is that it has 2 doors on the left side and only 1 on the right side. This body design brings many differences and although the front and rear structures are symmetrical the remainder is not. What can also be confusing is when reading the body repair manual the illustrations shown are for a left hand drive vehicle, this is the reverse configuration to ours so the front of the vehicle may face backwards. However the repair specifications are very detailed and when you see the different grade steels and where these are used, you will understand why these play a big part in how we must follow specifications to replace panels. **See Fig: 1**

Partial outer panel replacement methods for the Veloster are limited due to the large amount of HSS and UHSS used for reinforcements. Replacement body panels come complete with these reinforcements attached and requires these to be fitted as a full structure. You will see in the illustrations below fitting these panels requires outer panel cut-outs to give access for fitting these reinforcements. The Veloster does have a partial replacement procedure for the front rails. This requires an outer panel cut-out on the engine bay side, a straight cut to the outside outer panel, then sectioning the reinforcement. It's all good so long as you measure correctly. **See Fig: 2**

The A and B Pillars also have methods for replacing the full panel with the reinforcements attached. This is now becoming common practice for a number of vehicle brands due to steels used to achieve side impact safety

STATE OF THE ART DESIGN

SAGOLA

ADVANTAGES

TECHNOLOGY

Ultra fine and large spray pattern Excellent results

Single piece self adjusting packing gland No service kits or maintenance required

NEW GENERATION

ERGONOMICS



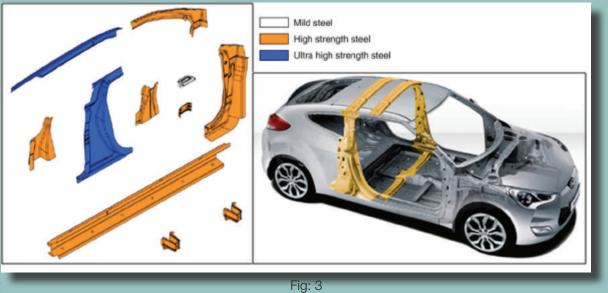
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Let's look at the HYUNDAI VELOSTAR

ratings. The illustration in **Fig: 3** shows the cut-out required for fitting the upper joint of the left hand 2 door side B Pillar reinforcement. Perhaps one panel replacement method for the Veloster that is of concern, is the right hand rear quarter. This is not your typical outer panel join on the sail panel and lower wheel arch area. The Veloster requires the full guard with reinforcement attached to be fitted. This involves a cut-out in the upper roof rail and sill with a butt joint also in the rear roof rail area. **See Fig: 4**

Looking at the Veloster is only a brief overview of some changes in the way we have typically repaired cars. These advancements are happening faster and faster as each new model vehicle is developed. Perhaps the greatest concern is what will happen if those repairing these vehicles don't keep up with these advancements.

Fig: 1



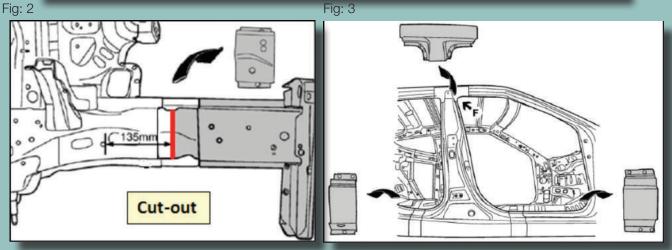


Fig: 4

