I-CAR NEW ZEALAND technical report

# Toyota Corolla

This edition of Paneltalk we look at the Toyota Corolla. ZZE150, ZRE15, NDE150, ADE15 series
Toyota NZ has been very supportive with providing information for this article.
Technical information for Toyota can be ordered through the parts dept and also available from your Toyota Dealership service department
Other Technical information can also be found from pay site www.techinfo.toyota.com
The I-CAR POP01 course also covers the Corolla and Camry sectioning options.

**MODEL AWARENESS**

Always check you have the correct Model Specifications of the vehicle before carrying out any repairs.

**ELECTRONIC AWARNESS**

Toyota recommends not exposing any ECUs to temperatures above 80*C.

Replacement of the driver's door regulator or motor will require reprogramming.

Remove all airbags and seat belt pretensioners when electric welding.

**WELDING**

A combination of STRSW (Squeeze Type Resistance Spot Welding) and MIG Steel welding is included in the Collision Repair Specifications.

Spot Welding should use **1.3 x the number used by OEM** and avoid welding over the previous welds.

**Do not** use spot welding for panels that have a combined thickness greater than 3mm, use Mig plug welds.

Increase the number of OEM plug welds (% increase no stated).

Sectioning weld joints use Open Butt Welds (without inserts)

Use weld through primers and apply anti rust treatmen following a repair.

**STEELS USED AND PRECATIONS**

Cold straightening only

Toyota states that it prohibits the use of the heat repai method on body structure panels during collision repair.

*Fig 1 shows where the different steels are located*

**GLUES SEALERS AND NVH**

Toyota uses a good amount of NVH (Noise Vibration and Harshness) semi rigid foam and recommends duplicating this during collision repair, Toyota also notes; that foam must be applied equally to both left and right sides.

Structural Adhesive is used when fitting the rear quarter panels; this is not applied to the full panel (see Fig 2) *(Checking the specs is important)*

Fig. 2

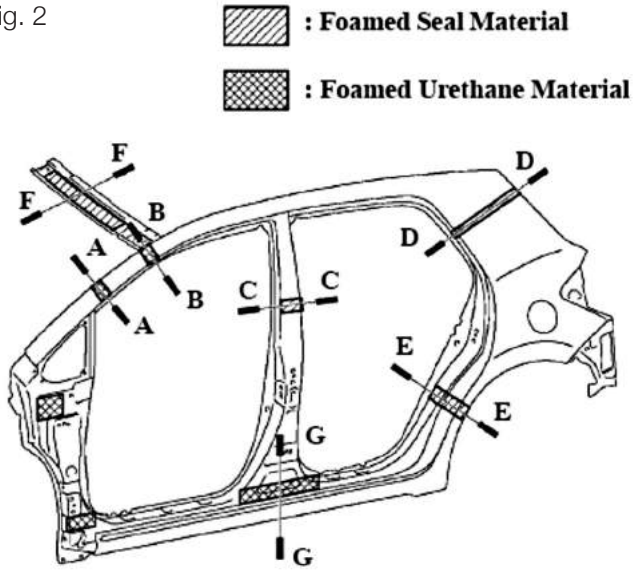
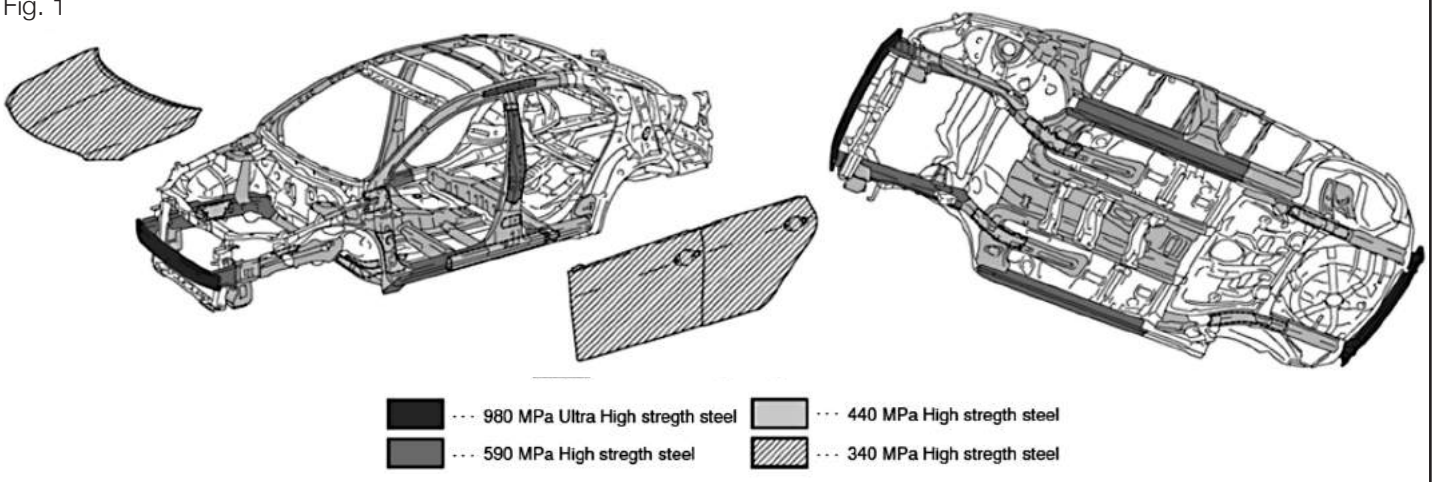



