

# INSTRUMENT PANEL

## Article Text

1989 Volkswagen Golf  
For Volkswagen Technical Site  
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Monday, August 23, 1999 11:55PM

### ARTICLE BEGINNING

#### 1989-90 ACCESSORIES & EQUIPMENT Volkswagen Instrument Panels

Cabriolet, Fox, Golt, GTI, Jetta, Jetta GLI, Vanagon

### DESCRIPTION & OPERATION

Instrument cluster for most models includes speedometer, fuel gauge and temperature gauge. Optional instruments include clock, tachometer, voltmeter and oil temperature gauge.

Printed circuit provides voltage to gauges. A voltage regulator attached to the printed circuit controls voltage to fuel and temperature gauges. Light Emitting Diodes (LEDs) are used for most warning lights. To replace diodes, pull from printed circuit sockets.

NOTE: Volkswagen Tester (1301) is required for resistance tests. Tester settings are numerical. Settings do not indicate resistance in ohms. Manufacturer does not supply resistance value in ohms.

### TESTING

#### FUEL & TEMPERATURE GAUGE

1) Disconnect wire from fuel tank or temperature sending unit. Connect VW tester between wire and ground. Turn ignition on and allow 2 minutes for gauge reading to stabilize. Use FUEL GAUGE TESTING or TEMPERATURE GAUGE TESTING table to compare gauge reading. Gauge should be within one pointer width of specification.

2) If gauge needle does not move, check continuity between sender wire and gauge. If needle moves, but does not match specifications, replace gauge. If gauge works correctly with tester, but not sending unit, replace sending unit.

#### FUEL GAUGE TESTING

Application			Dial Setting	Indicator
Cabriolet & Fox	.....	55	.....	Full
		560	.....	Empty
Golf, GTI, Jetta & Jetta GLI	.....	52	.....	Full
		550	.....	Empty
Vanagon	.....	50	.....	Full
		320	.....	Empty

#### TEMPERATURE GAUGE TESTING

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Application	Dial Setting	Indicator
Cabriolet .....	500 .....	Cold
	62 .....	Hot
Golf, GTI, Jetta,		
Jetta GLI & Vanagon ....	510 .....	Cold
	50 .....	Hot
AA		

### VOLTAGE REGULATOR

- 1) If only one gauge is inoperative, regulator is not defective. If both fuel and temperature gauges are inoperative, voltage regulator may be faulty or have a bad ground connection.
- 2) Partially remove instrument cluster. Position cluster so regulator can be reached with voltmeter probes. Leave chassis harness connected. Ensure ground connection at regulator is tight.
- 3) Turn ignition on. Connect voltmeter negative lead (-) to terminal No. 2 of regulator. Connect positive lead (+) to terminal No. 1. See Fig. 1. Meter reading should be 10 volts with an allowable tolerance of .5 volt. If voltage reading exceeds specification, replace voltage regulator.

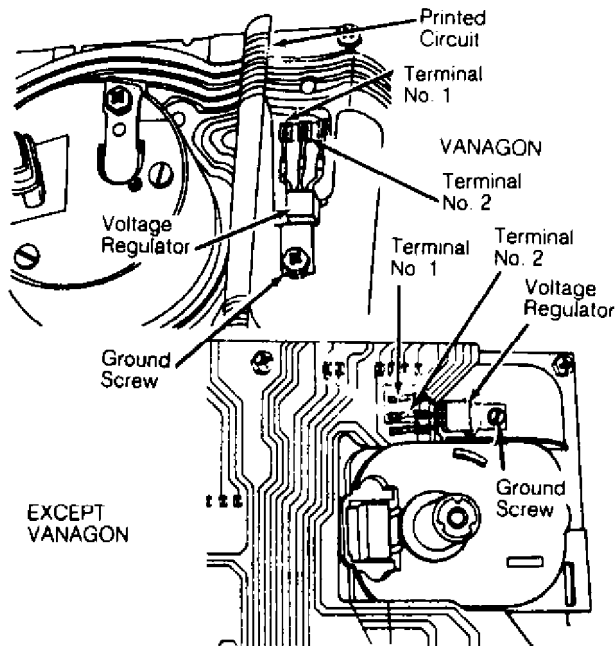


Fig. 1: Testing Voltage Regulator  
Courtesy of Volkswagen United States, Inc.

### REMOVAL & INSTALLATION

#### INSTRUMENT CLUSTER - CABRIOLET

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#### **Removal & Installation**

Disconnect negative battery cable. Remove steering wheel. Pull tilt shelf downward. Remove 3 shelf retaining screws and remove shelf. Remove 3 instrument panel lower retaining screws and pry off 3 clips. Remove 2 instrument trim retaining screws and remove instrument panel trim. Remove center instrument cluster screw and tip instrument panel cluster forward. Remove speedometer cable and wiring connector from back of cluster. Remove instrument panel cluster. To install, reverse removal procedure.

#### **INSTRUMENT CLUSTER - FOX**

##### **Removal & Installation**

Disconnect negative battery cable. Remove steering wheel. Carefully remove covers from vacant switch position. Depress switch spring retainer and remove switches from instrument panel. Disconnect wire connectors from switches. Remove 4 instrument cluster trim retaining screws. Remove instrument cluster trim panel. Remove 2 instrument cluster retaining screws. Remove speedometer cable. Disconnect cluster wire connector and remove instrument cluster. To install, reverse removal procedure.

#### **INSTRUMENT CLUSTER - GOLF, GTI, JETTA & JETTA GLI**

##### **Removal & Installation**

Remove temperature control knobs, levers and trim plate. Remove radio or convenience tray. Remove switches from instrument panel trim plate. Remove instrument panel trim plate. Remove 2 mounting screws and pull instrument cluster outward. Remove speedometer cable, vacuum hoses, and electrical connections. To install, reverse removal procedures.

#### **INSTRUMENT CLUSTER - VANAGON**

##### **Removal & Installation**

Disconnect negative battery cable. Reach behind cluster hood and pull back of hood upward. Pull hazard switch forward. Pull brake warning light housing toward front of vehicle. Remove 4 mounting screws and remove cluster. To install, reverse removal procedure.

#### **COMBINATION SWITCH**

##### **Removal**

Remove steering wheel. Remove column cover. Disconnect wiring and remove 3 switch screws. Remove switches.

##### **Installation**

Install switches on column. Place steering wheel on column and ensure clearance between wheel and turn signal switch is 1/16-1/8". Move spacer sleeve up or down to adjust clearance. Tighten steering wheel nut to 36 ft. lbs. (50 N.m) and replace pad.

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## **WIRING DIAGRAMS**

**NOTE:** See appropriate chassis wiring diagram in the **WIRING DIAGRAMS** section.

**END OF ARTICLE**