

VWvortex Forums > Eos > How to solve (or prevent) Eos Roof leaks

As many of you know, I don't own an Eos. This makes it difficult to provide practical advice based on my own experience with the car, as I do in the Phaeton forum. The staff at my VW dealership (Volkswagen Richmond Hill) follow activities in the forum, and when a customer called to say that his Eos had a water leak, the service manager at my dealer invited me to come up and watch the problem-solving process.

The Eos with the water leak was the first Eos my dealer sold. It was delivered to the customer only a few days after the Eos went on sale here in North America. It has a fairly low VIN (in the 7,000's), which suggests that it was probably built sometime in the summer of 2006. This is noteworthy, not because there is anything unique about a low VIN, but because the car is now 8 or 9 months old. This is certainly more than enough time for the seals on the car to dry out.

The owner of the Eos dropped it off at the dealership, and the first thing the technicians did was to have a look at the windows and roof to make sure that they were all operating smoothly and properly, and that all the measurements (especially the reference lines at the top of the window glass) were within specifications. No problems were found. The next step in the troubleshooting process was to carry out a 'baseline water test' to determine the extent of the leakage. The dealer principal sat in the driver seat, the windows were closed, and the car was flooded with large volumes of low-pressure water from a rather large hose in the wash bay. After about 30 seconds, he started honking the horn, and when the water was turned off, a very wet dealer principal emerged from the car. No doubt about it, the car leaked.

The leak manifested itself at the front left corner of the windshield, where the roof touches the top of the windshield. None of us knew where the water was getting in, but it was clear that the water was 'getting out'- in other words, dripping into the cabin - at one specific location.

We all put our heads together to try and determine what the facts were. They were as follows:

- 1)** The car was almost 9 months old, even though it was only delivered to the customer 5 months ago.
- 2)** No-one had ever lubricated the rubber seals on the car.
- 3)** The windows and roof all appeared to work properly, except for some deformation (pinching) of the seals on either side of the sunroof. This deformation appeared to be caused by the sunroof panel binding on the roof seal, and pulling part of the seal downwards.
- 4)** All the technicians had been to Eos training.
- 5)** All of us had read all the technical bulletins (TB's) issued for the Eos.
- 6)** None of us had ever read the owner manual.
- 7)** No-one wanted to start any kind of dis-assembly. We wanted to try the 'least invasive' solutions first.

So, after we had all read the '3.2' section of the Owner Manual (this is the "Tips and Advice" section, and there is some really good information in there), and after some discussion, it was decided that since the owner manual suggests on page 25 of section 3.2 that the roof seals be lubricated with VW lubricant part number G 052 172 A1, maybe it would be a good idea to start by doing exactly that.

We ordered three bottles of lubricant. None of us knew how much would be needed, but we knew that the bottles were pretty small. Because the dealer principal was still wet from the baseline water test, he had no disagreement at all with the technician's decision to order three bottles of lubricant. Because the lubricant would not arrive until the next day, we asked the PDI person to do a thorough detail of the car, to ensure that there was no dirt or other external influences on the car.

The next day, the lubricant arrived. We all took turns applying it – the technicians, myself, the PDI person, and some of the sales staff. We made some interesting discoveries:

- 1)** An Eos has two different types of seals on it. Roof seals and the seals that windows touch are made of a different material than door seals or trunk lid seals.
- 2)** These 'different' seals have sort of a rough texture, kind of like a cat's tongue.
- 3)** If the seals are dry (not lubricated), they will be quite hard, not pliable, and will not tightly conform to the window edge when the window is rolled up.
- 4)** If the seals are dry, they have a dull finish, and sort of a 'white' luster to them.
- 5)** It is easiest to lubricate the seals on either side of the sunroof if the sunroof is open.
- 6)** It is easiest to lubricate the seal that goes across the middle rear of the roof if the roof is stopped partway through the retraction process, before the front part of the roof begins to lift off the windshield.
- 7)** It is easiest to lubricate the windshield seal if the roof is fully retracted.
- 8)** To lubricate seals at the top of the windows, put the lubricant on your finger, then rub it in.
- 9)** If a seal looks deformed, rub lots of lubricant on it, and keep rubbing the seal until it 'rehydrates'.
- 10)** If you leave the roof open for an hour after doing the lubrication, the seals seem to suck up any excess lubricant that might be sitting on them.

After we finished lubricating all the seals, we conducted another water test. The results were "almost perfect". There were no leaks from the roof, but there was a small leak – just a few drops – from the area beside the exterior rear view mirror on the driver side. Investigation revealed that we had lubricated the window seals there with the door closed, hence, we did not fully lubricate the seal – we missed the part that hides behind the exterior rear view mirror. After applying lubricant to this area, we carried out the water test again, and the result was perfection – after 15 minutes of hosing the car, not a single drop of water was found inside.