Fig. 1



**TORQUE SETTINGS**

**Torque settings are given for all bolts used on the Toyota panel operations**

Use the correct torque setting when installing components as many bolts on the Corolla are part of the vehicles Passive Safety Features, this includes bumper beam bolts

**PARTIAL REPLACEMENT PANELS**

Toyota provides good Sectioning (Cut Replacement) Illustrations showing where cuts should be made, **only section in the areas shown and follow the welding recommendations.**

The Corolla has sectioning procedures for a good number of exterior body panels plus the front rails. However does not have sectioning procedures for any reinforcement panels.

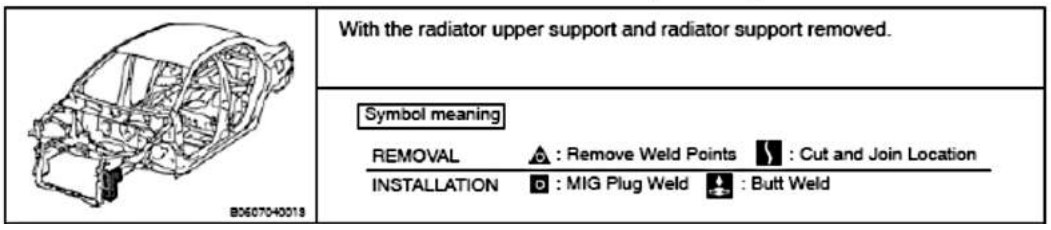
Illustrations provide easy to understand sectioning locations.

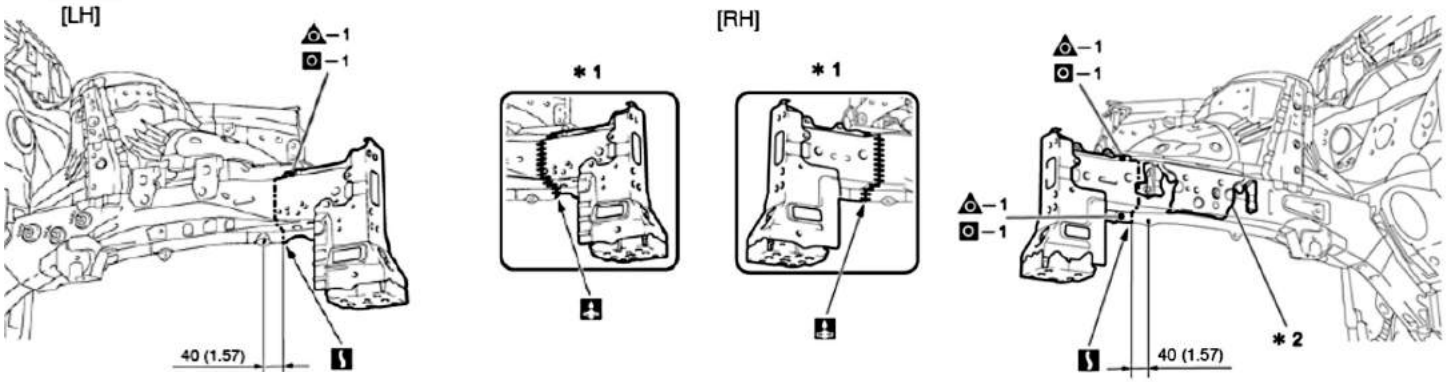
Partial replacement options include;

- Front Rails
- A Pillar outer
- B Pillar outer (Care must be taken here as the procedure can be confusing)
- Sill Panel
- Rear Guard

