Staying Dry

With the arrival of winter I know I am going to hear cries of complaint from passengers in Tractions that by the time we reach our destination they are wet. The driver is just as wet, but drivers will never complain [in public at least] that anything could possibly be amiss with their beloved. When I say beloved, I am of course referring to the Traction, not to their often long-suffering partner.

So, here are two recent articles from the Traction Owners Club, in the UK. The first is about keeping water from entering the cabin via the scuttle vent and the second about keeping your picnic [carefully packed into the boot] dry. The images associated with the article by Karel Beukema toe Water remain the copyright of the author.

Below: The first failed attempt to solve the leaking problem.

Shut your trap is a colloquial term for telling someone to be quiet. For the Traction owner this can only relate to the fresh air vent just below the windscreen. Older cars have got two of them.

These air vents have been and will continue to be the source of trouble and frustration. Either they will not open when it is hot because they have been sealed off, or they will not close when necessary, causing considerable leakage.

I can testify for both since one of my cars has a sealed air vent and gets really hot inside in summer time, the other has a vent that will open and close, but leaks as a consequence. Used to leak, I should say, because with a few tricks I did manage to get it to close and keep the water out.

Desperate

I tried just about everything: gluing the rubber seal into the rectangular slot, gluing the seal to the inside of the cover ~ alas without success; sooner rather than later the seal would start to let water through and once there was water with whatever cement or kit I used, the rubber would eventually come loose.

The frustration becomes even bigger when you think the vent is water-tight and do not find out until driving into a squall on the motorway that it still leaks ~ despite all your efforts to make it close properly.

At motorway speeds or with a strong headwind the pressure of the air ~ which increases by the square of the speed ~ becomes such that water will be forced in through even the smallest slot. Using a garden hose to test the water-tightness will not suffice. I made my neighbour believe I had really gone over the top with my old-timer hobby by setting off on test-drives in pouring rain. Make sure the test-drive in the rain also includes a stretch of motorway or a similar road where the speed can be increased to 100kph or more to be absolutely sure.

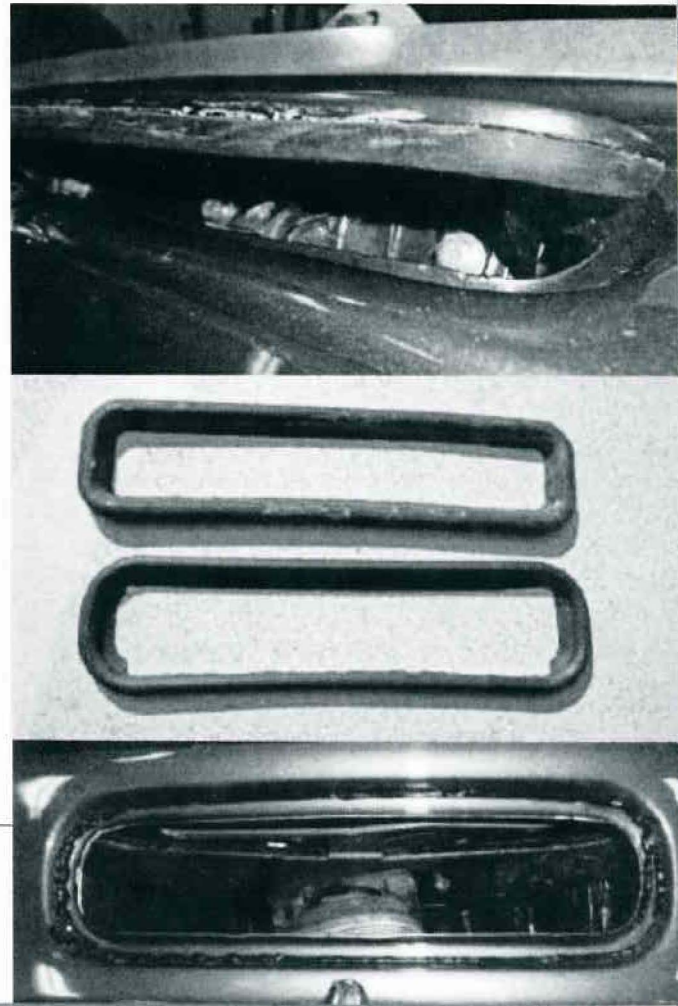
Rubbers and Rubbers

There appear to be different sizes of rubber seals. The one that came [new] with my car ~ the lower one in the picture ~ seemed to have a better fit into the slot, so logically I started off by using that. Wrong thinking! The seal would slide deeper into the slot, so the inside of the vent cover would not sit snugly against the rubber seal when it was closed. Eventually the larger seal ~ which I must admit did have a Citroën logo on it ~ turned out to be the better one.