The PDI person dried off the car, and we noticed that there were greasy spots on the paint where we had unintentionally deposited excess lubricant. The excess lubricant can be easily removed from the painted surfaces with a paper towel and some windshield washer fluid – no fancy solvents are needed. Because the paint is not porous, the lubricant can't sink into it.

Below are a whole bunch of photos that I took – hopefully this will explain the procedure better. Many thanks to all the service department staff at my VW dealer for their help making this post.

Michael



Care of rubber seals

If rubber seals are well maintained, they will resist freezing.

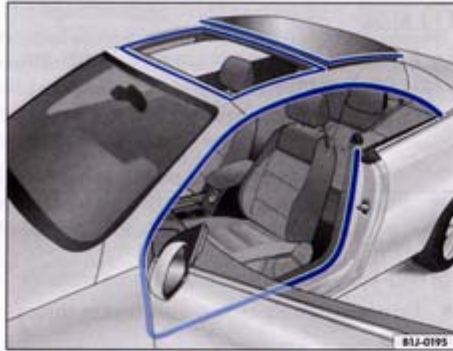





Fig. 2 Caring for CSC roof seals


We recommend cleaning and treating the CSC roof seals after every car wash.

Caring for the CSC roof seals

- Briefly press the  button in the center console to tilt open the power sunroof ⇒ booklet 3.1 "Controls and Equipment", chapter "Power sunroof".
- Briefly press the  button once more, until the sliding sunroof is fully open.
- Hold down the  lever in the center console to *start* opening the CSC roof, but *only* until the sunroof moves to the rear as far open as possible to expose the seals ⇒ booklet 3.1 "Controls and Equipment", chapter "CSC roof." **The roof frame must not separate from the top of the windshield frame. The rear window element must not lift up!**
- Use a soft, lint-free cloth and water to remove dust and dirt from the rubber seals, as shown ⇒ page 25, fig. 2.
- If necessary, also remove dust and dirt from the painted sealing surfaces (inside the door, for example).

- Dry the rubber seals thoroughly.
- We recommend treating the dry rubber seals with a soft, fine-pored sponge and special lubricant (liquid) G 052 172 A1 ⇒ .

Caring the rubber seals on the rear lid

- Remove dust and dirt from the rubber seals using a soft, lint-free cloth and water.
- If necessary, also remove dust and dirt from the painted sealing surfaces (inside the rear lid, for example).
- Dry the rubber seals thoroughly.
- We recommend treating the dry rubber seals with a soft, fine-pored sponge and special lubricant (liquid) G 052 172 A1 ⇒ .

The rubber seals of for the doors, windows, etc., will stay softer, seal better and last longer if you treat them with a suitable rubber-care product. For more information, check with your authorized Volkswagen dealer or a qualified workshop.

By caring for the rubber, you will avoid premature wear and tear of the seals and prevent leaks. Doors can be opened more easily. Well-maintained rubber seals will resist freezing during the winter.

Note

- The wrong car-care products can damage the seals. Check with your authorized Volkswagen dealer or a qualified workshop for information about suitable products.
- **Do not** use any rubber cleaning or treatment products containing silicone, or any products containing acids, such as industrial dust removers or insect repellents. ◀

