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SUBJECT *'Vehicle Construction - Fuel Lines'*

INTRODUCTION

This bulletin highlights a particular construction feature of two (2) particular vehicles; the Subaru Liberty (above) and the Honda Civic.

The routing of fuel lines is very close to the lower B pillar section adjacent to the sill. This area is a location where rescuers may choose to conduct B pillar rip techniques, or to cut and remove the B pillar.

HAZARD

The routing of the fuel lines near the B pillar and close to the sill does present challenges for rescuers. The best defence for rescuers in identifying the location of fuel lines before commencing techniques during extrication is to expose all areas to be cut and identify any potential hazards before cutting; don't rush.

VEHICLES

Although this bulletin highlights the Subaru Liberty and the Honda Civic, other vehicles from these manufacturers and other manufacturers may run fuel lines in similar locations.

EXAMPLES

Subaru Liberty

At an incident involving a 1998 Subaru Liberty wagon, while crews were conducting a B pillar rip, the fuel lines were exposed and cut through inadvertently with the hydraulic shears.

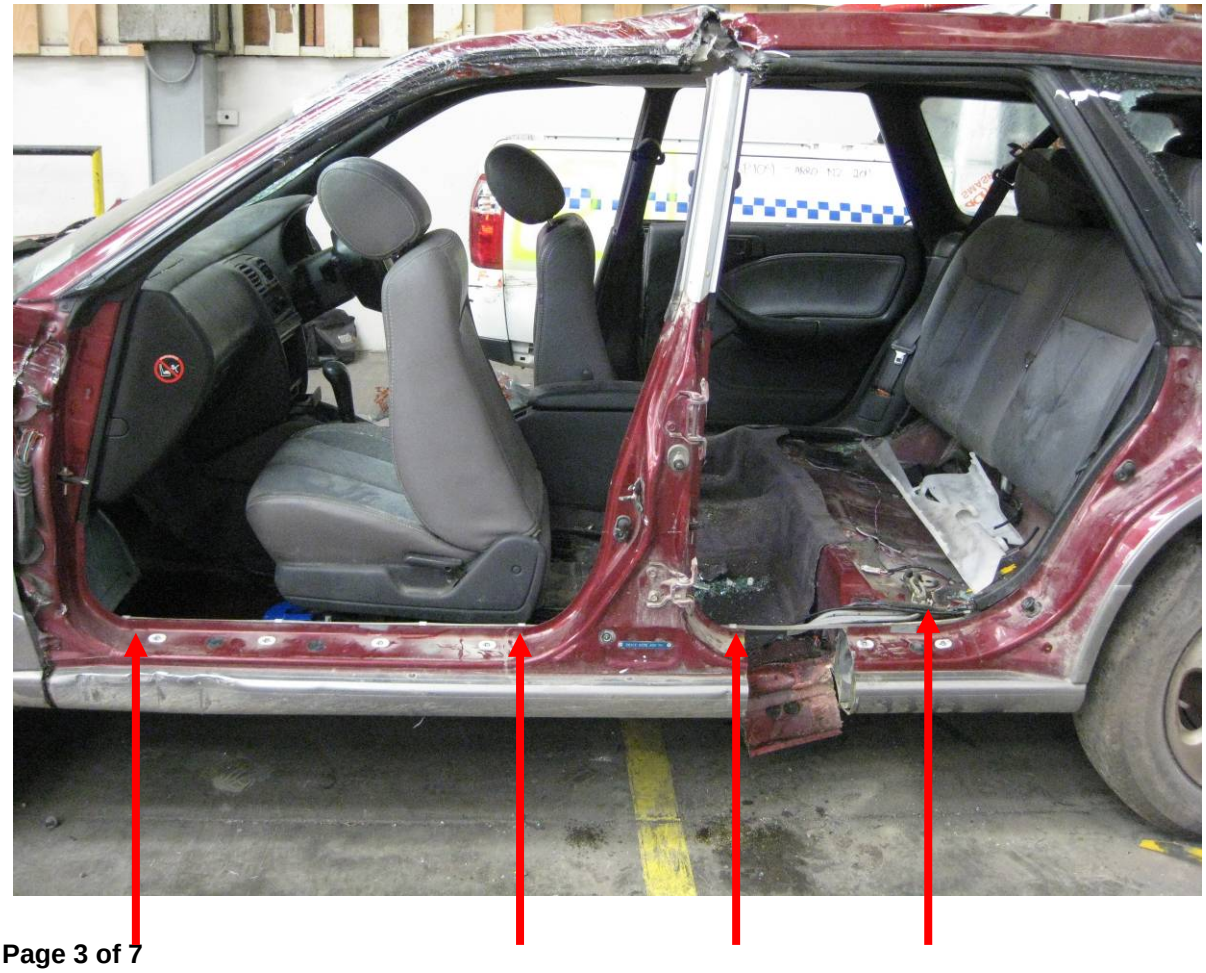
The routing of these fuel lines near the B pillar and close to the sill presented a major hazard for rescuers at the scene as fuel was released into the cabin.

Fuel lines

Later investigations on an earlier Subaru Liberty (1996) resulted in the following.

Section of sill removed, looking forward towards the B pillar

Fuel lines continue up into engine compartment along inner door post (lower A pillar). Note SRS wiring.



Honda Civic

During preparations for the 2011 WRC and ARC held in Wellington, New Zealand, a Honda Civic was identified during preparations as having fuel lines running in a similar location to the Subaru Liberty. The vehicle had been prepared with a simulated side impact collision behind the B pillar.

Closer inspection revealed the simulated side impact had exposed the fuel lines running along the inner sill, just behind the B pillar; similar location to the Subaru.

Occurrence during Rescue Challenge

During the 2011 WRC and ARC held in Wellington, New Zealand, a vehicle used in one the scenarios was found to have had the fuel lines cut through as part of team's run in that event. The technique of cutting through the sill each side of the B pillar and then folding the B pillar down is a viable option, however the routing of the fuel lines limited its success, and exposed the casualty, team members and CMT to a fuel leak. Here is a key example that if this can occur during a controlled training event; we all must do more to limit this from happening again.

REVIEW

Agencies should review vehicle construction information contained within training and skills maintenance programs to ensure all personnel are made aware of the various construction variations, and how these may affect extrication options.

Agencies should review procedures used by rescuers to ensure that ‘expose before you cut’ or similar concepts are embedded into operations so that all hazards at the point of operations can be identified and managed.

If rescuers do find further examples of the routing of fuel lines near locations that may affect extrication techniques, please provide feedback to the ARRO through the website, or to the author.

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Specific information for this Technical Bulletin gathered from research conducted in Queensland and New Zealand by ARRO members.