

## Shifting Film Tension and Risk Areas -1

This relatively new, but clever technique can be applied whenever cast film is stretched, e.g. carwrapping or signing.

Not only does this new technique prevent the film from coming off out of risk-areas\*, it has so much more advantages.



When signing or wrapping a car, you will always have to deal with sharp edges and deep grooves, where normally the film would thin out and could discolorize or deviate from the original. This simply can be solved by shifting and spreading the film tension.

### FILM TENSION AND RISK AREAS

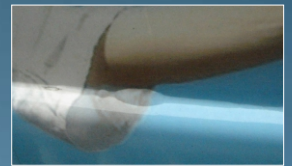
**Illustration 1.2 RISK AREAS IN DIFFERENT GROOVES**

● The red circles represent the groove's most critical risk areas, where the film usually is pushed in. These are pre-eminently the places where the film will lift.

**Illustration 1.3 WRONG FILM APPLICATION AND FILM STRETCHING**

..... → = Is often applied and pushed in first. (A) Here the film will stretch the least.  
 - - - - - → = After that, using heat, the film is pushed in completely (B)  
 ■ = The areas with the most film tension (and film stress) are marked with yellow. Here the film is stretched the most.

INSTALLATION



MORE INFORMATION AND GUIDELINES YOU CAN FIND HERE:

[www.sott-products.com](http://www.sott-products.com)

## Shifting Film Tension and Risk Areas -2

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### WHY SHIFTING TENSION?

There are several reasons. The most important one is the possibility that the film will come off out of a deep groove, when we stretch it out during application. Moreover the film could be stretched in such a way, that the color or texture at those places will visibly change. Which is just plain ugly.



### HOW DOES IT WORK?

Heat the film on a place where it can lie flat and without tension (A). That is where the film can be stretched, and not in the groove. Now push the film evenly into the groove (B). When necessary, reheat the film on the areas, thanks to you, until the groove is wrapped with our film. Now squeegee it quickly and firmly (A), until the groove is wrapped with our film. Now squeegee it quickly and firmly.

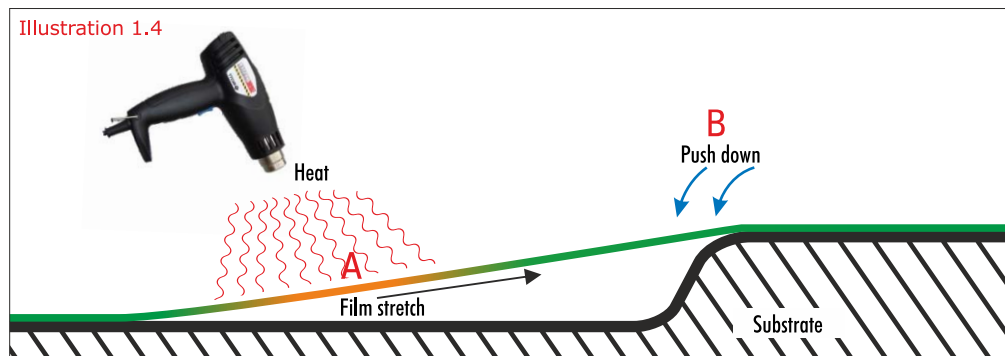
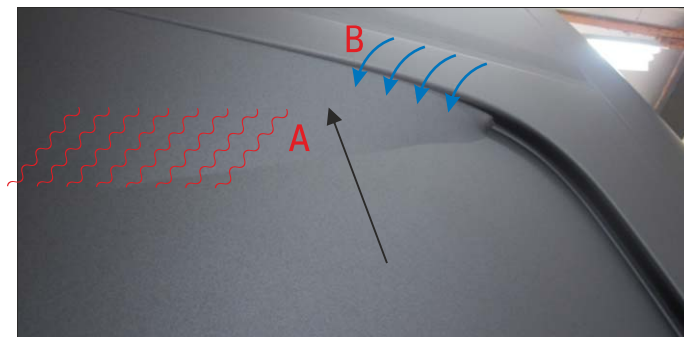


Illustration 1.5



#### \* RISK AREAS

Risk areas are those places on a surface which are very riskful for film. Think about the channels, grooves and swage lines. Film will easy come out of these channels after a while and turns into a bubble.