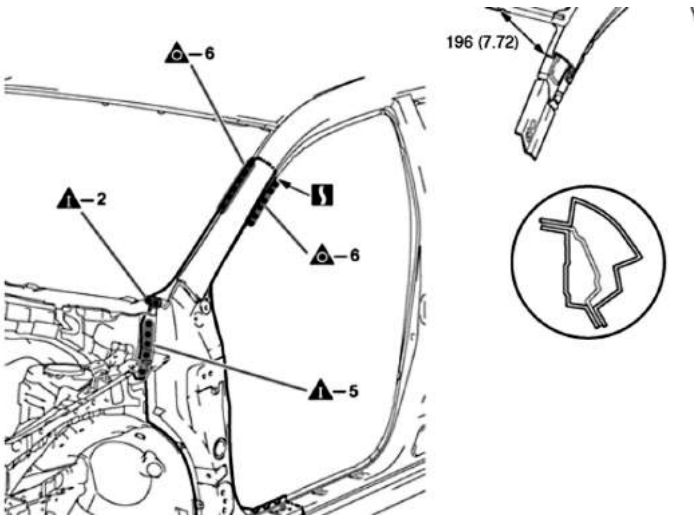
All other body panels and reinforcements are full replacement at factory seams only.

## FRONT SIDE MEMBER (CUT-P)

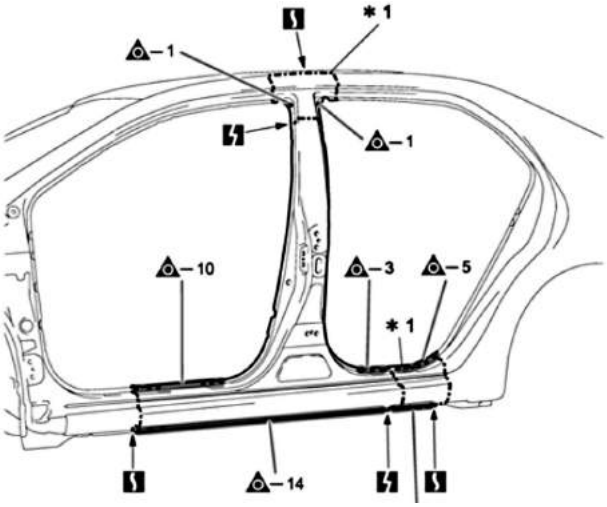



### FRONT A PILLAR

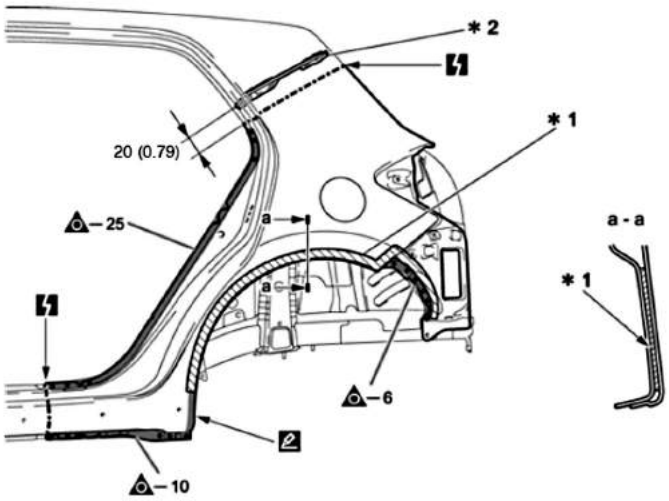



### CENTER B PILLAR

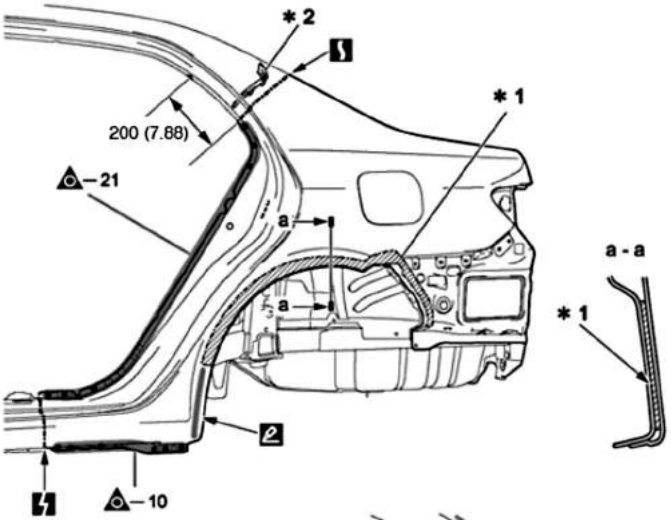



*Notes area where window can be cut for fitting the inner reinforcement, The I-Car POP 01 course has a easy to undersdtand video on how this should be done.

**HATCH REAR QUARTER PANEL**




**SEDAN REAR QUARTER PANEL**




**Another interesting caution for the Corolla**

On the models withour SRS curtain sheild airbag, the head impact protection structure is used. With this type of construction, if the occupant's head hits against the roof side rail and pillar in reaction to a collision, the inner panel of the roof side rail and pillar collapses to help reduce the impact.

Head Impact Protection Schceme