

Thursday, August 19, 1999 11:39PM

Component/Circuit (VAG 1598/18 Terminal No.)	Test Conditions/ Additional Steps (1)	Specified Value Or Test Result
Voltage Supply - Control Module (1, 54)	Ignition Off	Battery Voltage
Voltage Supply - Control Module Relay (1, 23)	(2) Ignition Off	Battery Voltage
Wiring To Fuel Pump Relay (6, 55 - Jumper)	Ignition On	Fuel Pump Must Operate
Heated Oxygen Sensor Relay (1, 28 - Briefly Jumper)	(2) Ignition On	Relay Must Operate (Click)
Malfunction Indicator Light (5, 55 - Jumper)	Ignition On	MIL Must Illuminate
Vehicle Speed Sensor (1, 65)	Ignition On, Select "D" or "N" & Raise & Rotate Left Front Wheel	Fluctuates Between Zero & 4 Volts Minimum
Ground Wire No. 58 Control Module - A/T (54, 58)	Ignition Off	Battery Voltage

Ground Wire No. 7 - A/T (7, 54)			
Ignition On, Select "P" Or "N" Select "1", "2", "3", "D", Or "R"			
Zero Or .5 Volt Max.			
Wire No. 39 From A/C (39, 55)			
Ignition On, Fan Switch On & A/C Switch On			
Battery Voltage			
Wire No. 37 From A/C Compressor (37, 38 - Briefly Jumper)			
Ignition On			
A/C Magnetic Clutch Operates			
Fuel Injector No. 1 (23, 24)			
Ignition Off			
14-21.5 Ohms			
Fuel Injector No. 2 (2, 23)			
Ignition Off			
14-21.5 Ohms			
Fuel Injector No. 3 (23, 25)			
Ignition Off			
14-21.5 Ohms			
Fuel Injector No. 4 (23, 26)			
Ignition Off			
14-21.5 Ohms			
EVAP Regulator Valve (23, 31)			
Ignition Off			
40-80 Ohms			
Engine Coolant Temp. Sensor (14, 33)			
(3) Ignition Off			
(3)			
Wiring To White Data Link Connector (1 (4), 21)			
Ignition Off			
1.5 Ohms Maximum			
Wiring To White Data Link Connector (1 (4), 43)			
Ignition Off			
1.5 Ohms Maximum			
Wiring To Heated Oxygen Sensor (20, 42)			
Disconnect Sensor Connector & Jumper Terminals No. 3 & No. 4			
1.5 Ohms Maximum			
Reconnect Sensor Conn.			
Infinity (Open)			
Throttle Position Sensor (33, 41)			
Ignition Off			
1600-2400 Ohms			
Throttle Position Sensor (33, 40)			
Throttle Closed			
1000-2000 Ohms			

	Throttle Slowly Opened	Steady Increase In Resistance
Throttle Position Sensor (40, 41)	Throttle Closed	2500- 4000 Ohms
	Throttle Slowly Opened	Steady Decrease In Resistance
Wiring To CMP Sensor (44, 56)	Disconnect Sensor Connector & Jumper Terminals No. 1 & No. 2	1.5 Ohms Maximum
Wiring To CMP Sensor (41, 56)	Jumper Terminals No. 1 & No. 3	1.5 Ohms Maximum
Wiring To Ignition Coil Power Output Stage (8, 55)	Disconnect Output Stage Connector	Infinity (Open)
Wiring To Ignition Coil Power Output Stage (8, 38)	Disconnect Output Stage Connector	Infinity (Open)
Wiring To Ignition Coil Power Output Stage (8, 55)	Jumper Terminals No. 1 & No. 2	1.5 Ohms Maximum
Wiring To Ignition Coil Power Output Stage (8, 38)	Jumper Terminals No. 2 & No. 3	1.5 Ohms Maximum
Wiring To Knock Sensor (33, 34)	Disconnect Sensor Connector	Infinity (Open)
Wiring To Knock Sensor (34, 56)	Jumper Terminals No. 1 & No. 3	1.5 Ohms Maximum
Intake Air Temp. Sensor (33, 36)	(3) Ignition Off	(3)
Wiring To Idle Air Control Valve (27, 53)	Ignition Off	7- 10 Ohms
	Disconnect Control Valve Connector	Infinity (Open)
Wiring To Mass Airflow Sensor (1, 16)	Disconnect Sensor Connector	1.5 Ohms Maximum
Wiring To Mass Airflow Sensor	Jumper Terminals No. 1 & No. 3	1.5 Ohms Maximum

