

Vanistan Seat Tilt Kits purchased after 4-15-24

Custom hardware package to attach to a VW/Westfalia (or possibly other unknown make) swiveling seat base so it can be tilted forward for access to the space underneath for storage, to mount auxiliary equipment, and for easier battery access. Latches at rear lock the seat base down. A prop bar can be engaged in the seat track to hold the seat in the up-tilted position.



Kit Contains:

(2) Moving hinge bars, top center
(2) Stationary hinge bars, middle
Latch bar right, far left
Latch bar left
Prop bar, far right

Fasteners kit contains:

(2) M8 flanged button head Allen bolts
(2) M8 nylon Belleville (conical) washers
(2) M8 nylock hexnuts
(3) M6 x 40mm Allen bolts
(4) M6 x 16mm Allen bolts
(3) M6 nylock nuts
(4) M6 square nuts
(8) M6 flat washers
(4) M6 wave washers
(4) M5 x 12mm hexbolts
(4) M5 hexnuts
(2) 2" pcs. 3/4" antifriction tape

Tools needed:

Drill

Drill bits:

pilot (1/8" (3mm) or smaller),
13/64" (5mm),
21/64" (8mm)

Small countersink bit to deburr holes (optional)

13/64 (5mm) transfer punch* and/or common center punch

8mm and 10mm sockets and combination wrenches

5mm Allen (aka: in-hex or hex socket head) driver

Vise-grip or other clamp

Tape (cloth, thick) (optional)

Thin non-magnetic pick, small screwdriver, wooden skewer or other implement

Razor knife

*The most accurate way to mark holes to match one part to another is with transfer punches. If you work with this sort of thing much we recommend having a set of these. Available at Harbor Freight, item #3577:

<https://www.harborfreight.com/28-piece-transfer-punch-set-3577.html>

Without the reliably accurate center placement of a transfer punch, if your drilled holes don't align well enough for the M5 bolts to fit thru, you may need a rat-tail file to shift a hole, or to drill slightly larger.

Note: All directions are from the driver's point of view: Front, or fore, is always toward the front of the vehicle; Rear, or aft, is always toward the rear of the vehicle; Left is always to the driver's left, etc. Outboard is away from the longitudinal centerline of the vehicle or subcomponent, inboard is closer to the longitudinal centerline.

Note: The VW/Westfalia factory swivel seat base assembly must have first been removed from the vehicle. The middle circular retaining plate with latching rod and the top turntable with seat tracks are removed and set aside; all work on this kit will be done solely on the bottom component of the 3-piece swivel assembly, which we will call the "base plate". This was originally welded in between the pedestal seat tracks in a Westfalia camper. The welds must be ground or cut out, leaving as much of the raised side flanges of the base plate as possible, such that the base plate will sit on the pedestal inside the pedestal seat tracks and nearly reach the inboard edges of the seat tracks on both sides, within about 1/8" along both sides. If the base plate was cut further inboard, so that there is much more than a 1/8" gap between both side flanges and the seat rails, it may be impossible to fit this kit unless metal is added in the pertinent areas by welding and grinding down to reproduce the original dimensions.

Westfalia Campers note: Most Westfalia Campmobiles sold in N. America had some sheet metal pieces Westfalia added around one or both seat pedestal battery compartments, to create an enclosure that would purportedly seal the battery off and vent it externally. This was done so the campers could be sold as RV's, the regulation required vehicle batteries be outside of or isolated from the living space. It was a ruse to overcome a regulatory requirement, and serves no necessary or useful function (the far larger number of non-camper vans have no battery ventilation provisions, because there is simply no need to vent a battery this small). The faux enclosure may interfere with the swivel seat base when the Seat Tilt Kit is installed, in particular the rear-edge angled strip of metal that supported a battery hold-down bracket (there is a stud in the seat pan directly below it for the non-camper hold-down bracket, which can be used instead). In order to fit the Seat Tilt Kit, we recommend removing the enclosure pieces entirely, which will greatly improve service access to the battery, or cutting off the angle strip if that will attain clearance in your particular application. We will provide no specific guidance other than this warning.

