


# Volkswagen Cabriolet



## DIY Guide: Cooling System & Fan Equipment

### THERMOSTAT

Temp Rating	Notes	Part Numbers	Years	Image
87°C	Normal temp	056-121-113D	1979-1993	
80°C	Low temp	056-121-113A	1979-1993	




- An 87° thermostat begins opening when the coolant temperature has reached 87°C and is fully open at 102°C.
- Always test a new thermostat in boiling water to ensure it opens correctly.
- O-ring part number: 059-121-119.
- If wanting to change to a lower-temp thermostat, you must also change the thermostatswitch to a lower temperature version. The low-temp thermostat is 80°C; the matching thermostatswitch is 85-80°C.

### COOLING FAN THERMOSWITCH



Temp Rating	Notes	Type	Fan Type	Part Numbers	Years	Image
95-84°C	Normal temp	2-pin	1-speed	191-959-481B	1979-1987	
85-80°C	Low temp	2-pin	1-speed		1979-1987	
95-84/102-91°C	Normal temp	3-pin	2-speed	191-959-481C	1988-1993	
85-80/93-88°C	Low temp	3-pin	2-speed	321-959-481	1988-1993	

- Most parts stores incorrectly list the thermo switches as being "with A/C" and "without A/C". From 1979 through 1987, Cabriolets use the 95-84° switch; 1988-1993 Cabriolets use the 95-84/102-91° switch; **A/C is irrelevant**. If you happen to have bought a 3-pin switch, it will work fine in your 2-pin system due to the pin layout as shown on page 4.
- The higher temperature is when the fan turns on, the lower temperature is when the fan turns off. Example: A 95-84°C fan switch turns the fan on at 95° and turns the fan off at 84°.
- If wanting to change to a lower-temp thermo switch, you must also change the thermostat to a lower temperature version. The low-temp thermo switch is 85-80°C; the matching thermostat is 80°C.



### THERMOSWITCH CONNECTOR COMPONENTS:

Part Number	Image
321-906-231A 893-906-231* <i>*is also used for the entire pigtail replacement harness</i>	
191-959-459 867-972-525B	
6.3mm locking female quick disconnect <i>(requires open barrel crimp tool)</i>	







### COOLING FAN AFTER-RUN THERMOSWITCH

Temp Rating	Notes	Type	Fan Type	Part Numbers	Years	Photos
110°C	K-Jetronic	Blue	2-speed	191-919-521B	1988-1993	
100°C	Digifant	Yellow	2-speed	191-919-521D	1990-1993	

### COOLING FAN WHEEL

Size	Type	Part Numbers	Years	Photos
280mm	4-blade	321-959-465	1979-1987	
280mm	6-blade	191-959-465 191-959-465A	1988-1993	

### COOLING FAN MOTOR

Size	Engines	Power	Fan Type	Part Numbers	Years	Images
280mm	DX, EJ, EN, EW, EX, HK, HN, KT, RE, EWA	100W	1-speed*	191-959-455E 191-959-455F 191-959-455L 191-959-455M 191-959-455AA 191-959-455AB	1979-1987	
280mm	JH	200W	1-speed*	191-959-455B 191-959-455C 191-959-455K 191-959-455N	1984-1987	 
280mm	DX, EW, EX, HK, HN, KT, RE, EWA	100/60W	2-speed	165-959-455L*	1988-1993	
280mm	JH, 2H (Hot climates: EW, EX, HN, RE, EWA)	200/120W	2-speed	165-959-455T*	1988-1993	
280mm	Hot climates: JH, 2H, DX, KT, HK	250/150W	2-speed	165-959-455A*	1988-1993	

**\* See notes on next page.**

**Most parts stores incorrectly list cooling fans as being "with A/C" and "without A/C". From 1979 through 1987, Cabriolets use one-speed fans; 1988-1993 Cabriolets use two-speed fans; A/C is irrelevant.**

\* One-speed fans are either NLA or are difficult to find new. Most stores are selling these 2-speed fans as retrofit replacements, which are 3-pin. **See next page.**



Boot (AKA grommet) for 2-pin fan motor connector: Part number 171-959-459.

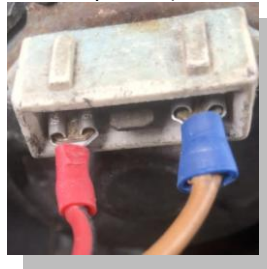
**If replacing a one-speed 2-pin fan with a two-speed 3-pin fan, you will also need to choose one of the following options for the wiring:**

1. Remove the terminals from the fan motor connector, apply heat shrink to the bare terminals (AKA quick disconnects), and install them onto the appropriate fan motor pins/terminals (see illustration on next page).
2. Cut the fan motor connector wires as close to the connector as possible, strip a small bit of insulation, install heat shrink tube to each wire, install & crimp insulated female disconnect on each wire, slide heat shrink over the disconnects and apply heat to shrink them, install the disconnects onto the appropriate fan motor pins/terminals (see illustration on next page).

