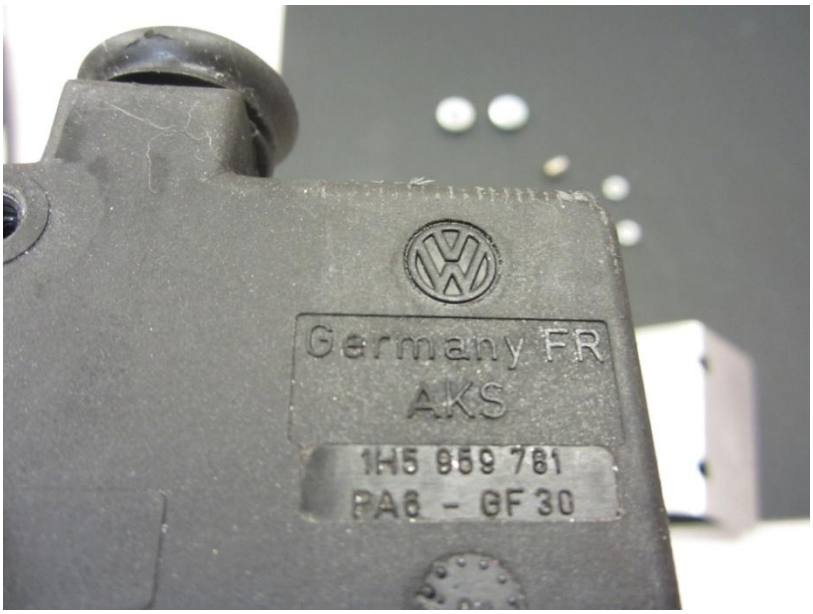
928 Hatch Motor Exorcism – Happy Ending!

Having had repeated issues with my Porsche hatch motor – I'm convinced it's both ill conceived/unreliable and a fundamentally over complex solution. There are many other hatch releases out there that do the same job more simply: better, quieter, more reliably and at less expense.

I recently swapped this over complex junk for a VW Golf hatch release motor (a much simpler auto return solenoid type).

#1 The VW unit: (it comes with a removable extension arm – just pops off sideways)



The installation was relatively straightforward and based on VW user feedback should be quite reliable, these are readily available cheaply since they are on volume produced vehicles that are now getting parted out in large numbers.

The Porsche release initiator circuit can be used directly - but the parking circuit (run off the 1A fuse) is now no longer needed - providing one available CE fuse and a low power circuit wired from the CE panel to the hatch area.

Thanks to Colin Jensan for the initial install idea for this. I used the VW Golf version (Golf GTI MK3 - 1H5 959 781 ~$20 used on ebay) which is a pusher design - not a puller like the one Colin has shown in threads on Rennlist. I prefer this type because there is no need to permanently modify the factory hatch receiver at all - and the original equipment can be reinstalled later if needed and it's allows a quite simple install.

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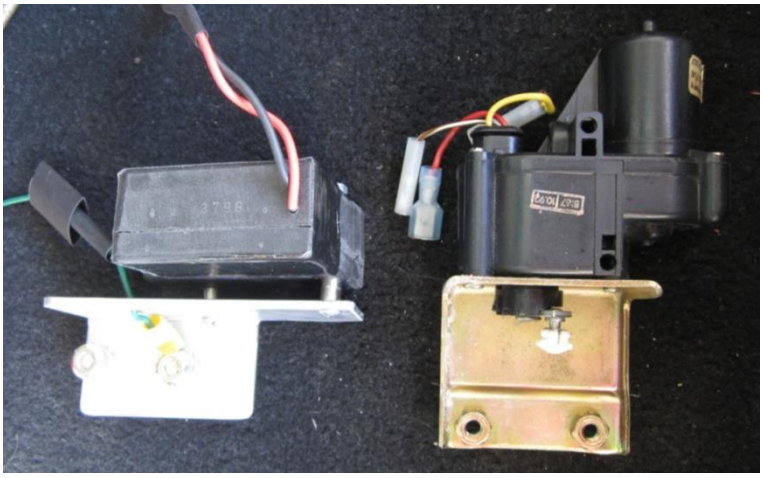
To remove the stock motor:

1. Remove the tool tray
2. Remove protection plate for the motor/hatch receiver switch (1 screw - central support)
3. Unbolt the motor bracket (2 bolts on the central support)
4. Pop the ball drive out of the nylon receiver & remove the motor
5. Unplug the connector for the motor & set the motor aside
6. Pop the nylon cup off the release arm (save all the motor parts)

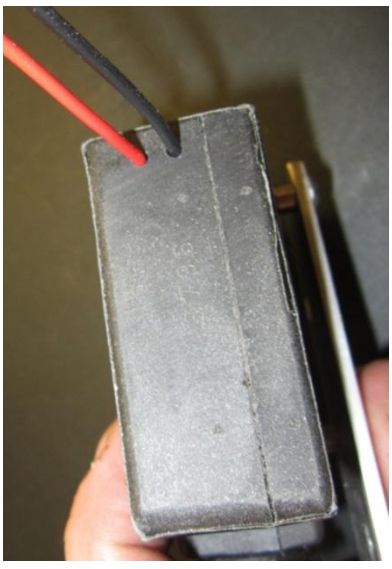
#2. Comparison of new VW Motor on bracket & stock Porsche motor on bracket:



Fabricating the new set-up:

I modified the wiring on the VW unit to exit to the side for clearance with a pigtail connector instead of the molded in connector mounted on the end – it's just too tall otherwise. Use JB weld to seal it all back up neatly.

#3. The VW unit connector on the end – this must get switched to a side pigtail:



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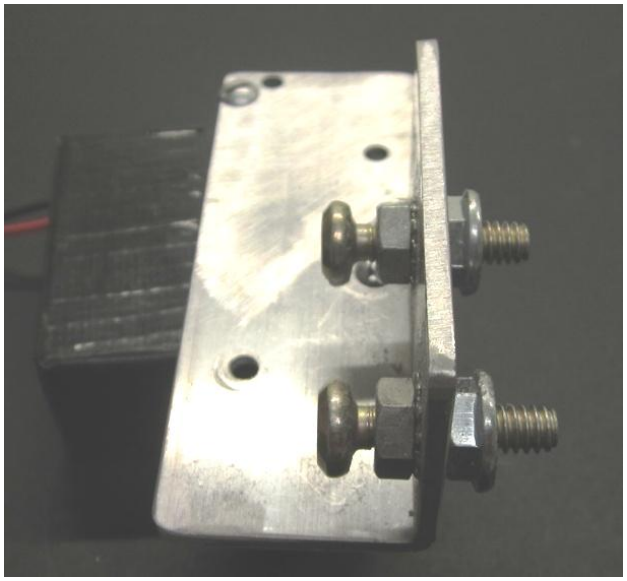
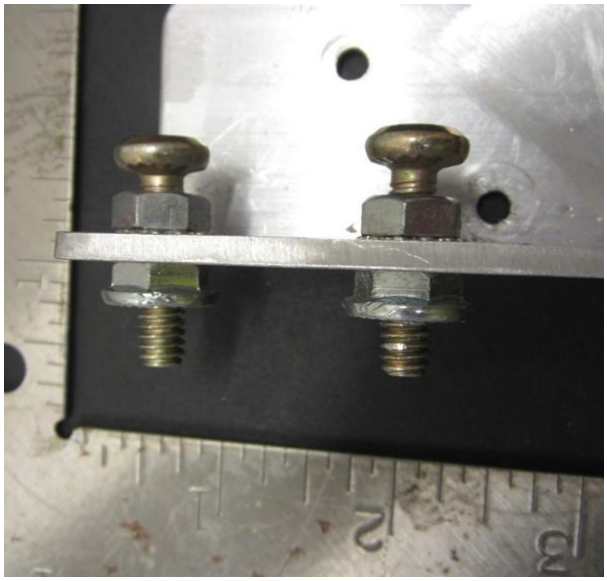
I made the mounting bracket out of aluminum angle stock (Ace HW/Home Depot) and attached the VW release motor with some long bolts and (~7mm) stand-offs. Generally this is a similar configuration to the stock hatch motor bracket and retains the adjustability (up/down).

