The New Honda Euro Civic

In this edition of Paneltalk we look at the new Honda Euro Civic. The just released Euro Civic is the beginning of a new body structure designed and developed by Honda; this new design will also be used for other Honda models such as the new Accord.

This new development by Honda is typical of many other motor manufactures, as they strive to meet the demands put on them to build lighter, more fuel efficient and safer vehicles. These new designs mean that the build geometry and assembly concepts will change with each new model released, and with this comes new repair methods.

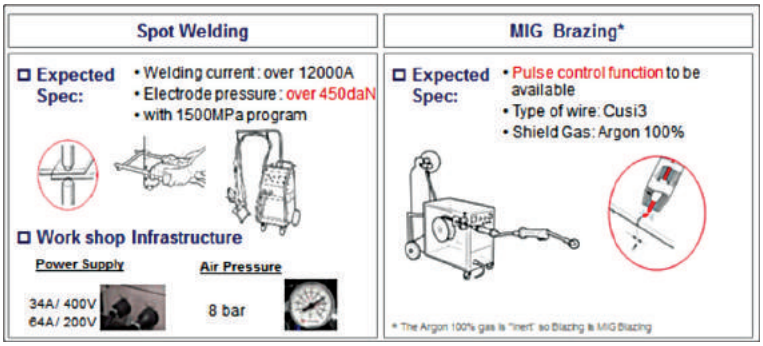
We look at some of the new technology and materials used to build the new Euro Civic body structure and how this will affect you if one turns up in your shop.

You will see in the body structure illustration below that **Hot Stamped Boron Steel** (also called Usibor) with a 1500 MPa strength, is used for the side rails, B pillar and passenger compartment reinforcements. This steel is extremely high strength and very hard so repair options are limited.

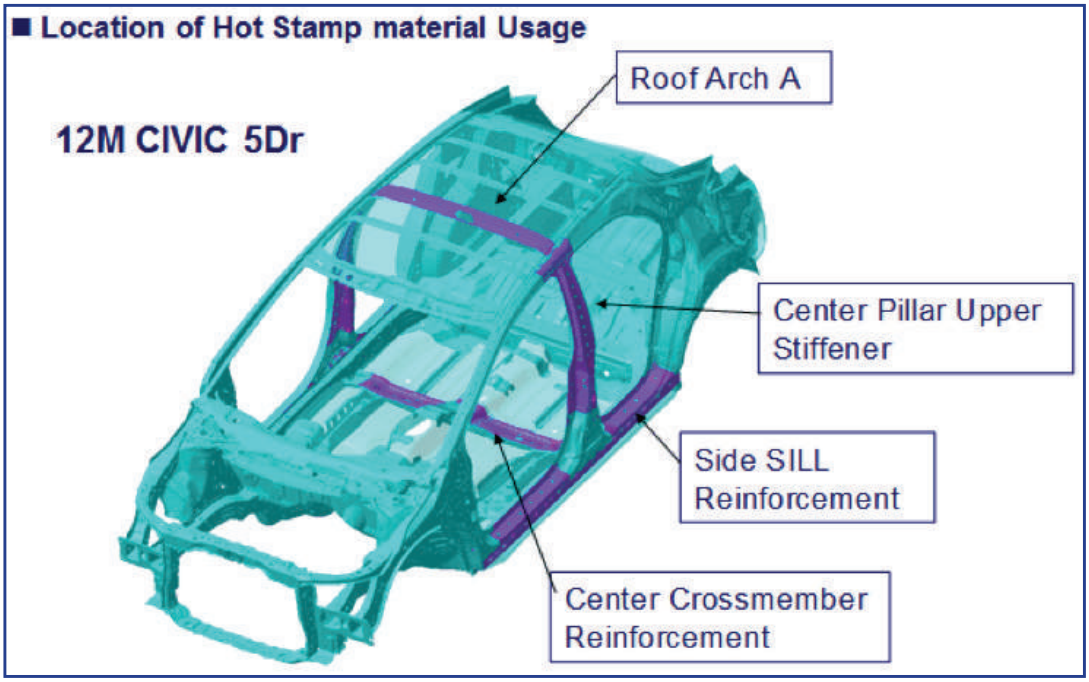
Removing these structural parts by drilling spot welds or grinding is difficult, it is also very heat sensitive; Honda say heat should not be used when repairing the Euro Civic and that the method of **Spot Welding** and **Mig Brazing** (also called Mag Brazing in the Honda manual) will require equipment with specifications stated by the Honda engineers, (check your equipment specifications against those shown in Figure 2)

In addition to Boron steel the Euro Civic uses a combination of other steels that include 270, 340, 440, 590, and 780 MPa strengths.