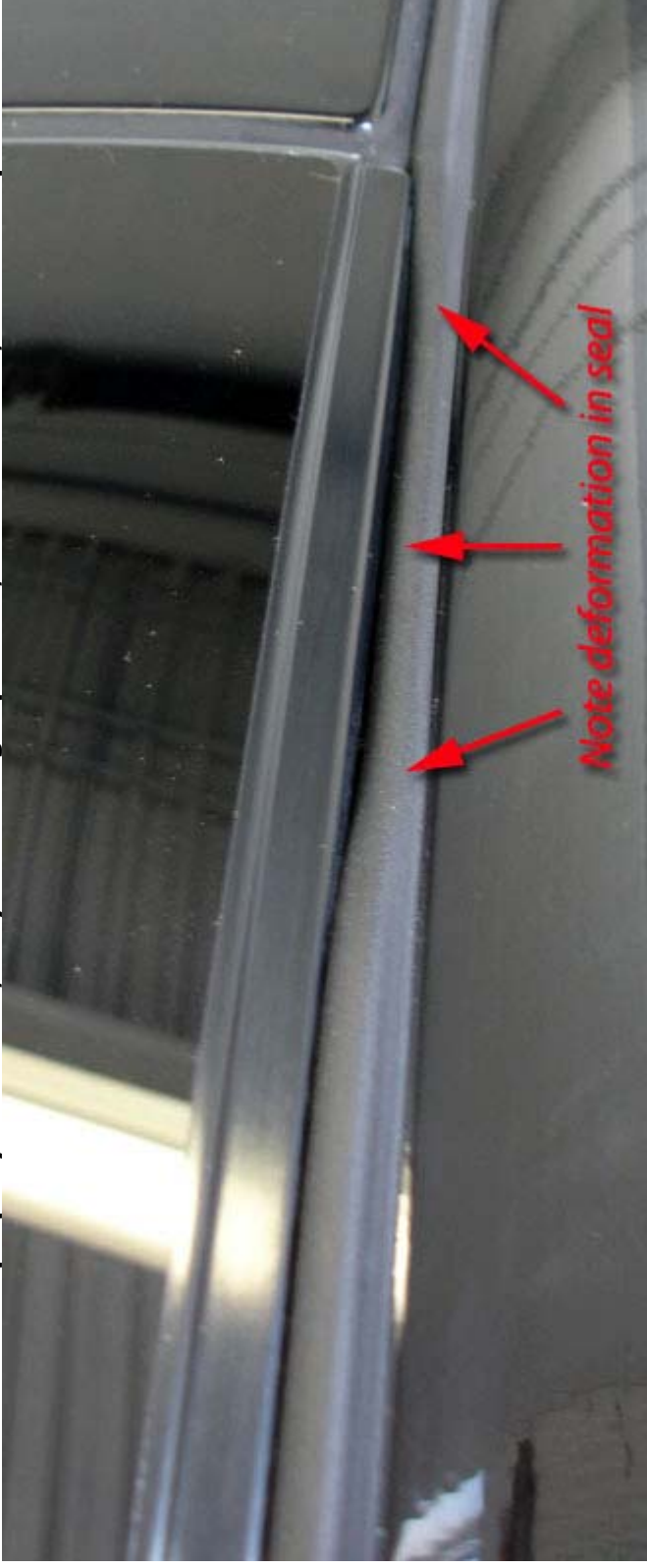
What it looked like before work began

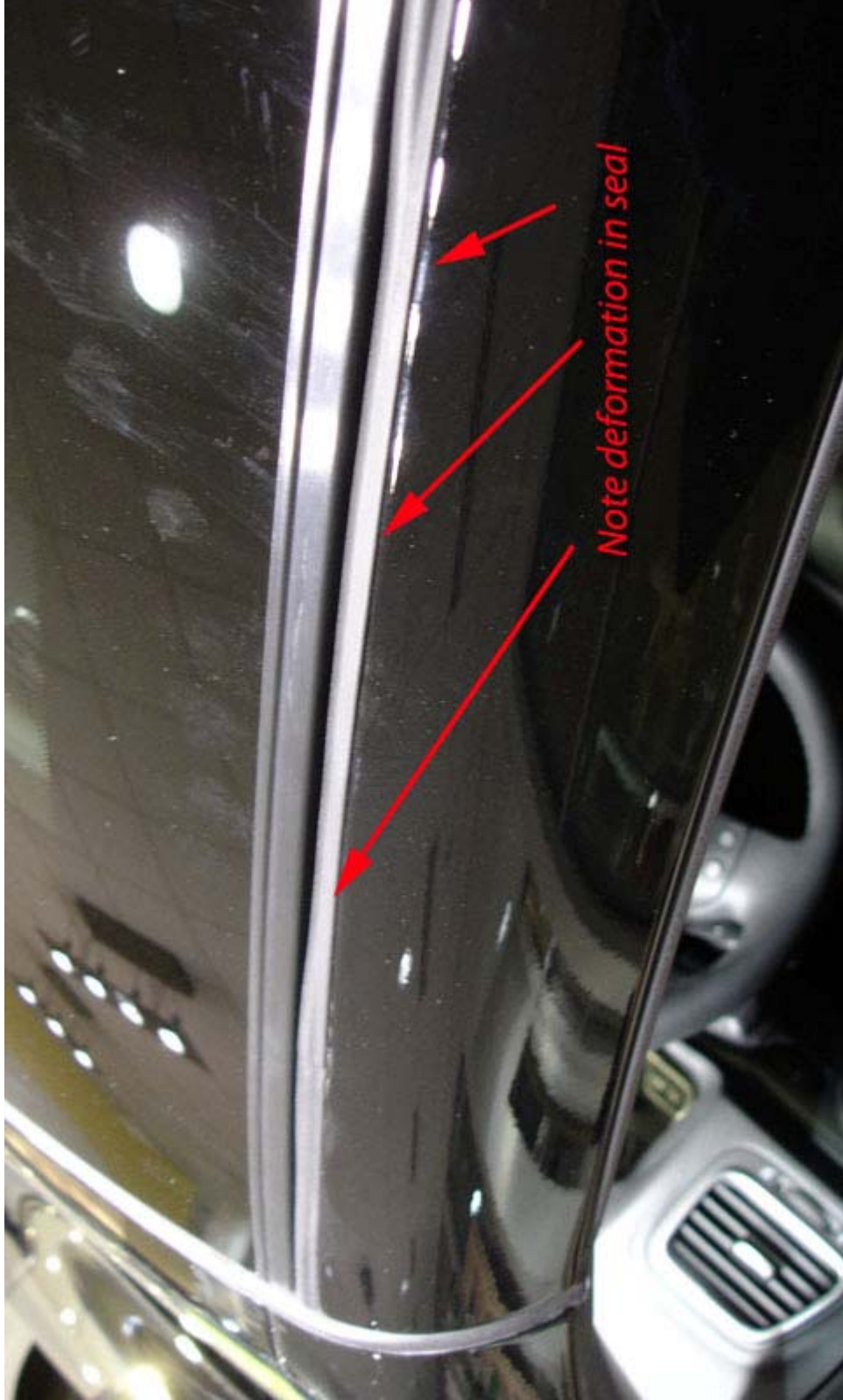


Seal Characteristics:

- 1) Dry, rough to the touch**
- 2) White-looking surface**
- 3) Not soft and pliable**

When seals are not properly lubricated, they bind and get pinched, and as a result, do not keep water out.





Note deformation in seal

Visual characteristics of a seal that needs lubrication



This is the stuff to use, simply because this is what the owner manual says we should use.



The alignment rack is a handy place to use to do the work.