For both options above, connect the red/black wire as follows:

- a. Current fan: 100W = use low/normal speed pin
- b. Current fan: 200W = use high speed pin

Example of the above options (minus the heat shrink):



**⚠ 1979-1982:** Using the high speed fan is not recommended. High speed is 17-21 amps, which reduces the safety margin of your 25A fuse and increases the load on your 40+-year-old wiring, all of which can lead to a potential electrical fire.

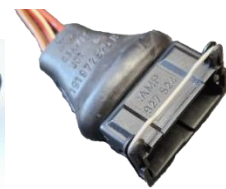
3. If you prefer to have a factory appearance, buy the appropriate 3-pin connector that matches your fan, wiring boot, and pins to install onto your existing wires (original connector will need to be cut off); or buy a used 3-pin harness. If you wish to have two-speed operation, you will need to also add a third wire to the fan motor connector, which will also need to be added to the thermo-switch connector, as well as replacing the 2-pin thermo-switch with the appropriate 3-pin.



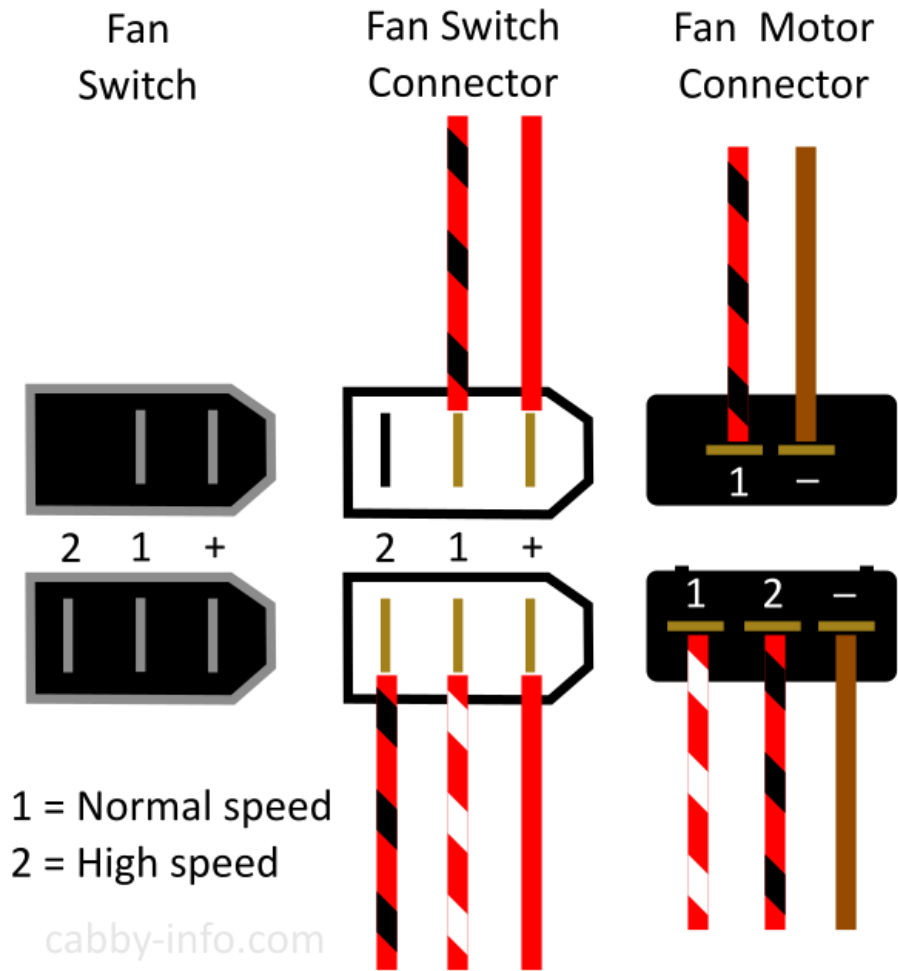
2-notch connector #1H0-906-233



3-notch connector #191-906-232B  
Boot #191-972-525B



**Factory-original fan switch and fan motor wiring:**



You can use a 3-pin switch with a 2-pin fan.  
You cannot use a 2-pin switch with a 3-pin fan, if you want the fan to run properly.