Note: For clearer photography, some of these pictures are made with a swivel seat assembly turntable standing in for an actual van's seat pedestal, because the seat tracks and spacing are identical, so positions shown here will be exactly the same positions on your van's seat pedestal tracks. Just pretend it's the actual seat pedestal you're looking at!

1. Prepare seat pedestal:

On the left edge of all 4 seat pedestals' seat tracks, a few inches from the front end of the track, is a short tab of metal that must be removed from the right rail of any pedestal where a swivel seat base has not yet been installed (the left tab is outside the area the base plate must fit within so does not have to be removed). Pointed out in this picture, having been removed and repainted:



If there is a plastic bushing with anti-rattle strips like shown above-right in the left track of the seat pedestal, it must be removed, and can be discarded (if there is one in the turntable tracks, it can stay):

2. Attach moving hinge bars to base plate:

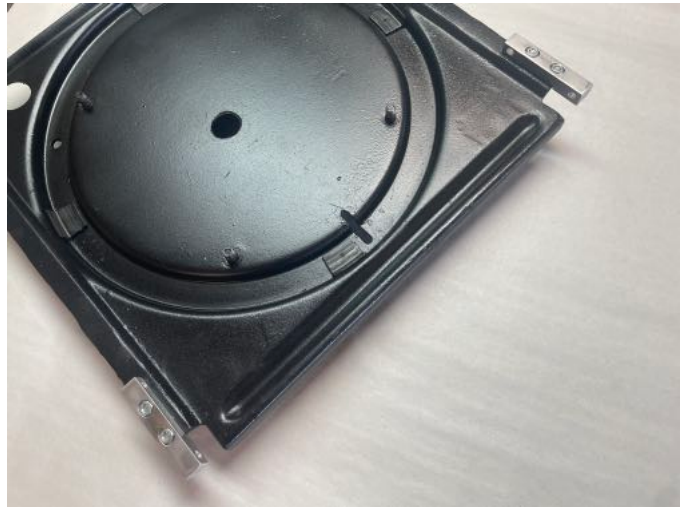
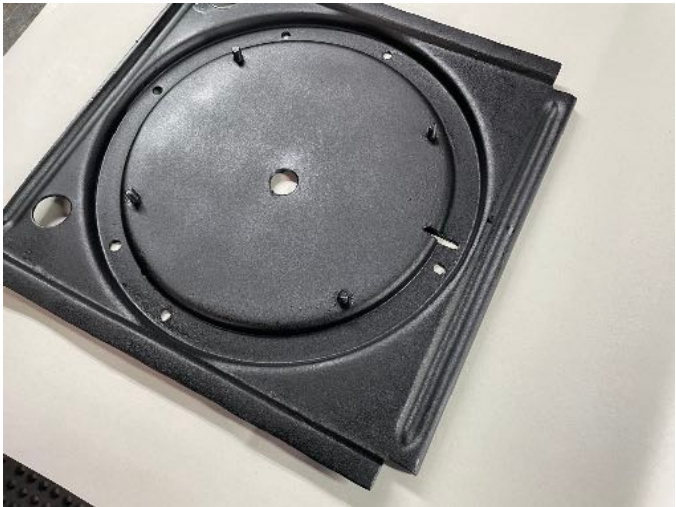
The two moving hinge bars are the longer of the four machined aluminum bars. The moving bars will be bolted to the swivel base plate, the stationary hinge bars will be bolted to the top of the seat rails that are affixed to the van seat pedestals.

Decide which side of the seat you would like the prop bar to be located. We prefer the prop bar to be on the outboard side so the seat tilt can be operated thru the open front door while standing outside the van. In this guide it will be shown being installed on the outboard side of a right front seat.

Below left is a bare swivel assembly base plate. Remember that the front edge of the plate has the long notch for the turntable latch bar, it is to the right in this picture.