Apply the lubricant sparingly, right out of the bottle (clip the top of the spout).





A little bit goes a long way!



Apply using
VW Special Tool
"F1Ng ΣR"



Apply a single thin line, then rub it in everywhere



Massage those deformed seals back to the original smooth, straight shape

With the roof in this position, you can get the "butt ends" of the window seals, as well as the rear seal that runs horizontally across the roof.

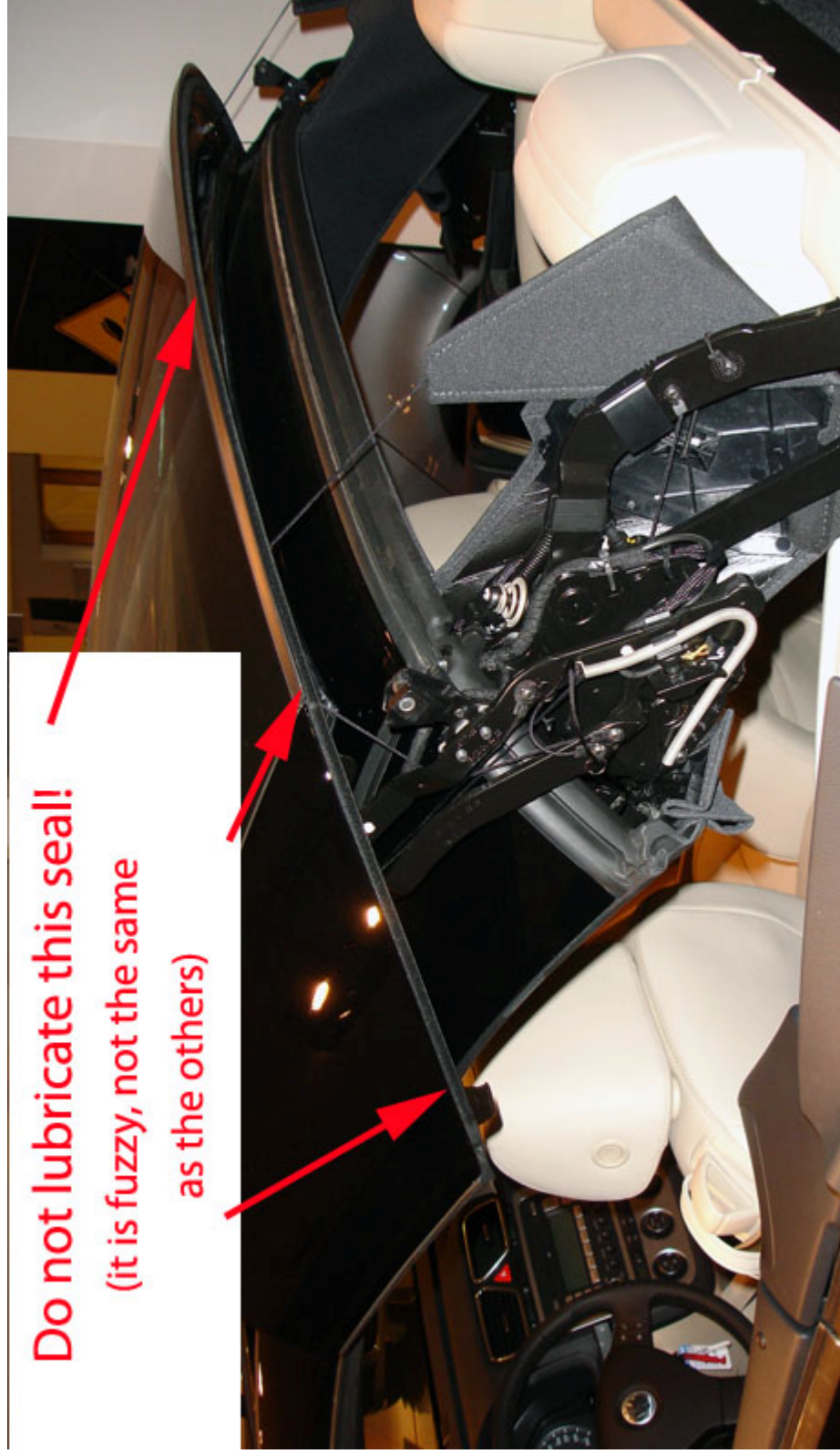
Don't let the roof lift up from the windshield - otherwise, it will come back down on you!



