

Convertible Roof Removal During Extrication



Roof removal during extrication is a standard technique practiced on a regular basis, and in day to day operations doesn't take long to complete.

A type of roof that is not often talked about is the convertible. Not a situation that gets presented on a regular basis. However when it does arise, are we comfortable with the techniques we can use to remove a convertible roof?

Questions have been raised about how we can go about this evolution.

There are a various techniques we can use, such as cutting through the posts as per a standard roof, cutting through the hinge joints, ramming and spreading at strategic locations, lowering the roof by the use of the vehicles power systems and finally lowering the roof by manual operation.

We are going to look at each of these techniques.

Cutting through the posts.

This technique is one that we are comfortable with as it is carried out on a regular basis, this would potentially lead us to using it on a convertible roof. It is a technique that works and can not be ignored.

The problems that we are likely to come across is the high strength metals used in the A and C posts, these will be extremely strong to prevent collapse during a rollover and such, this is where our hydraulics my struggle to cut these materials, good tool technique and awareness of its use will give you early warning that you are cutting a UHSS (ultra high strength steel) post. That will be your warning sign to think about progressing your plan and using another technique.

Cutting Hinge joints

Cutting the hinge joints will be an alternative to cutting the A and C posts. By exposing the hinges on a soft top or diagonal cutting on a hard top will avoid the UHSS in the posts. This can be an effective work around and fairly easy to complete with sound tool and vehicle knowledge.



Ramming and spreading

Ramming and spreading is a very effective technique for hardtops and standard roof removal where we are faced with UHSS that we can not cut.

For a convertible it works very well to break the hinge joints front and rear allowing complete roof removal, as with all techniques we must make sure we expose all the areas that we will be ramming, purchase points and push points.

Here we can see the various methods of roof removal using spreaders and rams to break the roof from the fixings.

A very effective technique if practiced regularly.



Photos from of Jörg Heck of Moditech



Lowering the roof automatically

Incidents can be very stressful places with a lot going on, this can lead to the simple things being missed.

One of the many reasons we do not disconnect the battery immediately is for this reason, we should get into the habit of unbolting the connectors/terminals and not cut them, this will allow for the re-connection of the battery should power be needed.

If the roof is fairly intact and the roof joints have not been damaged and roof removal is required for casualty care, we can use the vehicles electrical systems to lower the roof. Once this is completed we can then deal with the battery. A very simple technique and very useful when it presents itself. Don't forget to ask the driver or passengers if viable to get information on using these systems.

Manual roof operation

In a situation where we have lost power to the vehicle or inadvertently cut the battery cables, so can no longer offer power to the roof system the thought of manually lowering the roof has been raised.

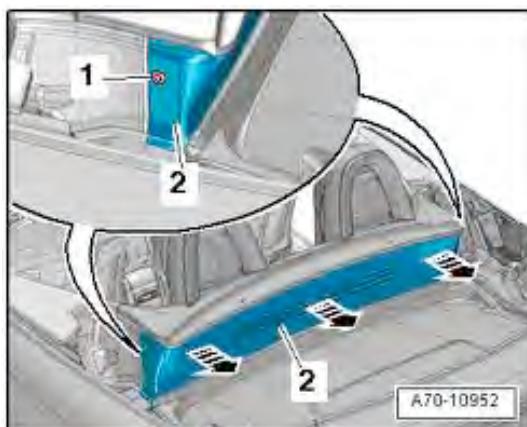
Such a simple idea that would be effective in such a situation. However lowering the roof manually is not an easy job, there are a lot of procedures and specific tools needed to manually lower a convertible roof.

The time that this would take is therefore not conducive to extrication time frames. It is not a simple job to complete and every vehicle is different.

A very effective technique that unfortunately does not fit into our extrication tool kit at the present time.

With a crash damaged vehicle a lot of the points that would need to be accessed to allow this technique would not be accessible.

One thing to be aware of for any convertible roof removal technique is the Hydraulic fluid pipes, these can run through the C posts and if ruptured under pressure will create a high pressure hydraulic fluid jet, possible causing injury or contamination to personnel and the scene. **Make sure you expose any area you are going to cut, spread or ram.**



Convertible roof removal is a technique that we do not see that often, when we do we need to know which is the correct technique to use and be able to carry it out effectively.

Think about using the vehicles own power to assist you, don't be too hasty disconnecting the battery as it may be needed at a later stage of the rescue.

Expose all the areas you will be cutting, spreading or ramming to look for hydraulic fluid pipes and SRS systems.

Try to avoid the UHSS and cut the roof hinges where possible. If your tool is struggling to cut the posts, progress your plan and go to your next plan and so on.

If you have any experiences or useful information please send it into;

rtc.rescue@gmail.com

rtc rescue