## Shifting Film Tension and Risk Areas -3

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### APPLYING FILM IN DIFFERENT KINDS OF GROOVES WITH THE FILM TENSION IN THE RIGHT AREA

Illustration 1.6

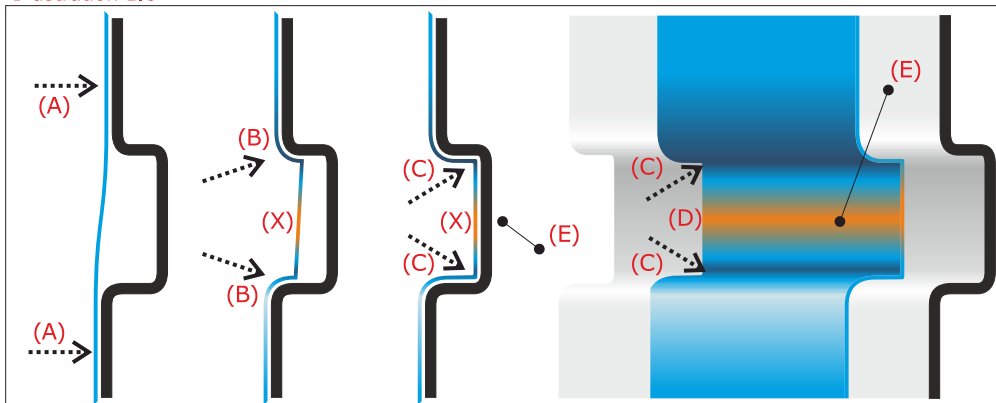


Illustration 1.7

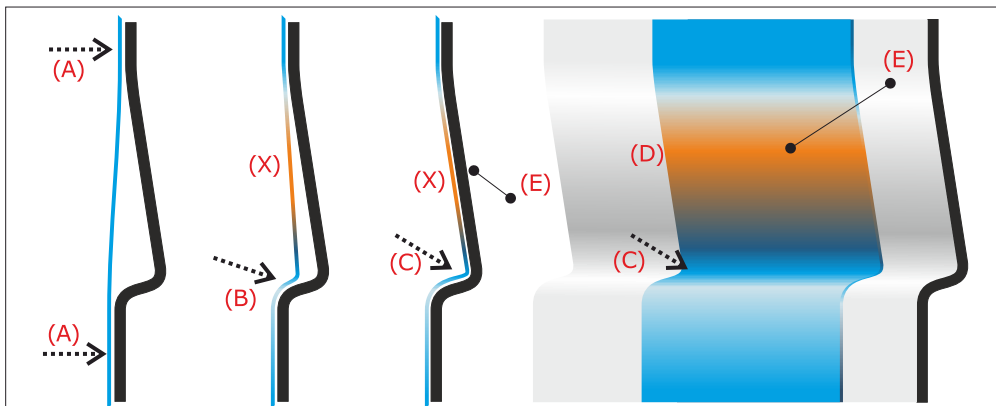
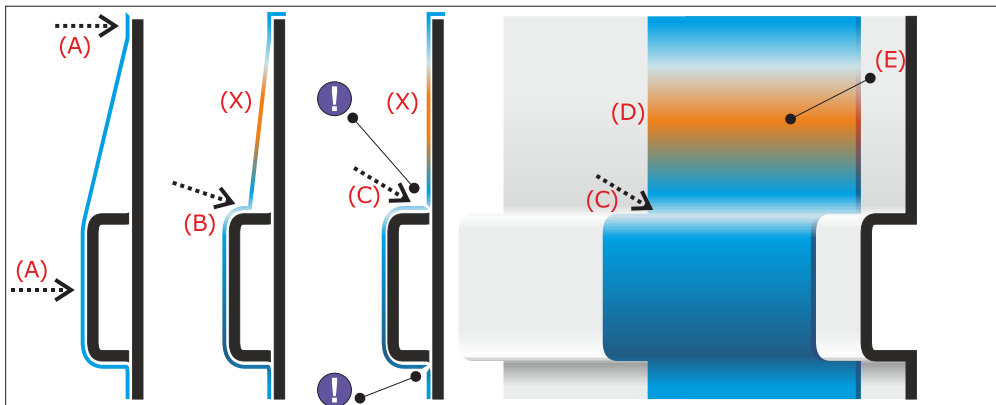


Illustration 1.8



#### HOW IT'S DONE

(A) The film is applied on the flat surface first.

(B) Then you will apply the film at the edges inwards into the groove

Doing this gradually, means that you will stretch the film in a different area (X). This is necessary, because the film will fully adhere to the surface on this area (D).

When the groove is too deep, and the film is reluctant to stretch into it, you can use short heat bursts. Be sure to only heat the area that may stretch and where the tension should be (X).

You will continue applying the film into the groove until you can go no further (C).

When you finished stretching, you will apply the film firmly starting at the edges, continuing inwards where the tension is (D).

As you can see on the graphics, we have shifted the tension to a flat area, rather than having it in the corners of the groove (E).

! Concerning mounted parts: it is advised to cut the film at the edges, and since we have shifted the tension to another area, there is a minor chance of film coming off (C).

#### DO NOT FORGET! Finishing is important!

To keep the film in its new shape, the tension needs to be removed. Using a technology we call 'heat-setting' you can achieve this. In short, this means that you are re-casting the film in its new shape.