It really needs to be shaped and pushed inside the slot but this is exactly what causes the cover to close off properly. With the larger seal, the sharp edge of the cover is pushed into the soft rubber when the vent is closed. This is exactly what is needed to ensure water-tightness.

What Cement or Kit to use?

So the first challenge is to securely fix the seal into the slot of the car body. Contact glue [like



Right top to bottom
Failed attempt number 2.
Two different rubber seals.
Sikaflex 291 applied to the opening.

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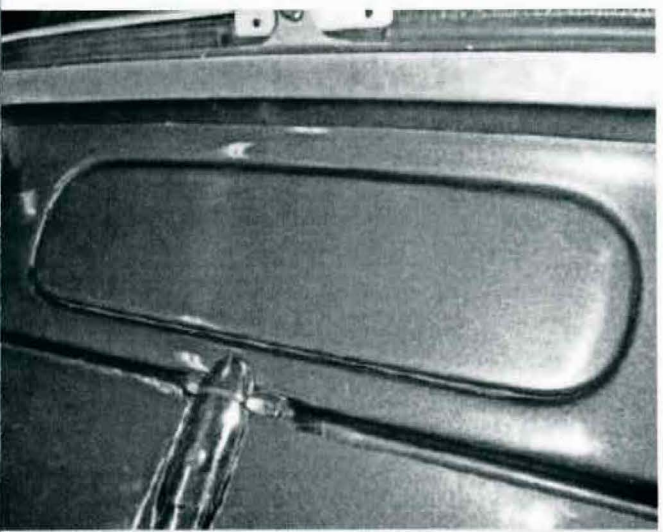
Bison Kit] is unsuitable for this job because once joined, the surfaces can no longer be moved. In the case of this seal, considerable manipulation is still necessary after it has been laid into the slot. So I decided to use Sikaflex 291 Marine Sealant Kit. This stuff is used to ensure water-tightness of deck latches and winches on ocean racing yachts, so I felt it should work on the air vent of a Traction as well. Sikaflex products are available in 100ml blister packing from most major yachting equipment stores.

When applying the Sikaflex Kit, I made sure that the outer perimeter of the rubber seal would be bonded with the outer perimeter of the slot since that is where water is likely to penetrate between the seal and the car body.



Left, top to bottom:
Allow Sikaflex 24hours to dry.
The rubber gasket, cut around the bracket.

Bonding and Drying

Any adhesive bonding needs to be allowed to dry or to harden while the parts are held firmly together. The most effective way to make the rubber seal bond with the car body is by using the air vent itself to hold the rubber down and in place. Even without the cover bolted to the hinge, the spindle with the key below the dashboard will pull the cover firmly onto the rubber seal and hold it in place. This also allows for some moving of the cover to ensure that the pressure is evenly applied around the perimeter of the seal. I allowed the kit to dry under the pressure of the cover for at least 24hours.