J - PIN VOLTAGE CHARTS

Article Text (p. 4)

1996 Volkswagen Golf

For Volkswagen Technical Site

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Thursday, August 19, 1999 11:39PM

3	(1, 23)	3		3		3
3	Wiring To Mass	3	Jumper Terminals	3	1.5 Ohms Maximum	3
3	Airflow Sensor	3	No. 1 & No. 4	3		3
3	(1, 17)	3		3		3
3	Wiring To Engine Speed	3	Ignition Off	3	500-700 Ohms	3
3	Sensor (67, 68)	3		3		3
3	Wiring To Engine Speed	3	Ignition Off	3	Infinity	3
3	Sensor (56, 67)	3		3	(Open)	3
3	Wiring To Engine Speed	3	Ignition Off	3	Infinity	3
3	Sensor (56, 68)	3		3	(Open)	3
3	Wiring To Engine Speed	3	Disconnect Sensor	3	1.5 Ohms Maximum	3
3	Sensor (56, 67)	3	Connector	3		3
3	Wiring To Engine Speed	3	Jumper Terminals	3	1.5 Ohms Maximum	3
3	Sensor (56, 67)	3	No. 1 & No. 3	3		3
3	Wiring To Engine Speed	3	Jumper Terminals	3	1.5 Ohms Maximum	3
3	Sensor (56, 68)	3	No. 2 & No. 3	3		3
3	EGR Frequency Valve	3	(5) Ignition Off	3	Valve Must Operate	3
3	(If Equipped) (9, 56	3		3	(Click)	3
3	Briefly Jumper)	3		3		3
3	Wiring To EGR	3	Ignition Off	3	27-31 Ohms	3
3	Frequency Valve	3		3		3
3	(23, 30)	3	Disconnect Valve	3	Infinity	3
3		3	Connector	3	(Open)	3
3		3		3		3
3		3	Jumper Terminals	3	1.5 Ohms Maximum	3
3		3	No. 1 & No. 2	3		3
3	EGR Temp. Sensor	3	Disconnect Sensor	3	Infinity	3
3	(15, 33)	3	Connector	3	(Open)	3
3		3		3		3
3		3	Jumper Terminals	3	1.5 Ohms Maximum	3
3		3	No. 1 & No. 2	3		3
3	(1) - TESTING CONDITIONS: Disconnect harness connector from ECM	3		3		3
3	Connect Test Box (VAG 1598/18) to ECM harness connector,	3		3		3
3	leaving ECM disconnected.	3		3		3
3	(2) - With ignition off, jumper terminals No. 9 and 55 of test box.	3		3		3
3	(3) - Refer to the I - SYSTEM/COMPONENT TESTS article or the	3		3		3
3	K - SENSOR RANGE CHARTS article.	3		3		3
3	(4) - These are terminal connectors at data link connector.	3		3		3
3	(5) - With ignition off, jumper terminals No. 30 and 55 of test box.	3		3		3
3		3		3		3

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Voltage Supply - Control Module (1, 54)	Ignition Off	Battery Voltage
Voltage Supply - Control Module Relay (1, 23)	(2) Ignition Off	Battery Voltage
Wiring To Fuel Pump Relay (6, 55 - Jumper)	Ignition On	Fuel Pump Must Operate
Heated Oxygen Sensor Relay (1, 28 - Briefly Jumper)	(2) Ignition On	Battery Voltage
Malfunction Indicator Light (5, 10 - Jumper)	Ignition On	MIL Must Illuminate
Ground Wire No. 7 - M/T (7, 54)	Ignition Off	Battery Voltage
Wiring To Starter Relay - A/T (1, 7)	Select "P", Disconnect Ignition Coil & Operate Starter	Approximately 10 Volts
Vehicle Speed Sensor (56, 65)	Ignition On, Select "D" & Raise & Rotate Left Front Wheel	Fluctuates Between Zero & 4 Volts Minimum
Wiring For A/C (39, 55)	Ignition On, A/C Switch On	Battery Voltage
Wiring To A/C Compressor (37, 38 - Jumper)	Ignition On	A/C Magnetic Clutch Operates
Fuel Injector No. 1 (23, 24)	Ignition Off	15-21.5 Ohms
Fuel Injector No. 2 (3, 23)	Ignition Off	15-21.5 Ohms
Fuel Injector No. 3 (23, 26)	Ignition Off	15-21.5 Ohms
Fuel Injector No. 4 (4, 23)	Ignition Off	15-21.5 Ohms

