

The Gull Wing

Please read this first

In this demo we have used a reciprocating saw to complete the cuts on an old car with little strength in the sill. In new vehicles especially with high Euro NCAP ratings you may not be able to cut the sill with a reciprocating saw, so the use of hydraulics will be needed.

The idea of this method is to hopefully avoid the UHS metal in the B-post base area, so effectively there should not be too many issues, as with all techniques assess what you are wanting to achieve, use the right tool for the job and feel what the tool is doing, this will give you an idea of the toughness of the structure and will enable you to change tools to use a more effective tool and method instead.

This is a technique predominantly called the Gull wing in the UK, there are varying names for this method across the globe.

With the increase of HSLA (High strength low alloy) metals being used more on new vehicles we have to look at alternative methods to displace the B-post due to its size, width and strength. The Gull Wing method is primarily used on a vehicle resting on its roof / inverted, it can also be just as effective used on a vehicle resting on its wheels.

This method will not always be possible due to the size and strength of the B-post and sill, so we will need to evaluate the situation before we commit to this plan.

Furthermore if we start to lift the post and door and find that it's fairly resistant we will need to make sure that any unnecessary force does not cause unwanted movement of the vehicle, if this happens we may need to look at using another technique or modifying our plan (think ahead)

This technique can be carried out with either the use of dedicated cutters, combi tools or reciprocating saws or the use of multiple tools together.



Here you can see we have completed all the cuts with a reciprocating saw as the sill was very weak with the age of the vehicle.



What is also important to look for is additional strengthening in the Sill / rocker channel, as sometimes in newer vehicles we will find a circular strengthening tube that we may not be able to cut through with old cutters or reciprocating saws this will only be visible once you have cut through the outer skin.

What is important to remember is that the cuts need to go through the Sill / rocker channel far enough so that it overcomes the sill strength, ideally all the way to make sure we cut through any structural support in the Sill and floor pan. This will make folding the post a lot easier. Sometimes this can be hampered when using hydraulics if the blades are not large enough to make a deep cut, so several attempts will need to be made to get sufficient depth.

Here we can see the cut in the top of the B-post. A (V) or pie cut would have been a better option to remove the top piece of the post that sticks up. Always remember to check any area we cut for SRS





You can see in the pictures the effectiveness of this technique when it works!! As with every extrication method they do not always work to plan or go as smoothly as we would like.

Once the post and door have been flapped they will need securing with a GP line or ratchet system.



Again here you can see the space we have created for casualty access and removal,

At the time these photo's were taken all stability had been removed.

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