Below right is the base plate with both moving hinge bars bolted in place, the next steps show how.

Important: Note that the four plastic glide blocks are removed in the left picture, showing their positioning holes, and are in place in the right picture. **These glide blocks must be in place** to attain the necessary vertical clearance to swivel the seat height.



All four hinge bars have a 1/8" step on the bottom of the forward end of the bar.

Place each moving bar flat on top of the base plate side flange, and move it back until the step butts against the forward edge of the base plate flange, as shown below left from below. Position outboard edge of hinge bar even with edge of base plate as shown. Clamp in position with vise grip or other clamp. If you wish to avoid marring the parts, cover the clamp jaws with small pieces of heavy tape.



Check alignment carefully and clamp in place firmly. Mark thru the bar's holes to establish the centers for the bolt holes (a 13/64" transfer punch is shown below left).

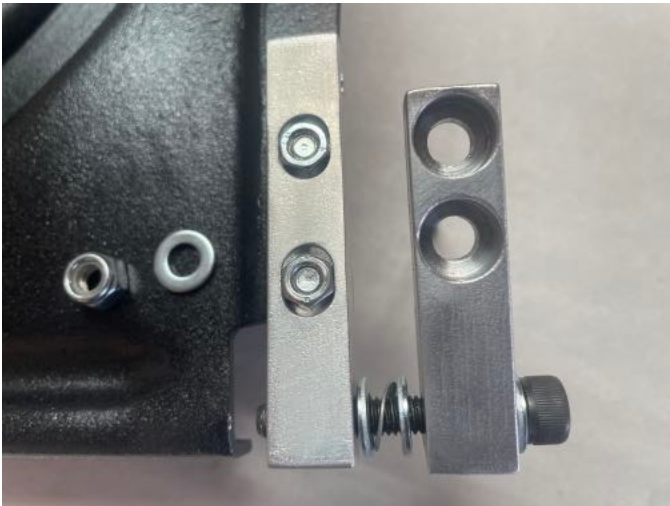


Set the hinge bars aside. Use a center punch to deepen the center marks enough to positively center your pilot drill bit. Pilot drill all 4 holes, then drill out to final size of 13/64" (5mm). Deburr with countersink top and bottom.

Reposition both moving hinge bars and fasten to base plate with four M5 x 12mm hexbolts inserted from below with no washers, and M5 nuts inserted in the recesses on top of the moving hinge bars, as shown below and in the picture on the previous page.

3. Assemble hinges:

The stationary hinge bars can be preattached to the moving bars. Assemble each stationary hinge bar to the outboard side of each moving hinge bar with one M6 x 40mm Allen bolt with one M6 flat washer, then the stationary hinge bar, then a sandwich of two M6 flat washers with one M6 wavy washer in between, and on the inboard side of the moving hinge bar another flat washer and one M6 nylock nut. The parts order is shown below left. Tighten the bolt and nut until the wavy washer is flattened, and there is enough friction between the hinge bars such that the stationary bar moves smoothly but remains wherever you position it. The nylock nuts will retain the adjustment.



4. Attach prop bar to moving hinge bar:

The prop bar assembles to either moving hinge bar's rearward hole in the same way, except without any M6 flat washers. Instead use one M6 wavy washer on each sides of the prop bar's eye, as shown below left. Tighten so the prop bar has enough friction to remain wherever it is positioned.



5. Install base plate on seat pedestal:

On the van's seat pedestal, position two M6 square nuts as shown. Before inserting, cut a roughly 3/8" wide strip of thick cardboard and slip it into the front opening of each track to create a raised floor for the nuts. Slide each nut back into the track and using a small non-magnetic implement from above, center the first nut below the first rectangular notch, and the 2nd below the hole in the top of the track ridge. Center up the nuts by eye. Prepare both seat tracks this way.