The full collision repair manual that includes what panel replacement methods should be used, cut locations, types of welds, and any cautions you should be aware of, can be found on the Honda web- site at www.parts.honda.co.nz



The Euro Civic has very detailed welding methods for every panel replacement operation, these include accurate **spot welding** settings for multi layered panels, the size and where **Mig steel plug** welds should be used, the length of **Mig steel welds**, and the locations where **Mig**

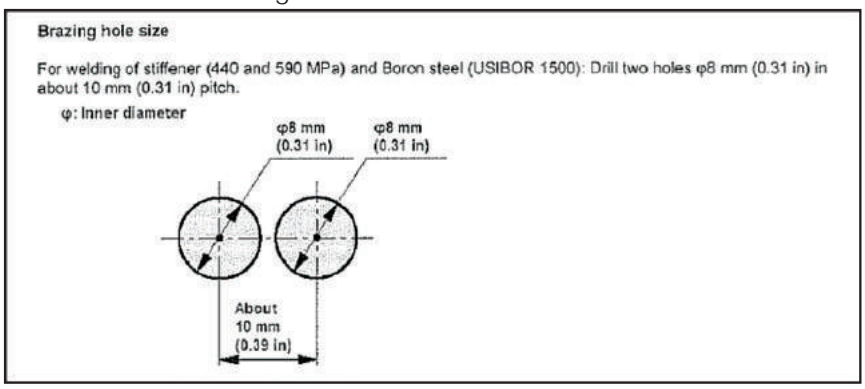


Brazing is required. You will see in the illustration below the symbols used for the different welding methods.

Mig Brazing; This is required when replacing many of the HSS and UHSS panels, one option for doing this requires using the two hole method (shown below), you will need to check these methods as they do vary for the different grades of steel.

NOTE:

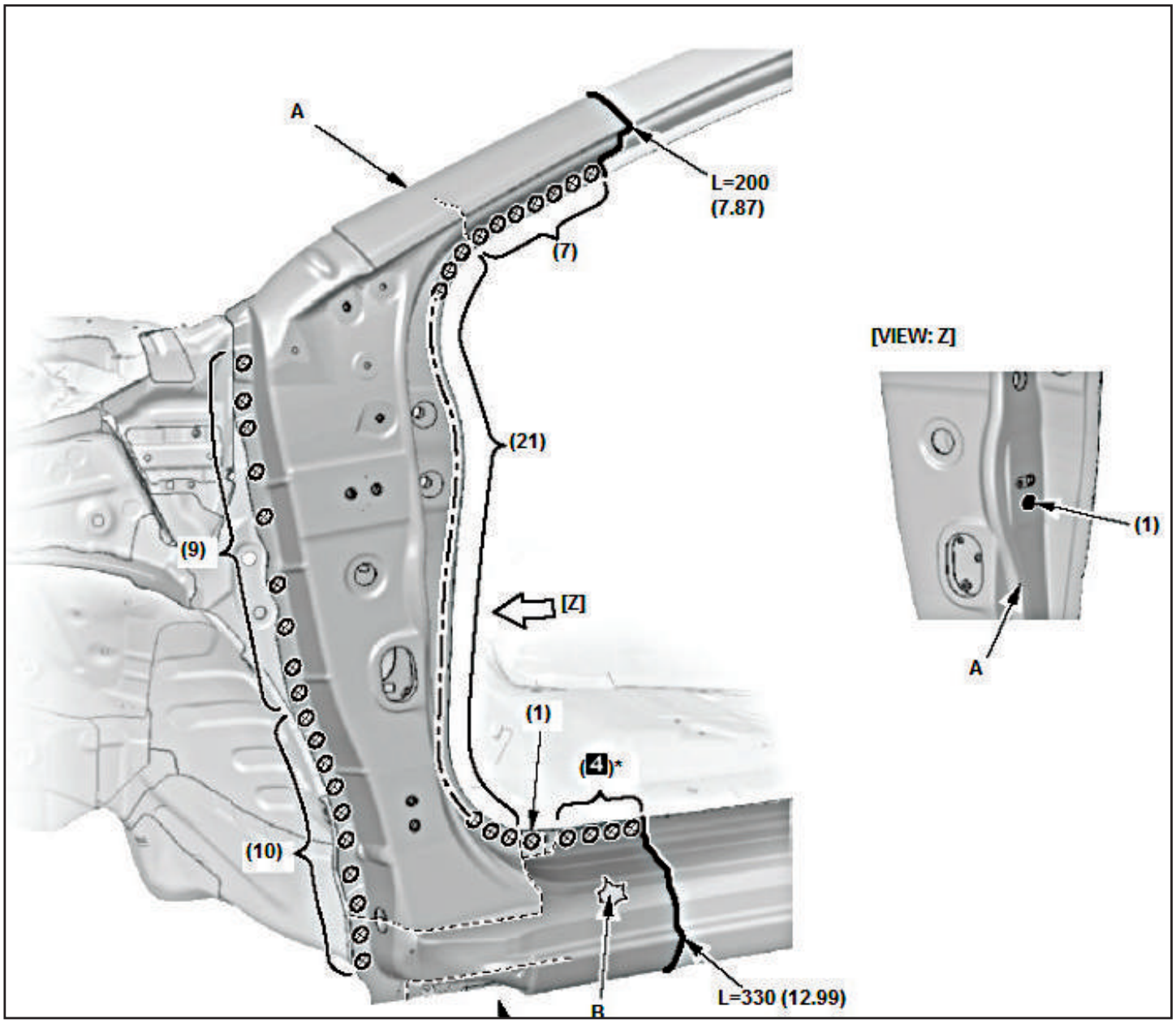
- Welding symbols
  - ✕ : 2-Plate spot welding
  - ⊗ : 3-Plate spot welding
  - ☒ : 4-Plate spot welding
  - ● : MIG plug welding
  - ▬ : MIG welding
  - ▨ : MIG brazing
  - L=Welding length unit: mm (in)
- ( ) and ( )*: The number of welds

