



GW-CRUISE Cruise Control – Vanagon [84-91]

Driving without cruise control on a long trip can be tiring. Update your vehicle with some modern convenience with this easy to install cruise control kit.

Tools Needed

- Phillips screwdriver #2
- Electric Drill and bit set
- Pliers
- Metric socket set
- 5 Minute Epoxy

DISCLAIMER: This kit has been designed for easy installation. However, it does involve some wiring. The installation of this kit is not within everyone's ability. Read through these instructions carefully and decide if installing it is for you. If not, please take your vehicle to an automotive electrician. Wiring errors can be troublesome and hazardous.

PREPARATION

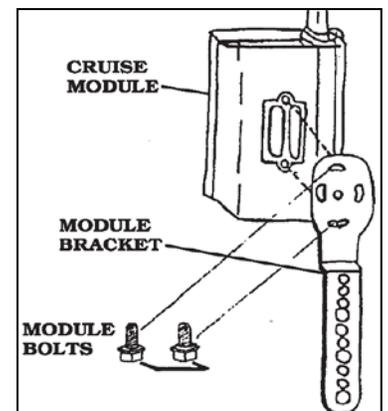
1. Begin by disconnecting the vehicle battery (disconnect both the main battery and auxiliary battery, if you have one).
2. Next, the following interior components will need to be removed:
 - Glove box.
 - Center lower heater shroud.
 - Lower steering column cover.
 - Ashtray
 - Instrument cluster

CRUISE MODULE INSTALLATION

3. Before installation, set the dip switches on the cruise control unit to the suggested settings for your particular Van. Remove the rectangular rubber plug on the bottom surface of the unit to reveal a row of small dip switches. Refer to the Appendix for the proper dip switch settings. These settings are a good starting point, but the switches will likely need to be adjusted after installation and a test drive.



4. Attach the long, black bracket to the Cruise control unit with the supplied black, hex-head screws using a 10mm wrench. Install with the long portion of the bracket oriented to the side of the unit opposite the cable. The bend should be positioned up, away from the unit (illustrated at right).

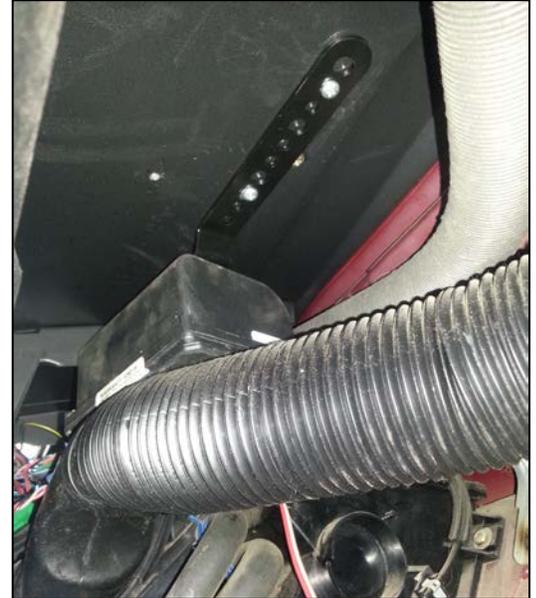




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5. There are two installation methods for the cruise module. The first method is easier to install, but the second method will give more slack in the cable and is suggested.

5.1. The cruise module is mounted underneath the dash, to the left of the glove box. If your dash is padded you can use the supplied self-drilling screws to mount the cruise control unit to the underside of the dash as shown in the picture. It is **very** important to locate the cruise control unit as far to the left and as close to the air distribution box as possible, with the cruise cable facing toward the center of the dash. This is to ensure that you will have enough slack in the cable when attaching it to the throttle. The heater ducts will determine the fore/aft positioning and the proper placement will be clear upon installation. **NOTE: If your dash is NOT padded, you will have to drill holes in your dash and attach the cruise unit with bolts and nuts, or use the alternative method below to mount the cruise box under your dash.**



5.2. The second installation method mounts the cruise in the vertical position on the dash support bar located to the left of the glove box. One of the provided self-drilling screws should be used to mount the module to the support bar. The mounting bracket will have to be cut short in order to accomplish this. A picture showing the cruise module mounted in this orientation is shown to the right.



