

So I decided on the Maxxfan 7000K with the remote control so I can operate it from the driver's seat without having to reach over all the dog crates. It can also be set on automatic so it opens if the temperature gets above a set point.



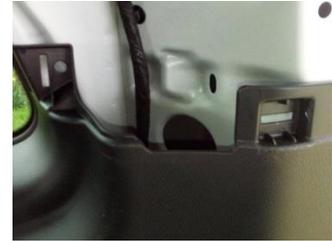
The first thing was to pull down the roof liner to see where it would fit without cutting the cross supports. With the fan hood extending out the back, there wasn't enough clearance right at the back with the lift gate, but it might have worked with barn doors.



1 At the back pillar (right side shown), the cover pops off and the screw comes out.



2 There are spring clips at the bottom that fit into



3 slots in the lower pillar cover



4 At the top, in addition to the screw, there are fingers that



5 fit up under the roof liner. Green stuff is the air bag so be careful not to damage.



6 The rear ceiling light just pops off



7 It's held in place with plastic clips and can be unplugged easily



8 The mid ceiling light pushes to one side (right),



9 drops down and unplugs.



10 The plastic plugs can be pried out of the overhead handle



11 giving access to the metal clips that hold it in.



12 These can be pried in to release the handle



13 Similarly, the cover pops off the air vent to reveal the screw



14 and the grill slides out



15 to reveal the duct



16 To remove the c pillar cover, the coat hook cover slides up



17 to reveal the screw



18 then the bottom pops out and it slides down



19 Clips holding the bottom in



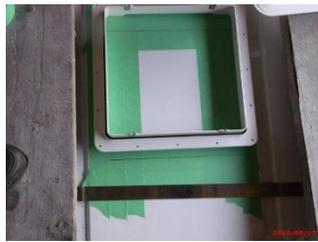
20 With the van in a sheltered but bright location,



21 I secured scaffolding planks across the roof rack



22 Peeling back the rubber around the windows, the liner pulls down to check the clear area for the hole.



23 Marking the opening side to side is easy, but the location front to back has to fit the flat area on the liner inside



24 By drilling a hole through the roof and liner half way back on the panel



25 the final position of the inside frame can be set to avoid the ridge in the liner



26 Front and back lines are drawn on the tape and diagonals checked for square.



27 The cut saw would be easy, but rough and holes would be needed to start



28 So I went with the small circular saw that could plunge cut on the lines without cutting the liner



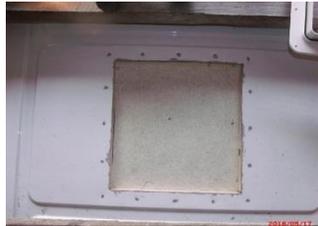
29 so none of the metal dust would fall into the van and could be picked up with a magnet



30 once the metal plate is removed.



31 A 3/4" pine spacer between the roof and liner gives enough depth to mount the fan and something to screw into. Notches provide room for the sound proofing and wires



32 With the fan mount in place, two screws hold it and holes are drilled out for the rest.



33 Sealant is applied and all screws secured.



34 The liner cuts easily with a serrated knife. Note the hole in the wood spacer for the wires.



35 With the fan open, 4 screws attach it to the mount (it was checked for operation before cutting the hole)



36 Inside, the wires are fed through the hole in the spacer across to the c pillar



37 and then down to the floor and forward to the fuse block on the auxiliary battery. The cup holder pulls out for access.



38 Four screws hold the surround in place. Because the infra-red remote sensor is somewhat hidden from the front seat,



39 A small piece of foil is positioned to reflect the beam up.



40 So, there it is. With the windows open an inch or so it can move a lot of air. I might get some wind deflectors to keep rain out when it's standing. Worked well in the Chicago heat at the dog show.

Next: this doesn't show the solar panels that keep the auxiliary battery charged to keep this and the crate fans etc. running. Took lots of pictures of that as well, but the \*&%\$ smart phone just says "album not available". They were there but disappeared when I tried to transfer them. I'll just have to retake some of the easy ones.

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