The stock motor bracket has captive nuts and bolts onto the center support. I reversed this with some bolts located with 2 nuts as adjustable studs so I could limit the protrusion out of the center support. This ensures no interference with the tool panel & avoids having to deal with loose nuts & bolts for the install. Judge the approx 'stud' locations based on the stock bracket – however since the central support has slots the spacing is not super critical.

#4 Bracket configuration & approx. dimensions:





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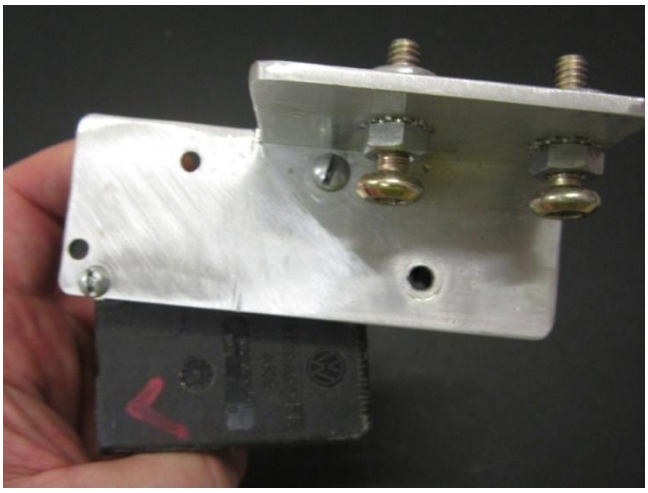
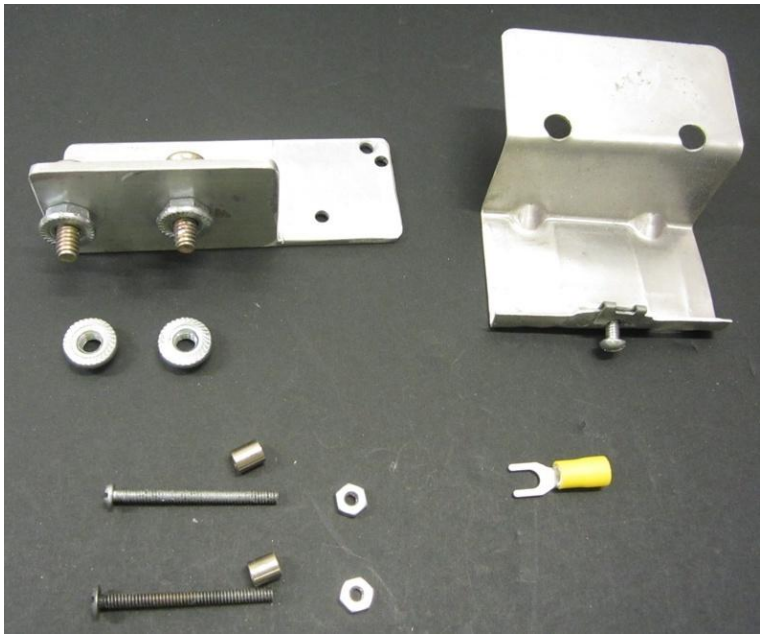
#5 Motor Mounted to Bracket:

When installed the release lever arm runs between the motor and the bracket (~7mm gap) locating it (side-side) and is also located (front/rear) by the two stand-offs. The motor must be mounted to the bracket on a slight angle to vertical to allow the cam rotation of the actuator arm (top) and also to keep the motor ~in plane with the forces applied.
This gap could certainly be smaller – if all is aligned exactly right you only really need a few mm. However a smaller gap will make the final arm & fork install more difficult (see later).

#6 Mounting Hardware:




To attach the release lever arm to the actuator I screw attached a small fabricated steel angle section to the (unmolested) release arm with a fork in the end that locates under the actuator stub end. The motor must be loose to attach this – but once in place reattaching the motor secures this in place permanently.

