

Let's look at the Ford Focus

In this issue of PanelTalk we are looking at some of the body repair recommendations from Ford for the Ford Focus. Ford NZ and Fairview Motors Hamilton were very supportive in assisting with research for this information. A few procedures and recommendations we need to be aware of before repairing a Ford Focus:-

TECHNICAL INFORMATION

Information for the Falcon and Territory is available in hard copy from your Ford dealership parts department. Information for other models can be obtained through the workshop manual or online through the dealership web site. (However be sure to check the vehicle country of origin, as these can differ).

MODEL AWARENESS

The Ford Focus imported into New Zealand is manufactured in Europe. Unlike the Australian models that come from South Africa.

Steels used for some replacement structural parts like the front and rear rails may be different.

So **check the country of origin.**

ELECTRONIC AWARENESS

- Many electrical components may require reprogramming if disconnected
- Never use electrical test equipment other than that specified
- Check OEM disarming procedure before removing Airbags.
General rules from Ford state:- disconnect battery terminals and wait 15 minutes, any work on Airbag systems may only be performed by persons who have a relevant certificate of competence.

STEEL USED AND PRECAUTIONS

The Focus has a detachable Crash element (Crush Zone Extension) bolted to the front end of the front rails, these are designed to absorb impacts of up to 15km and **must not** be straightened or repaired.

The rear end also has a bolt on cross-member that contributes to an increase in Passive Safety in the event of a rear end impact.

Ford cautions when working with HSS and UHSS

These must **NOT** be heated during straightening and always replace with new, as cutting and heating where not specified will reduce the strength of the original performance.

Pos	Used type of steel	Application range (Examples)
1	Ultra High Strength Steel (UHSS)	Impact Carriers, Bumper Carriers, A-B Pillar reinforcements
2	Extra High Strength Steel (EHSS)	Frame Side Member; Rocker Reinforcements
3	Very High Strength Steel (VHSS)	Wheel House, Structural Members
4	High Strength Steel (HSS)	Roof Sticks, Fenders
5	Normal Strength Steels	Outer Panel

WELDING

Ford has a very informative description for welding and panel replacement. Squeeze Type Resistance Spot Welding with Inverter Technology is the preferred method however; Mig Plug welds are recommended when there is limited access or when the thickness of steel exceeds the spot welder machine performance rating.

- Inverter Spot welding is the preferred method, matching that of OEM but not to be used on more than 3mm thickness unless the welding equipment is rated for this
- Always carry out Destructive Testing of practice welds prior to the welding of the vehicle
- Duplicate any OEM Mig Steel Welds with the same MIG configuration
- Use Open Butt Welds for sectioning
- Mig Brazing must only use Ford-approved Bronze wire (SG-CuSi3Mn 1)
- Keep a 30mm minimum away from any adhesive when Mig brazing
- If duplicating Bronze welding with Mig steel welds make sure that these are not carried out on or near the existing Brazed seam to prevent the reduction of strength
- Roof replacement



Warning; The roof repair may only be carried out in Ford-approved special workshops and only by specially trained personal.

Note: The roof is secured to the side walls with laser soldered seams in production. When repairs are carried out, these laser-soldered seams must be replaced by soft-soldered seams.

GLUES, SEALERS AND NVH

The repair specifications make reference where **Structural Adhesive** is required, it also has good illustrations where the **NVH Foam** is located and Ford reinforces the need to replace this when repairs are being undertaken.

NOTE: The quality of the bonded connection is largely dependent on the care taken during preparatory work. When gluing bodywork parts, follow the work instructions from the adhesive manufacturer.

The need for **Corrosion Protection** such as weld through primers and cavity wax is also highlighted as this is a big part of the Ford warranty programme.

BONDING AND WELDING

On some vehicle models, (such as Ford Ka), bonding is combined with resistance spot welding. This connection has the following advantages:

- Tight, anti-corrosion connection seam.
- High strength due to additional resistance weld spots.

Please note the following points during the repair work:

- Only use adhesive suitable for welding (conductive).
- Carry out resistance spot welding on the connection flanges before the adhesive hardening process.
- Any welding carried out during a sectional repair on a connecting flange with sealant or adhesive material, the material must be applied at a distance of approx. 10mm from the weld spot.

TORQUE SETTING

Although these were not stated in the Body Repair Specifications you should check out these at your dealership if you are removing any mechanical or underbody bolt-on parts.

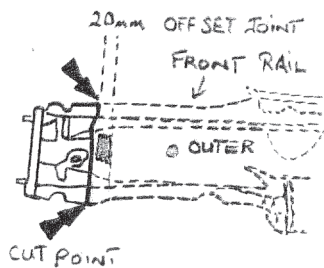
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PARTIAL REPLACEMENT OF PANELS

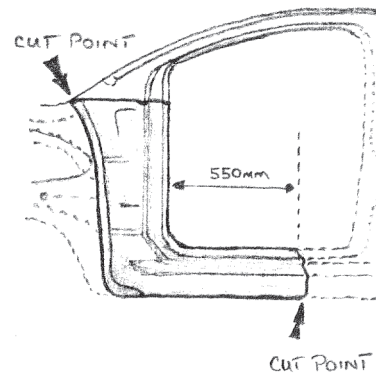
The Focus has a good range of options for partial replacement and has good illustrations showing where and how. Partial; replacement panels include:-

- Front Rails
- A Pillars
- B Pillars
- B Pillars reinforcement (This is very detailed so refer to Ford Specifications)
- Sill Panels
- Rear Guard
- Rear Rails
- Boot Floor (required when fitting a new rail)

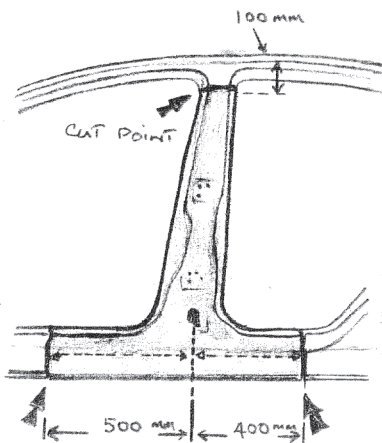
Front Rail



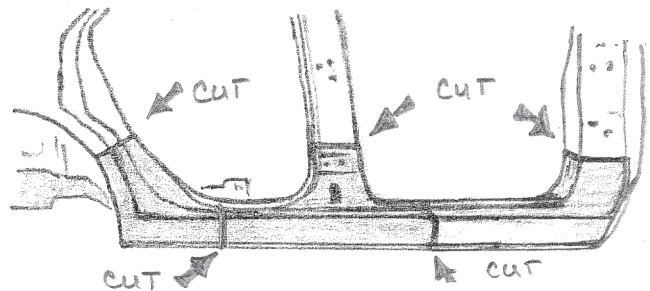
A Pillar



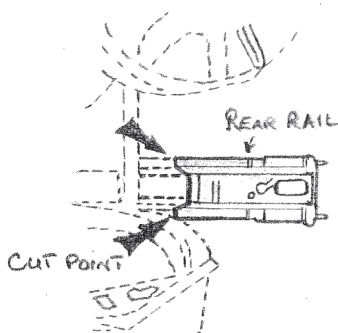
B Pillar



Sill Panel, has a few options



Rear Rails



Rear Guard

