

# TECHNICAL REPORT



DEFINING 'BEST TRADE PRACTICE' -

THE NEVER-ENDING SEARCH FOR REPAIR INFORMATION, AND A COMMITMENT TO SAFE AND CORRECT COLLISION REPAIRS

In developing a repair blueprint or damage analysis, a typical collision repair scenario can often look like this –

The repairer investigates the availability of an OEM repair specification from the local dealership or similar, and is told that there is no information available – use “**Best Trade or Industry Practice**”.

So, all good then, we can use this term of reference to complete a wholly acceptable / safe repair .... **NOT REALLY**, and like most things that the trade is faced with in this day and age, its just not that simple – it raises more questions than it answers :-

- Suitable sectioning joint locations.
- MIG weld (steel/bronze) or STRSW
- Weld pitch / spacing
- Joint preparation techniques
- Corrosion protection requirements
- Adhesive bonding
- New, aftermarket/pattern or recycled parts usage
- Heating tolerances
- Material identification ( HSS, UHSS, Aluminium, etc.)
- Changes in attachment methods (rivets,screws, and so on)

In general terms, the auto body trade’s perception of Best Trade Practice (BTP) becomes increasingly polarising - if we ask the question “what is BTP” of a shop owner, an apprentice, senior or junior tradesman, or an assessor, as examples - by and large most of these individuals will have differing opinions, or worse still, have little or no real understanding of the phrase. This is because there are no clear generic guidelines for the technician / administrator to reference.