Fuel Injector No. 5 (23, 25)	Ignition Off	15-21.5 Ohms
Fuel Injector No. 6 (2, 23)	Ignition Off	15-21.5 Ohms
EVAP Solenoid Valve I (23, 31)	Ignition Off	40-80 Ohms
Engine Coolant Temp. Sensor (14, 33)	(3) Ignition Off	(3)
Wiring To White Data Link Connector (15 (4), 21)	Ignition Off	1.5 Ohms Maximum
Wiring To White Data Link Connector (7 (4), 43)	Ignition Off	1.5 Ohms Maximum
Wiring To Oxygen Sensor (20, 42)	Disconnect Sensor Connector & Jumper Terminals No. 3 & No. 4	1.5 Ohms Maximum
	Reconnect Sensor Connector	Infinity (Open)
Throttle Position Sensor (33, 41)	Ignition Off	1500-2500 Ohms
Throttle Position Sensor (33, 40)	Throttle Valve Closed	700-1300 Ohms
	Throttle Valve Opened	Resistance Must Increase
Throttle Position Sensor (40, 41)	Throttle Valve Closed	2500-3500 Ohms
	Throttle Valve Opened	Resistance Must Decrease
Wiring To CMP Sensor (23, 56)	Disconnect Sensor Connector & Jumper Terminals No. 1 & No. 3	1.5 Ohms Maximum
Wiring To Hall Effect Sensor (44, 56)	Jumper Terminals No. 2 & No. 3	1.5 Ohms Maximum

Wiring To Ignition		Disconnect Output	1.5 Ohms Maximum
Power Output Stage		Stage Connector &	
(8, 55)		Jumper Terminals	
		No. 1 & No. 2	
Wiring To Ignition		Disconnect Output	1.5 Ohms Maximum
Coil (55, 60)		Stage Connector &	
		Jumper Terminals	
		No. 1 & No. 3	
Wiring To Ignition		Disconnect Output	1.5 Ohms Maximum
Coil (52, 55)		Stage Connector &	
		Jumper Terminals	
		No. 1 & No. 4	
Wiring To Ignition		Disconnect Output	1.5 Ohms Maximum
Coil (38, 55)		Stage Connector &	
		Jumper Terminals	
		No. 1 & No. 5	
Wiring To Knock		Disconnect Sensor	Infinity (Open)
Sensor I (33, 34)		Connector	
(5)			
		Jumper Terminals	1.5 Ohms Maximum
		No. 1 & No. 2	
Wiring To Knock		Jumper Terminals	1.5 Ohms Maximum
Sensor I (34, 56) (5)		No. 1 & No. 3	
Intake Air Temp.		(3) Ignition Off	(3)
Sensor (33, 36)			
Idle Air Control Valve		Ignition Off	6-12 Ohms
(27, 53)			
Wiring To Knock		Disconnect Sensor	Infinity (Open)
Sensor II (7, 33)		Connector	
(6)			
		Jumper Terminals	1.5 Ohms Maximum
		No. 2 & No. 3	
Wiring To Knock		Jumper Terminals	1.5 Ohms Maximum
Sensor II (56, 57)		No. 1 & No. 3	
(6)			
Wiring To MAF Sensor		Disconnect Sensor	1.5 Ohms Maximum
(16, 17)		Connector & Jumper	
		Terminals	
		No. 1 & No. 4	
Engine Speed Sensor		Ignition Off	500-700 Ohms
(67, 68) (7)			

END OF ARTICLE