*Note: If for some reason neither of these locations is available to mount the cruise module, another location may be selected by the installer. If selecting a different location, the cruise module **MUST** be mounted so that the dip switches are easily accessible and the cable **MUST** be able to have a nice smooth route to the accelerator linkage.*

6. The cruise control cable should be routed from the cruise control unit under the dash and through the large grommet that the heater core hoses run through. This can be done by carefully poking or carefully drilling a hole (1/4" drill bit works well) in the grommet and simply pushing the cable through this hole as shown in the picture to the right. Be sure to route the cable smoothly, in the shortest path possible, without kinking the cable.





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VEHICLE SPEED SENSOR (VSS)

12. Install the VSS into the back of the speedometer. Your speedometer may have a black plastic tab covering the port for the speed sensor. Break this plastic tab off and use the two screws packaged with the speed sensor to mount the speed sensor in this space. IF you are using the dash-mounted switch in the cluster, now is the time to install it, as well (see next section for details).
13. Reinstall the instrument cluster and route the speed sensor connector and wire harness through the dash toward the cruise control unit. Plug it into the main wiring harness, through the ashtray port.



SWITCH OPTIONS

Dash Mounted Switch

14. Remove the button blank from the right side of the gauge cluster housing. This blank is typically located under the emergency flasher switch. Route the wires and connectors from the dash mount switch through the space where the button blank was inserted. The dash mount control switch should now push tightly into this space (see Picture). ****Note: we have noticed that on some vehicles this switch can move up and down slightly when installed. If this is the case, place some quick drying epoxy on the outside of the Christmas tree pins before inserting the switch into the dash so that the epoxy holds the switch firmly in place.**
15. If you want the in-dash cruise control switch to be backlit when the dash lights are on. Find the gray/blue wire located on the back of the headlight switch connector. Use a pair of pliers (slip-joint work well), to install the blue T-tap connector onto the grey/blue wire and plug the grey wire with the insulated male quick connect from the switch, into the T-tap (shown at right).
16. Plug the switch into the White 4-pin connector and the Red 2-pin connector on the main wiring harness.



Wireless Steering Wheel Mounted Switch

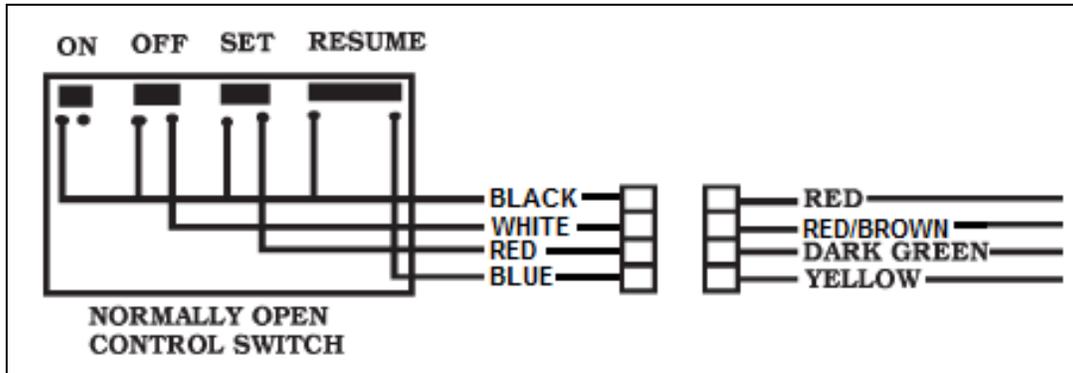
17. Refer to the instructions supplied with the switch for a detailed installation procedure.



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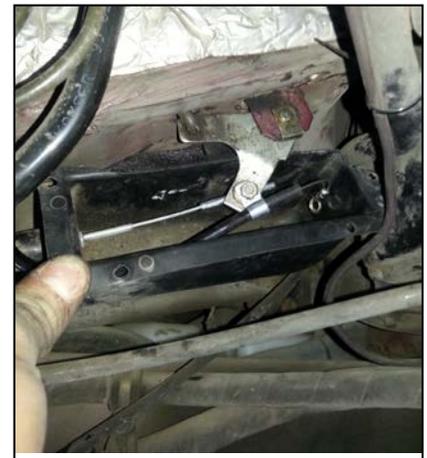
Factory Cruise Control Switch

18. Refer to the diagram below to wire up a factory switch to this system. The factory connector is not plug-and-play; alternative connectors will be needed.



