

INSTRUMENT PANEL - STANDARD

Article Text

1987 Volkswagen Quantum/Quantum Syncro
For Volkswagen Technical Site
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Sunday, March 19, 2000 01:46AM

ARTICLE BEGINNING

Switches & Instrument Panels
VOLKSWAGEN

DESCRIPTION

Instrumentation for most models includes speedometer, fuel gauge and temperature gauge. Optional instruments include clock, tachometer, voltmeter and oil temperature gauge. All models have a headlight switch mounted on the dashboard. Other switches on the instrument panel control the hazard flashers, rear window defogger and optional equipment. Levers on the steering column control high beams, turn signals and wiper/washers. Switches are retained in place by spring clips.

OPERATION

The cluster gauges receive power from a printed circuit. A voltage regulator attached to the printed circuit controls voltage to the fuel and temperature gauges. Light emitting diodes (LEDs) are used for most warning lights. The diodes may be replaced by pulling them out of the printed circuit sockets.

TESTING

NOTE: Volkswagen Tester (1301) is required for all resistance tests. Tester settings are numerical. Settings do not indicate resistance in ohms. Resistance value in ohms is not available.

FUEL GAUGE

1) Disconnect wire from fuel tank sending unit. Connect VW tester between wire and ground. Turn ignition on and allow 2 minutes for gauge reading to stabilize. Use the FUEL GAUGE TESTING table to compare gauge reading. It 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

AA

Application	Dial Setting	Indicator
Vanagon (W/O Tach.),		
Quantum, Fox	55	Full
	560	Empty
Vanagon (W/Tach.)	50	Full

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	320	Empty
All Others	52	Full
	550	Empty

AA

TEMPERATURE GAUGE

1) Disconnect sending unit wire. Connect VW tester between wire and ground. Turn ignition on and allow 2 minutes for gauge reading to stabilize. Use the TEMPERATURE GAUGE TESTING table to compare gauge reading. It 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.

TEMPERATURE GAUGE TESTING

AA

Application	Dial Setting	Indicator
Vanagon, Quantum		
Fox	500	Cold
	62	Hot
All Others	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 center terminal of regulator. Connect positive lead (+) to terminal "A". See Fig. 1. Meter reading should be 10 volts with an allowable tolerance of .5 volt. If voltage reading exceeds tolerance, replace voltage regulator.

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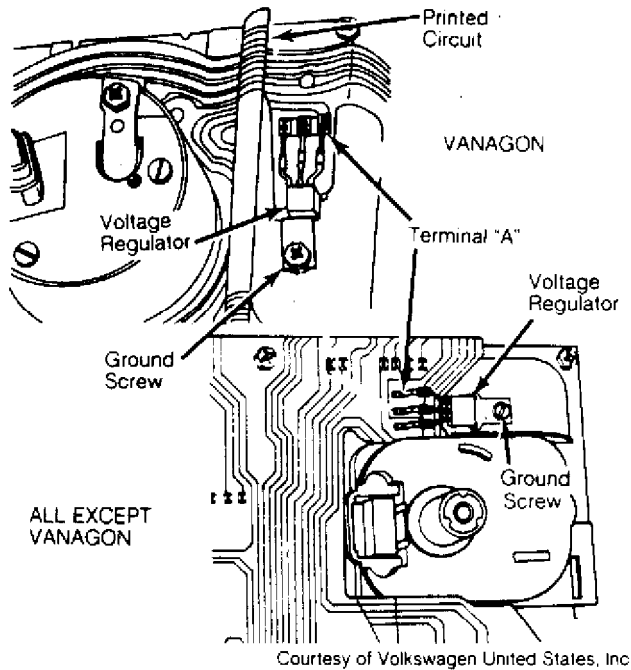


Fig. 1: Testing Voltage Regulator
Courtesy of Volkswagen United States, Inc.

REMOVAL & INSTALLATION

INSTRUMENT CLUSTER

Removal & Installation (Vanagon & Vanagon Syncro)

Disconnect battery ground. Reach behind cluster hood and pull back of hood up. 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.

Removal & Installation (Quantum & Quantum Syncro)

Disconnect battery ground. Remove steering wheel. Remove trim panel above steering column. Remove 4 retaining screws and instrument cluster trim. Remove top instrument cluster retaining screw and tip cluster outward. Remove speedometer cable and wiring connector from cluster. Remove instrument cluster. To install, reverse removal procedure.

Removal & Installation (Fox)

Disconnect battery ground. 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.

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Removal & Installation (Cabriolet & Scirocco)

Disconnect battery ground. 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.

Removal & Installation (Golf, GTI, Jetta & Jetta GLI)

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.

COMBINATION SWITCH

Removal

Pull off horn pad and remove steering wheel securing nut. 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 check that clearance between wheel and turn signal switch is 1/16-1/8" (2-4 mm). Move spacer sleeve up or down to adjust clearance. Tighten steering wheel nut to 36 ft. lbs. (50 N.m) and replace pad.

WIRING DIAGRAMS

NOTE: For wiring diagrams, see chassis wiring in WIRING DIAGRAMS section.

END OF ARTICLE