Don't forget this seal.



...but, DO NOT LUBRICATE the fuzzy seal that touches the trunk lid.
This seal is obviously different from the others - it is fuzzy, not rubber.



Do not lubricate this seal!

**(it is fuzzy, not the same
as the others)**



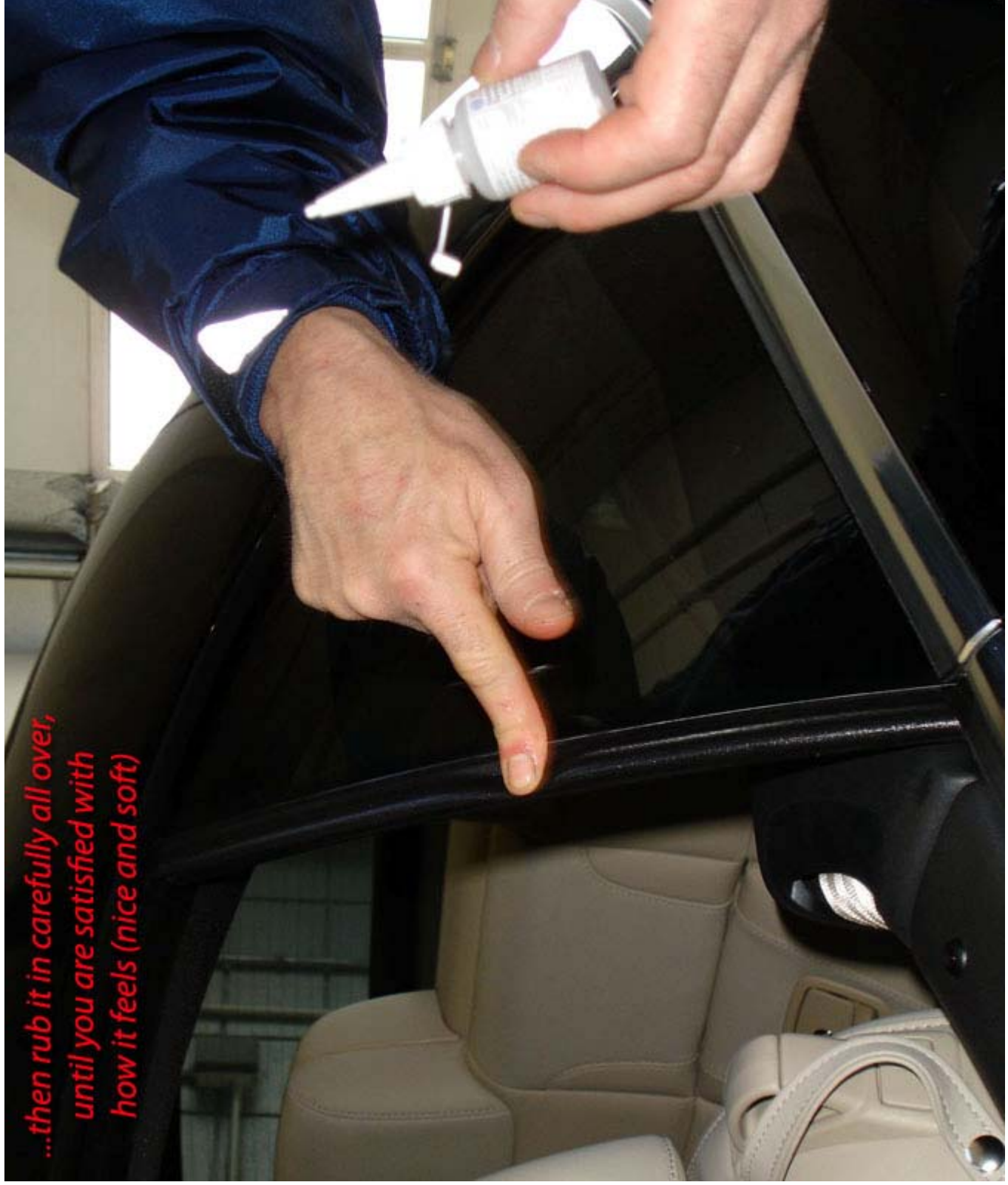
*With the rear lid up,
you can also get access here*



An easy way to get access to sunroof seals



Apply one thin line only...