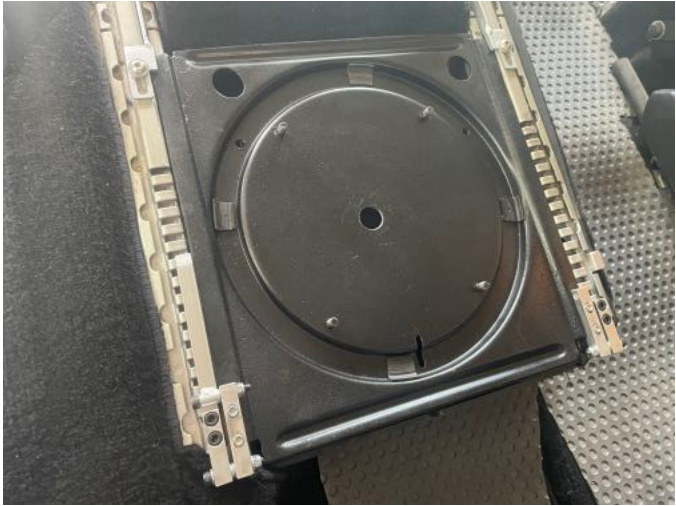
Gently place the base plate assembly onto the van's seat pedestal and align the holes in the stationary hinge bars with the track holes under which you positioned the square nuts, so you can sight down thru to the square nuts below.

Carefully insert each M6 x 16mm Allen head bolt straight down into the stationary bar to find the square nut below, gently feel for the bolt to center up in the nut, and turn the bolt slowly to engage the nut threads, If you're not sure the threads have engaged, you can confirm by pulling up on the bolt. Get all four bolts started, then run them down and tighten evenly to secure the hinged base plate assembly.



The last procedure is not difficult but requires patience and a gentle touch. If you find it too difficult, you can attach the stationary hinge bars to the van's seat tracks individually, and then attach the swivel base plate, but I find it more difficult to insert the required washers between the hinge bars that way. Whatever works best for you.

The hinged base plate should look like below left, minus the latch bars. Check that the hinging works smoothly and the base plate comes to rest centered between the pedestal seat tracks with an even narrow gap on both edges.



Test function of the prop bar with base plate lifted, the bent end can be placed in any of the seat track notches for the desired height of tilt, as shown above right.

6. Install latch bars:

About 4" forward of the rear end of both seat tracks is a nearly-8mm hole in the top of the track's center ridge. These holes must be slightly enlarged with the 21/64" (8mm) drill bit.

Deburr the holes with a countersink, or a flat file or sandpaper. Feel for any burrs, the top surface of the track should be smooth for the latch bar to slide over.

Wipe the surface clean with Brakleen or other fast-drying solvent. Then peel the backing film off the anti-friction tape and apply the 2" strip to the top of the seat track center ridge, using the latch bar as a guide as shown, so that the tape will be underneath the latch bar for its full range of motion. Press and smooth the tape down, then use a sharp knife point to cut out the tape inside the hole.



Using a suitable implement, slide an M8 nylock hexnut into the rear opening of the seat track center ridge, nylon locking side of the nut down. Slide forward until the nut is in position directly under the hole.



Place the latch bar on the track hump, the bar's handle extension runs inboard of the seat track. Fasten down with a M8 button head screw with a nylon Belleville washer, concave side down as shown:



Tighten the M8 button head screw until snug, then loosen about a half-turn. Try to slide the latch bar fore and aft and loosen the screw in small increments until you can just slide the latch bar both ways by hand but with some resistance.

With the latch bars in their rearmost positions the rear edge of the base plate must clear the forward end of both latch bars as shown below. Test function that the latch bars can be slid onto the base plate to lock it down, and pulled back by hand to unlatch. The best adjustment is often where the base plate



needs to be pushed downward a bit to slide the latch bar to the latched position, this will leave some residual tension that keeps the assembly latched.

Finally, be sure the plastic glide blocks are in place, then install the turntable and retaining plate. Adjust the swiveling drag, and put the seat on the turntable tracks.

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