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#7. The actuator arm attachment:


This is perhaps the fiddliest bit – the release arm is attached to the hatch release cam, so you must raise the arm into the hatch area out of the way while you loosely install the motor on the center support (angle the bracket to make sure the top of the bracket slides under the hatch mechanism…). Now partly (mostly) remove the lower bolt holding the motor to the bracket – leave just enough to hold the stand-off in place- loosen the top bolt a little to allow the motor to pivot enough to slide the actuator arm between the bracket & the motor. Then pivot the motor out further to get the fork over the motor's actuator nub. Re-install the bottom bolt fully and tighten the top bolt.

#8 Attaching the actuator arm to the motor: (loosen bottom bolt – slide arm behind it)


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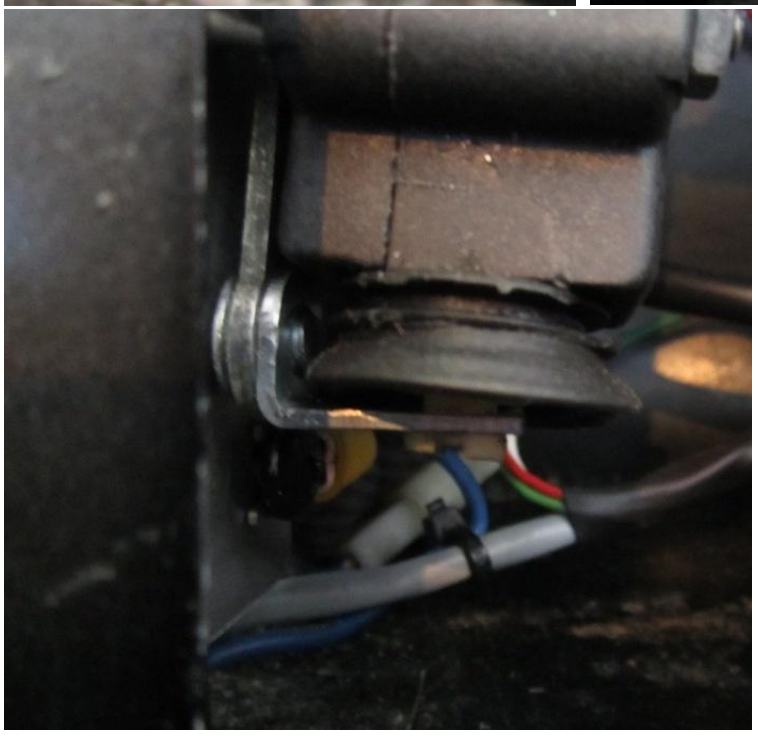

The bracket is adjustable up/down exactly as the stock one is to set the correct range of motion. The actuator can be activated manually to check for correct adjustment before powering the motor. Grease the release arm by the bracket for reduced friction – although if you get the alignment just right these don't even touch.

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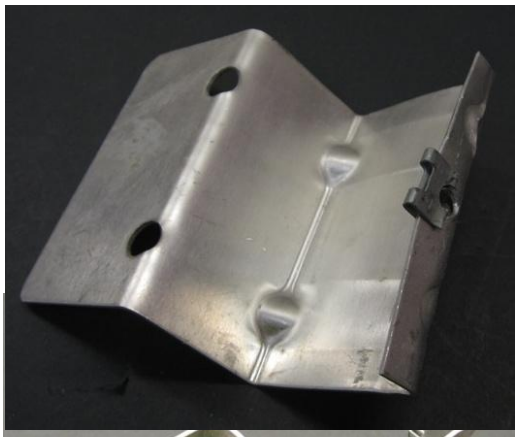
#9 The Bracket Mounted:

I modified (re-folded) the stock protection plate (designed to protect the bottom of the hatch receiver and the hatch actuator mechanism) to work with the new configuration.

#9 The protection plate:



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Here are a couple of videos of operation too – it's fast operating and relatively quiet (esp when all buttoned up – unlike here).

Video inside view of operation

Video outside view of operation

Works as a direct replacement to my old hatch release and operates from both hatch pulls or from the remote fob exactly as the old one did (no wiring changes are required – use the yellow wire & the brown/white wires). Mine is already modified for my KE implementation so I used the Yellow wire and a local ground (as I did before).