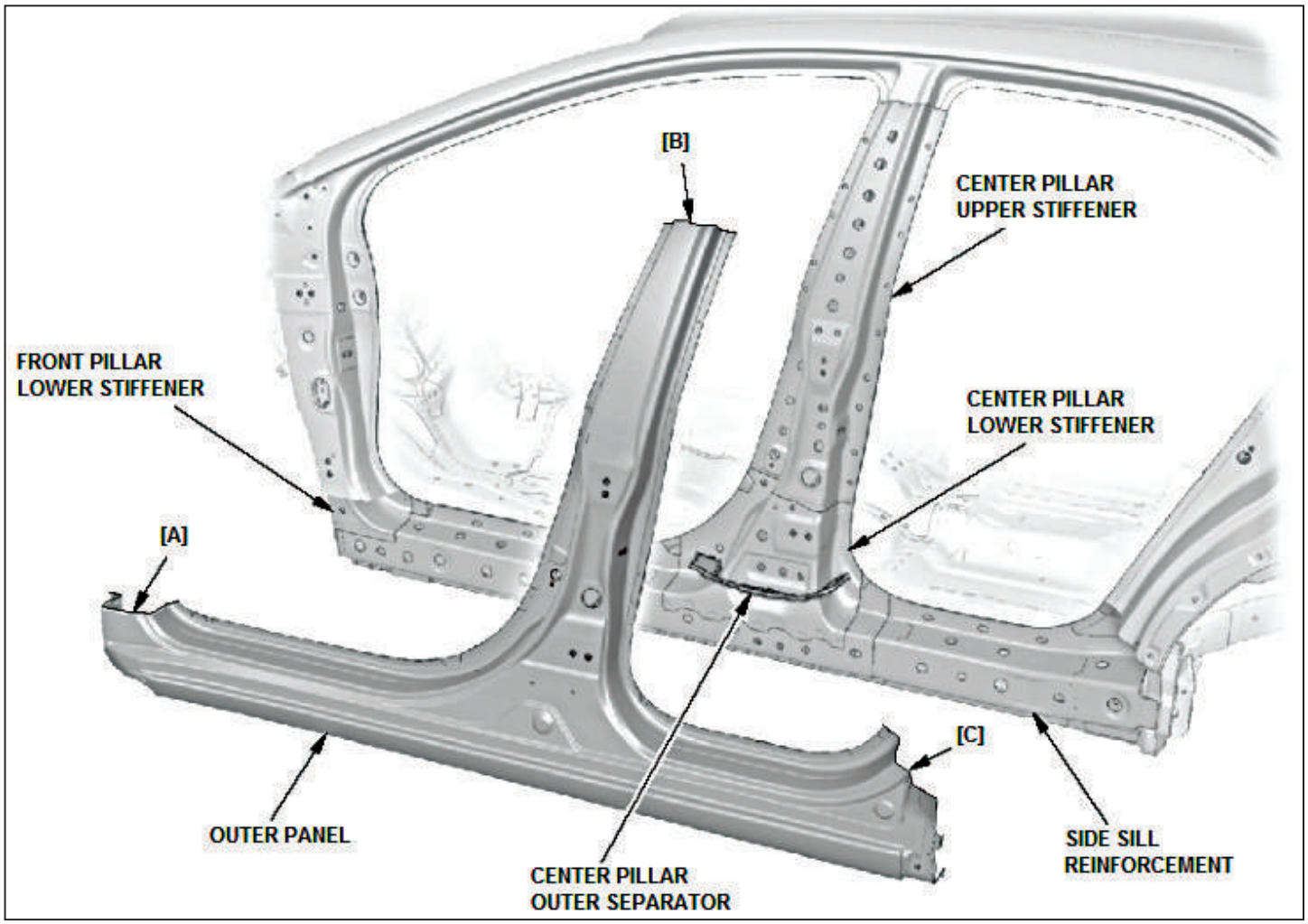


Partial Replacement; Although partial panel replacement options are limited, the Euro Civic does show the following methods in the body repair specifications.

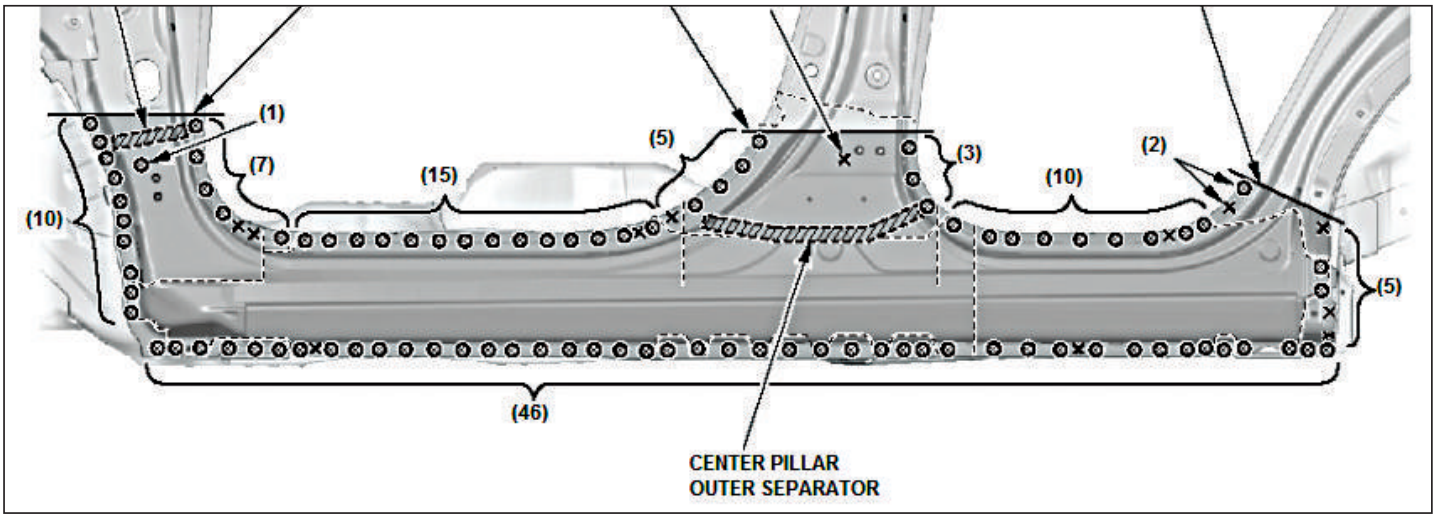
Caution; t*hese options shown are only a guide for assessment purposes, the full repair method should be obtained before commencing any repairs.*