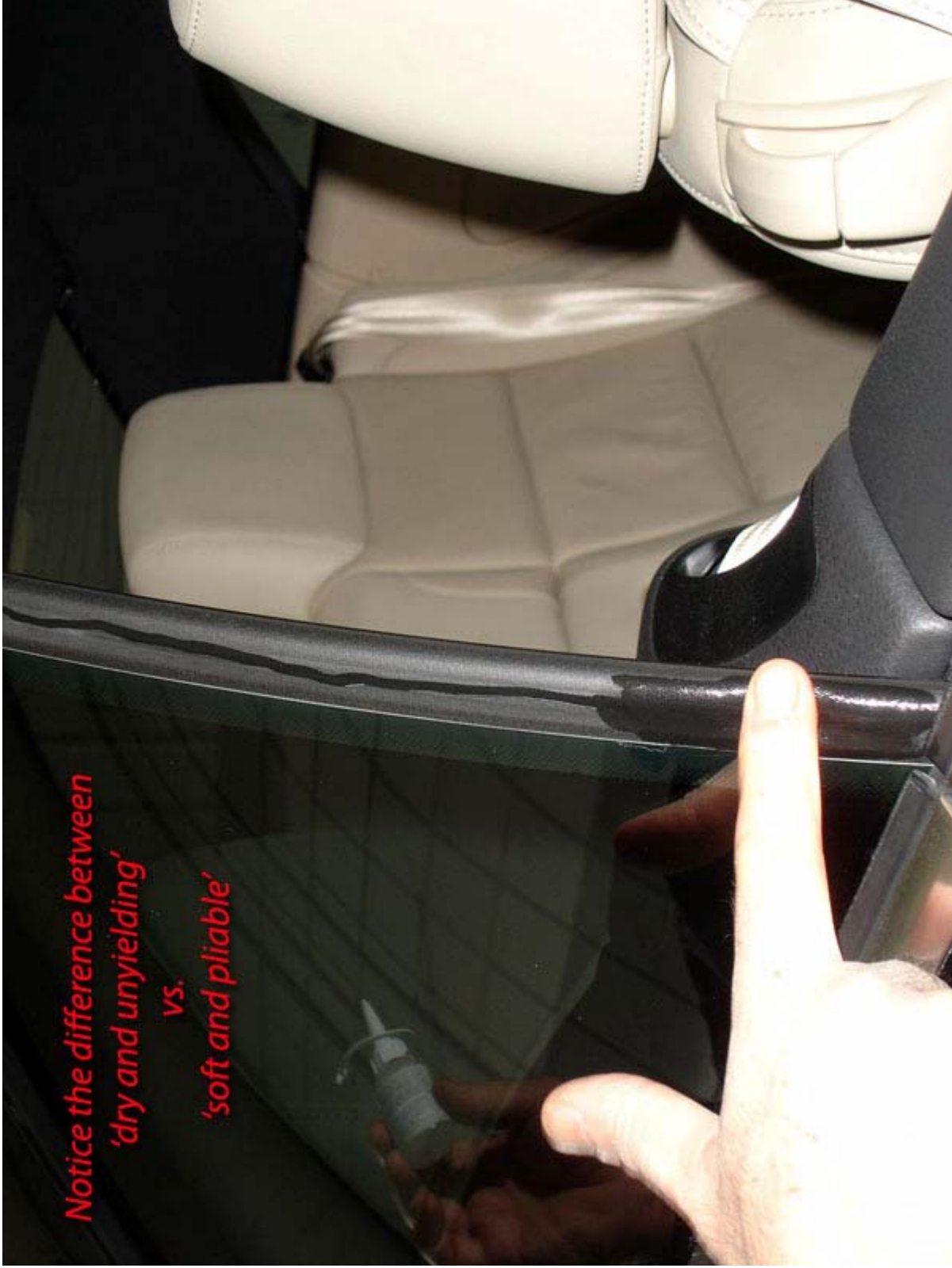


*...then rub it in carefully all over,
until you are satisfied with
how it feels (nice and soft)*

Notice the difference between
'dry and unyielding'

vs.