## HEATING AND STRAIGHTENING LIMITATIONS



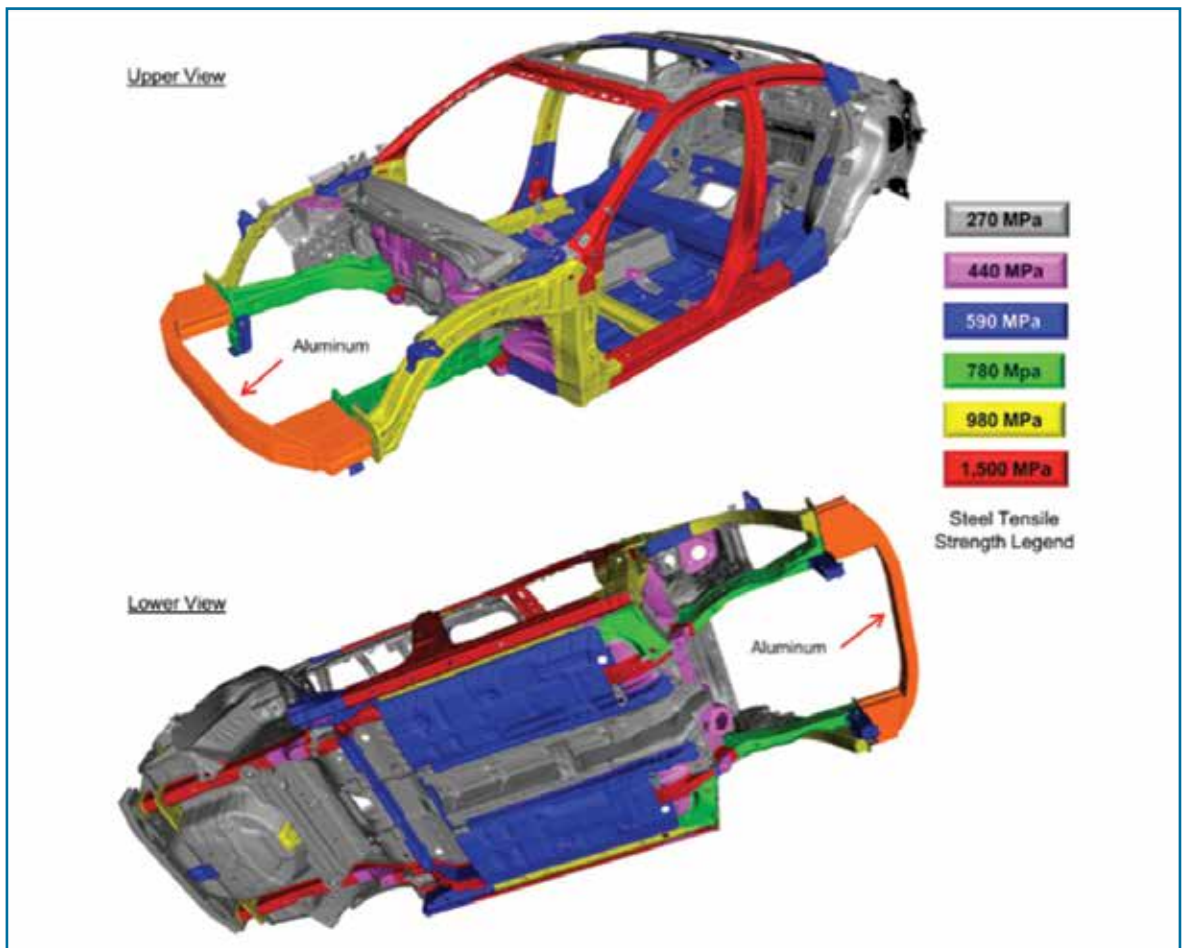
# TECHNICAL REPORT



## ANCHORING & JIGGING REQUIREMENTS



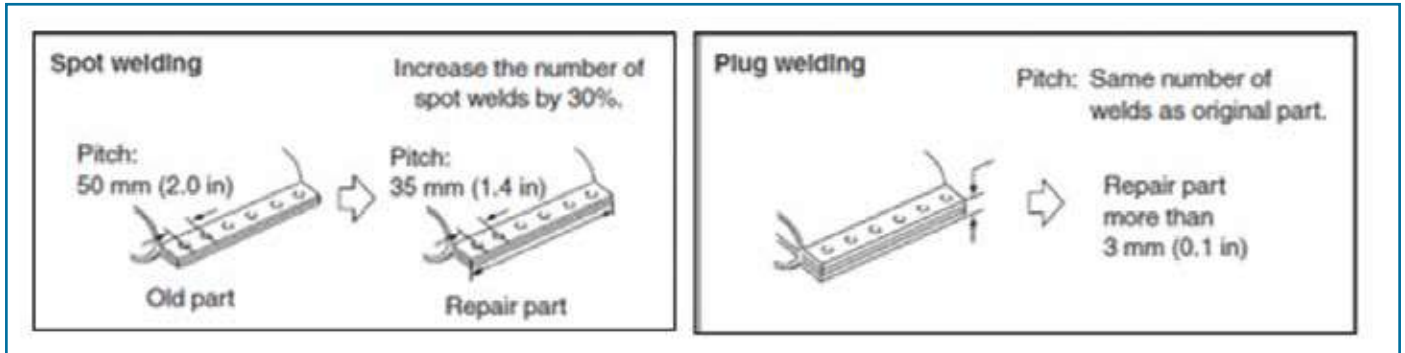
## STEEL TYPES & MIXED MATERIALS USAGE



# TECHNICAL REPORT



## WELDING REQUIREMENTS



## USING ADHESIVES – WELD BONDING AND RIVET BONDING



Using the phrase or statement of “Best Trade Practice” therefore would appear to have very little relevance or practicality in the real world of collision repairs –

With the advent of new technologies in recent years, we at I-CAR NZ have regularly been asked about “approved” repair methods, other than those from the vehicle-maker (OEM), or in the absence of a defined method or procedure for a particular model .....

# TECHNICAL REPORT



## I-CAR'S GENERAL RECOMMENDATIONS AND WHAT "BTP" COULD LOOK LIKE :-

First and foremost, as training providers, we will ALWAYS advocate for any information provided by the vehicle-maker (typically found in the Body Repair Manuals - BRM). Other OEM supporting documents, such as "Position Statements" and warnings/ cautions will also be referenced, where available.

Based on this, most vehicle-makers provide **General Recommendations** for auto body repairs within any given model BRM (may also often be listed under **Introduction** or **Guidelines**).

This information is effectively describing appropriate repair and straightening techniques, methods of attachment, electronic and SRS awareness, corrosion protection, NVH, steels and material types, and so on – both for a defined procedure, and for determining a suitable repair process where no method is described.

Therefore, Best Trade Practice should include, as an essential referencing point, BRM general recommendations specific to the particular OEM.