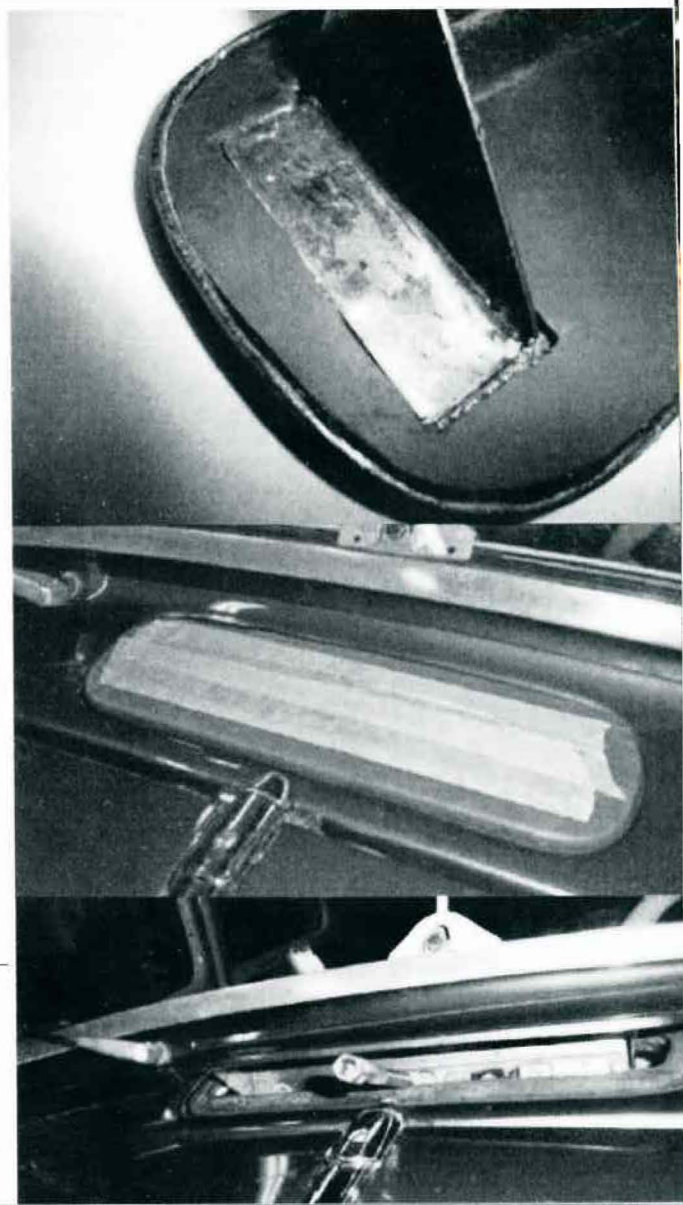
Note: it is important not to apply more kit than will be necessary for a proper bonding. Make sure to remove any spilt or excess kit using a wet cloth immediately while the kit is still wet.

Bear in mind that it takes quite some care to remove all traces of any excess kit from the painted surface of the car, so avoiding this does save a lot of time.

Further Improvement

Now, I could have left it at that and have full faith in the flexibility of the rubber seal to compensate for any irregularity of the steel cover. For, if you turn the cover upside down, you will find that it looks a bit like a moon landscape, and that the bent edge of the cover is far from even as well.

So, I felt I should do something to compensate for the unevenness with the aim of creating a smoother surface that would make better and more reliable contact the rubber seal. For this I used a piece of 2mm thick reinforced flat rubber material [also used for rubber gaskets], which I meticulously cut out to mate with the surface of the inside of the vent cover. I had to cut around the places where the bracket was welded against the inside of the cover to really make sure there would be intense contact between the rubber and the metal, and there would be no ~ or very little ~ unevenness for



Right, top to bottom:
The rubber gasket glued to the inside of the cover.
The cover, with masking tape ~ drying for 48hours.
Tighten the M5 bolts with a small socket.

the rubber seal on the car body to cope with.

This rubber gasket was then glued to the inside of the cover using Bison Spray, a contact adhesive which is said to be particularly suitable for rubber.

Unlike the rubber seal at the bottom, this gasket when doing what it was intended for, would receive pressure only in one direction: downwards, so I believed this was the correct way of fixing the gasket to the inside of the cover.

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Bonding and Drying

Once again I used the spindle to pull down the cover and apply the right pressure to the bonded parts to hold them in place. I did make sure to remove all traces of glue from the rubber surfaces before securing the cover, otherwise I might have ended up inadvertently cementing the two rubber surfaces together which obviously was not what I wanted. From the picture you will note that I used some masking tape to protect the painted surface of the cover against spilled cement and stains from fingerprints. This sort of glue can only be removed using thinners, and high- gloss paint does not like thinners.

I let the cover sit like this for 48hours before undoing it to remove the masking tape.

Attaching the Cover to the Hinge

Finally, the cover needs to be attached to the hinge inside the car, using the three M5 bolts.

Left, top to bottom:
Air vent seen from below the dashboard.
Air vent closed, and watertight

This takes some fiddling and you are likely to find that the hinge will have dropped to its lowest position with the holes far from being aligned. Particularly on cars with their wipers below the windscreen getting at the hinge from below may prove to be troublesome.

Once the holes are somehow aligned [use a helper to hold up the hinge from below] the three M5 bolts with their washers can be inserted. Please do not tighten them yet, since this should best be done from below after moving the cover back and forth to ensure a perfect fit and turning the spindle until the cover sits firmly on the rubber seal. Now, use a small 8mm ring wrench to tighten the three M5 bolts from behind the dashboard as much as you can. Then, open the vent to its maximum and use an 8mm socket with an extension to tighten the bolts completely.