'soft and pliable'



*To solve problems like this,
it is easiest to first open the sunroof,
then you get full access to the seal.*



*Compare the look of the seal here
to the look of the same seal
in the first photo.*

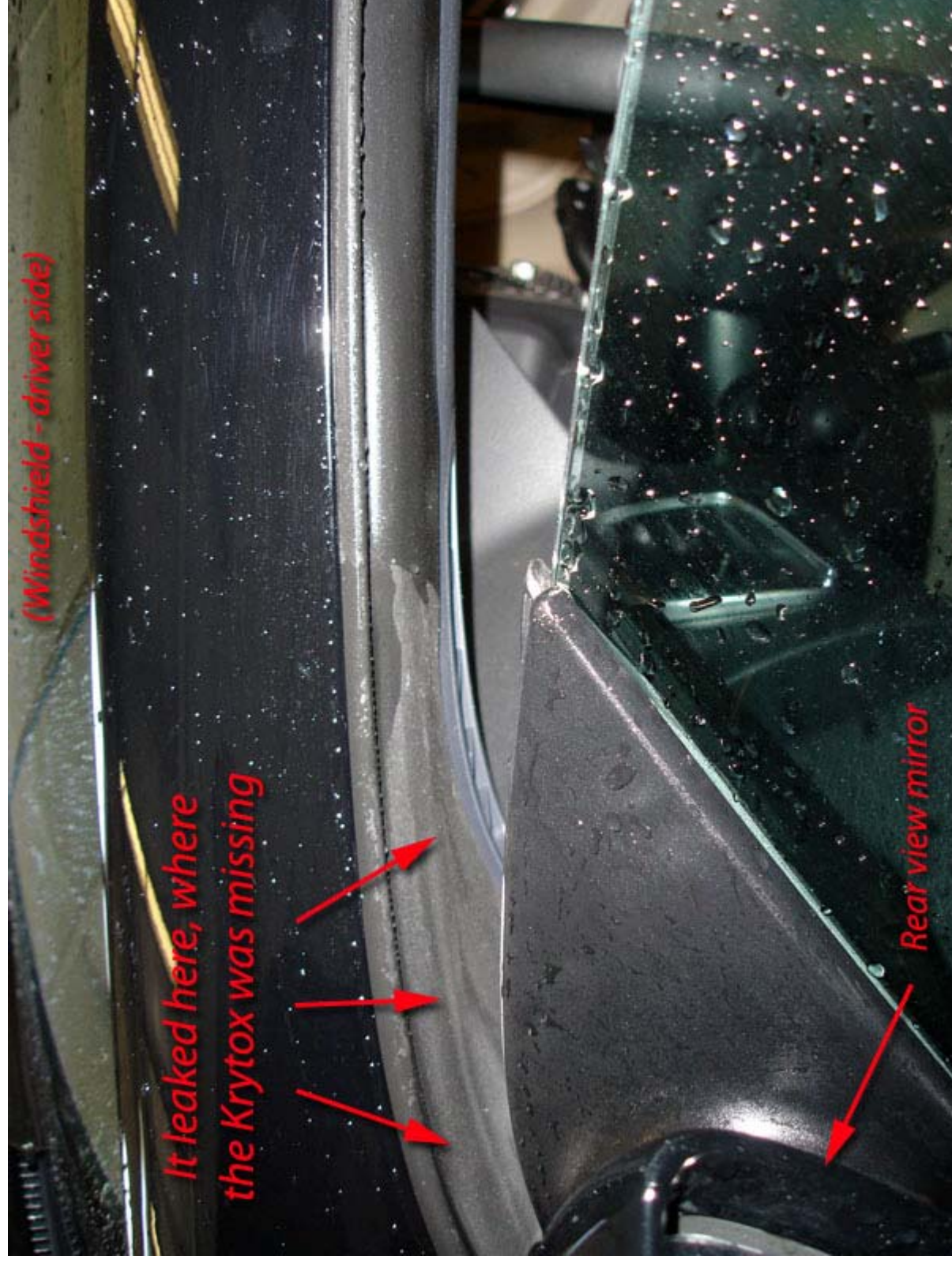


Flood the car with water, hit all the seals directly, but don't use a nozzle on the end of the hose.
Let's be realistic: You want to imitate a heavy rainstorm, not Hurricane Katrina.



**Test it with large volumes of water,
not with high pressure water.**

Don't forget the bits at the very front of the doors that are hidden by the rear view mirrors.