CABLE INTERFACE

19. Remove the spare tire beneath the front of the vehicle to access the black plastic gas pedal linkage cover. Remove the cover to access the throttle linkage and pull it out of the way. Remove the setscrew from the throttle cable barrel.
20. Locate the cruise control throttle cable that was pushed through the heater hose grommet previously route the cable cleanly, from the grommet to the throttle linkage.
21. Drill two 7/16" holes in the linkage cover. One in the bottom right corner of the rear side (where the cable enters). The second, in the front of the cover in a straight line forward of the rear hole. The cruise control cable will run through these two holes and fasten to the radiator shroud.
22. Route the cruise cable along the Vanagon's throttle cable and through the hole in the rear of the gas pedal linkage cover.
23. Locate the threaded "P" fitting supplied with the kit and thread it onto the threaded end of the cruise control cable sheath. Orient it so the flat side will lie against the throttle linkage with the cable running on the inboard side of the linkage. The setscrew you removed will be used to secure it. Thread the clamp about 1in onto the cable sheath to start. This will need to be adjusted later.





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24. Use the metal eyelet to fasten the end of the cruise cable to the radiator shroud directly in front of the throttle cable assembly with the provided self-drilling screw.
25. Place the small throttle barrel bolt removed earlier through the hole in the threaded "P" fitting and reinstall the bolt into the barrel which holds the Vanagon throttle cable so that the throttle cable is adjusted taught. The threaded "P" fitting will need to be adjusted so that there is about 1/8" of slack in the cruise cable, so this step may need to be repeated several times. ****Adjusting the cruise cable and getting the throttle linkage assembled can be tricky. Several adjustments may have to be made in order to get approximately 1/8" of slack in the cruise cable.**
26. Once the cable and linkage are adjusted correctly, the gas pedal linkage cover can be screwed down again and all components that were removed, reinstalled.
27. After installation is complete, drive the vehicle and test the cruise. The dip switches may need to be adjusted in order for optimum performance. Refer to the Appendix for how to properly adjust these switches.



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APPENDIX

GoWesty Cruise Control Suggested Dip Switch Settings												
	1	2	3	4	5	6	7	8	9	10	11	12
4WD Manual Transmission	off	on	on	off	off	on	on	off	off	on	off	off
2WD Manual Transmission	off	on	off	off	off	on	on	off	off	on	off	off
2WD Automatic Transmission	off	on	off	off	off	on	on	off	off	on	on	off

Note: These the suggested settings are a good starting point, but they may likely need to be changed due to preference or other factors such as engine size. Instructions on what the dip switches do and how to adjust them correctly is shown below.

Cruise Control Dip Switch Adjustments												
Programming Functions	1	2	3	4	5	6	7	8	9	10	11	12
Gain (Sensitivity): Gain is how the cruise reacts to road conditions and motor size. Always start at Mid gain. If the vehicle surges, change the gain. For a fast surge, switch to a low or extra low gain setting. If there is a slow surge, switch to high gain.												
Extra Low	off	off										
Low	on	off										
Mid	off	on										
High	on	on										
Pulses Per Mile: Vehicle Speed Sensor reading (3200 for 2WD -- 6400 for 4WD) If your van surges try to change the gain setting function first. If it still surges, try raising this value to the next highest setting (4000 for 2WD -- 8000 for 4WD). We have found that this can suppress a surging condition.												
2000			off	off	off	off						
4000			on	off	off	off						
6000			off	on	off	off						
8000			on	on	off	off						
10000			off	off	on	off						
12000			on	off	on	off						
18000			off	on	on	off						
24000			on	on	on	off						
3200			off	off	off	on						
6400			on	off	off	on						
9650			off	on	off	on						
12870			on	on	off	on						
16090			off	off	on	on						
19300			on	off	on	on						
28960			off	on	on	on						
38600			on	on	on	on						
Engine/Setup Timer: Engine/Setup timer is how fast the cruise retracts cable in on set. Always start at low. If vehicle drops below set speed but then recovers, switching to a high or extra high setting may help. Note: All settings are based on 1/8 inch slack in cable. More slack will cause cruise to surge or lose speed on set.												
8 Cylinder/Low							off	off	off			
4 Cylinder/Low							on	off	off			
6 Cylinder/Low							off	on	off			
6 Cylinder/Extra High							on	on	off			
8 Cylinder/High							off	off	on			
4 Cylinder/High							on	off	on			
6 Cylinder/High							off	on	on			
4 Cylinder/Extra High							on	on	on			
VSS Source: The supplied VSS uses Square Wave Input												
Sine Wave Input										off		
Square Wave Input										on		
Transmission Type												
Manual											off	
Automatic											on	
Control Switch: The Stock Vanagon cruise switch and any control switch purchased from GoWesty is an Open Circuit Switch.												
Open Circuit												off
Closed Circuit												on