To take this to the next step, let's look at a representation of a vehicle-maker that has BRM information/procedures for many of its models, but there are a number of platforms (particularly domestic market), where **no** specific BRM information is available :-

### EXAMPLE :- TOYOTA MARK X

Toyota body repair manual information is sourced from their GSIC site (Global Service Information Centre). Under the heading "Introduction" can be found a substantial amount of information about welding, heating and cutting, symbol identification and "how to read the manual". Much of that detailed info could be applied to models that are not covered (as above).

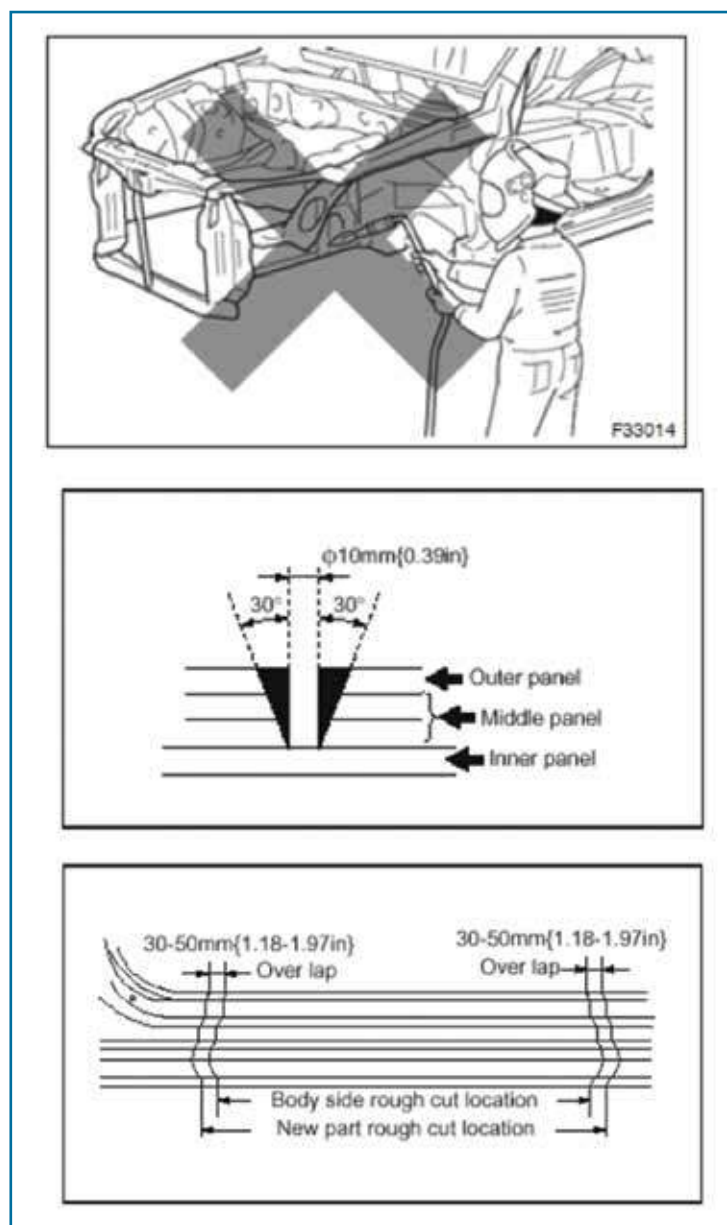
"BTP" for the Toyota Mark X could include :-

- Use of weld – thru primers
- Open butt welding for sectioning joints
- Remove adjacent components
- Considerations when working with UHSS steels
- 1.3 X, or an increase in the number replacement spot welds
- Correct shielding gas
- MIG plug hole size variations
- Requirements for panel stack thicknesses over 3mm
- Personal safety and PPE
- Corrosion protection and sealers
- Battery disconnection and working with SRS parts
- Toyota NZ bulletin on welding could be implemented
- The prohibition of heating and sectioning of reinforcements
- Position statement on the use of salvage and aftermarket parts
- Identifying the "Service Condition" of replacements parts when determining cutting/sectioning location(s)
- Referencing a similar model (with procedures), to assist in determining cut locations for outer panels

# TECHNICAL REPORT



It has to be understood that there will be no singular BTP document that would cover all makes and models. While there is some commonality across different vehicle-makers, by necessity, there are also many general and model specific requirements that must be followed in accordance with the particular OEM.



*These articles have been written by Martyn Lane : I-CAR Instructor, Weld Test Administrator and Technical Specialist to the auto body industry*