A Pillar partial replacement:

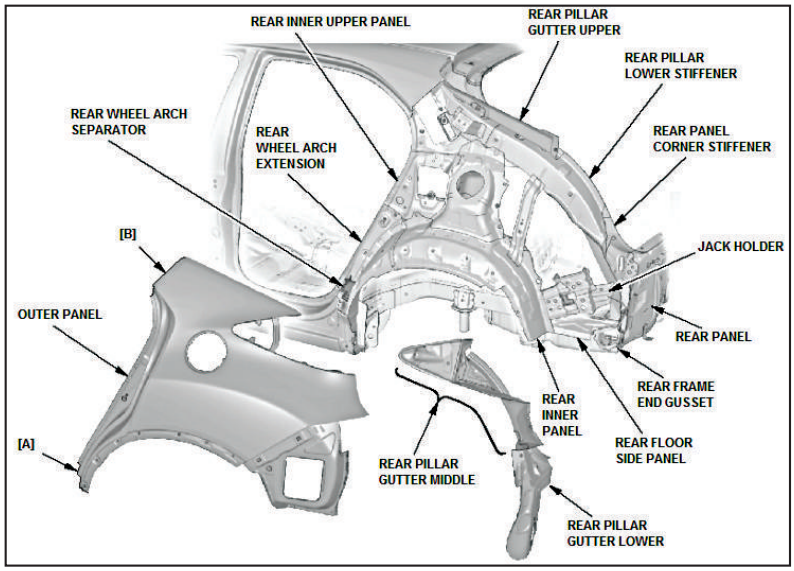


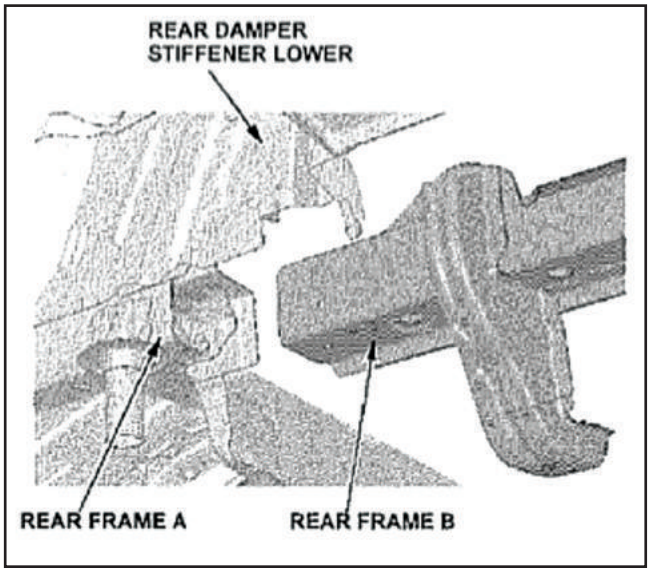


Outer Sill panel and B pillar options;



Rear outer quarter panel;





Rear rail partial replacement;

Torque settings; These are given for all fasteners and should be used when replaceing any bolt on parts, the illustration below shows an example of the different settings for some bolt on body parts;