Now, the air vent should open and close when you turn the key of the spindle below the dashboard. If you park the car in broad daylight and look from under the dashboard while opening or closing the vent, you will note the light coming in through an even slot the very moment the rubber gasket inside the cover lifts off the rubber seal. With the cover closed, shine a torch on the inside of the cover and note that the gasket sits evenly on the rubber seal. This should withstand any pressure from outside air I can assure you from experience: it does!

It takes a bit of thinking time and a bit of fiddling to get the air vent to work properly whilst at the same time guaranteeing water-tightness when we want to keep our feet dry. But after all it the solution is quite simple and will allow us a more comfortable ride in hot weather.

John Ogborne Stops That Annoying Problem of Water Getting into the Traction

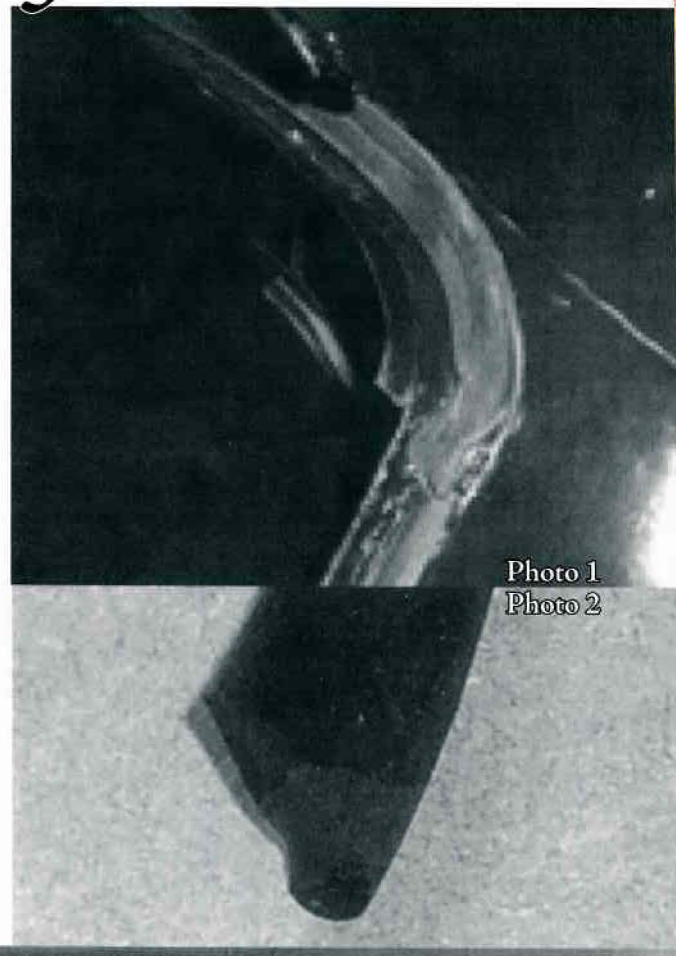

Photo 1
Photo 2

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Big Boot

One of the first things that I learnt about the Traction Big Boot was not to open the boot when it had been raining.

In yet another cunning Citroën design any water on the lid drips directly down into the boot and onto the contents.

Photo 3

Photo 4

I suffered this for years, wiping as much water as possible off the lid before opening it ~ at least when I remembered to do so.

The problem is that the channel along the top edge of the boot aperture does not extend far enough forward to catch the water and allow it to run down the sides.

There is a simple answer. A rubber strip attached to the channel extends it and catches the drips [see photo 1]. I used a length of door rubber seal [see photo 2] and, after thoroughly cleaning the surfaces, used a contact adhesive to attach it. The adhesive is quite strong enough because there are no forces acting on it even when the boot is shut. I can't claim a 100% cure because a little water sometimes escapes at the sides but for all practical purposes it works well.

I also modified the side seals because I have always felt that the wonderfully named "big boot bottom rubber" was rather ugly and particularly cumbersome around the bottom corners. I have therefore just fitted the rubber to the bottom edge and used closed cell foam strip down the sides [Photos 3 and 4], giving what I think is a much neater ~ if not original ~ appearance.

Closed cell is important ~ you do not want a sponge.