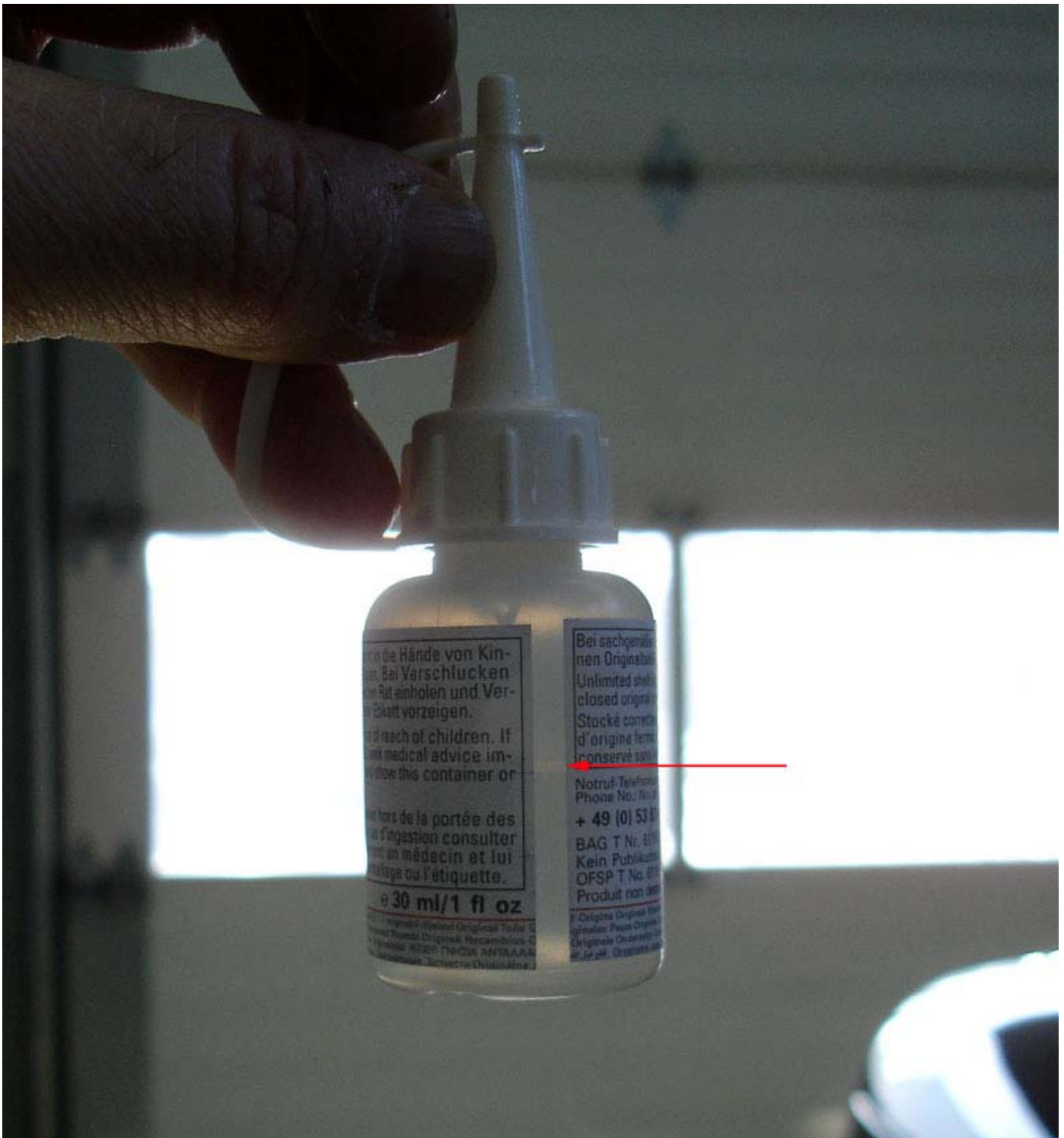
Just a post-script:

After this was all done, the staff at my dealership decided that they were going to modify the way that they carried out the PDI (Pre-delivery inspection) on new Eos.

Because the Eos is a seasonal vehicle, it is not uncommon for the PDI to be carried out several months before the vehicle is actually delivered to the customer. By example, there is a really nice Eos in the showroom of my VW dealer right now (the one I am salivating over), and it has been there for a few months. The seals could dry out if the lubricant is applied at the time of PDI, especially if the car is not purchased quickly after the PDI.

So, the new plan at my VW dealer is as follows: Roof seals will be lubricated on the day of delivery to the customer. We found out that it takes about half a bottle of lubricant to do the entire car, so, the plan is that the techs will lubricate the seals on delivery day, then the salesperson will give the remaining half-bottle of lubricant to the customer as a gift, and at the same time, explain both how to apply it, and the importance of using the lubricant as explained in the owner manual.

This is what was leftover after everything was lubricated



Some additional elaboration...

**This is the easiest way (best roof position)
to get access to almost all the seals**



**This is the best roof position to use
to correct deformed sunroof side seals**



Rub a tiny, tiny bit of lubricant on the vertical sides of the sunroof (here). This prevents side seal deformation.





Don't forget to lubricate these two seals, which are hidden when the door is closed.



Be sure to lubricate
the 'butt ends' of
all the seals.

It helps promote lubricant absorption if you leave the roof down for 1 hour after applying the lubricant.

