

Test table

Overview of test steps

Component to be checked	Test step
Voltage supply for automatic gearbox control unit -J217-	– Perform test steps No. 1 → Anchor and No. 6 → Anchor
Selector lever lock solenoid -N110-	– Perform test steps No. 2 → Anchor and No. 18 → Anchor
Voltage supply for cruise control system	– Perform test step No. 3 → Anchor
Multi-function switch -F125-	– Perform test steps No. 4 → Anchor and No. 5 → Anchor
Kick-down switch -F8-	– Perform test step No. 7 → Anchor
Brake light switch -F-	– Perform test step No. 8 → Anchor
Solenoid valve 1 -N88-	– Perform test steps No. 9 → Anchor and No. 10 → Anchor
Solenoid valve 2 -N89-	– Perform test steps No. 9 → Anchor and No. 11 → Anchor
Solenoid valve 3 -N90-	– Perform test steps No. 9 → Anchor and No. 12 → Anchor
Automatic gearbox pressure regulating valve 1 -N215-	– Perform test steps No. 9 → Anchor and No. 13 → Anchor
Automatic gearbox pressure regulating valve 2 -N216-	– Perform test steps No. 9 → Anchor and No. 14 → Anchor
Automatic gearbox pressure regulating valve 3 -N217-	– Perform test steps No. 9 → Anchor and No. 15 → Anchor
Automatic gearbox pressure regulating valve 4 -N218-	– Perform test steps No. 9 → Anchor and No. 16 → Anchor
Automatic gearbox pressure regulating valve 5 -N233-	– Perform test steps No. 9 → Anchor and No. 17 → Anchor
Gearbox output speed sender -G195-	– Perform test step No. 19 → Anchor
Gearbox input speed sender -G182-	– Perform test step No. 20 → Anchor
Gearbox oil temperature sender -G93- (ATF)	– Perform test step No. 21 → Anchor
tiptronic switch -F189-	– Perform test steps No. 22 → Anchor and No. 23 → Anchor

Test step No. 1

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
26 + 6 26 + 28 1) 26 + 34	Voltage supply (terminal 30) for automatic gearbox control unit - J217-	<div><div>I Ignition switched off</div><div>– Switch to voltage measuring range</div></div>	Approx. battery voltage	<div>– Check wiring according to current flow diagram:</div> <div><div>I From contact 26 to terminal 30</div><div>I From contacts 6, 28 and 34 to earth</div></div>
55 + 6 55 + 28 1) 55 + 34	Voltage supply (terminal 15) for automatic gearbox control unit - J217-	– Switch on ignition	Approx. battery voltage	<div>– Check wiring according to current flow diagram:</div> <div><div>I From contacts 55 or 54 to terminal 15</div><div>I From contacts 6, 28 and 34 to earth</div></div>
55 + 54			0 V	
<div>I 1) Terminal 28 is used up to model year 1999 only.</div>				

Test step No. 2

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
2 + 6	Selector lever lock solenoid -N110-	I Ignition switched on		

		<ul style="list-style-type: none"> – Switch to voltage measuring range 	Approx. battery voltage	<ul style="list-style-type: none"> – Check wiring according to current flow diagram – Check multi-function switch -F125- for short circuit – Check selector lever lock solenoid -N110- for short circuit – Perform test step No. 18 → Anchor
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Test step No. 3

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
9 + 6	Only vehicles with throttle cable: Voltage supply for cruise control system	<ul style="list-style-type: none"> ┌ Ignition switched on ┌ Switch to voltage measuring range – Selector lever in “D”, “4” or “3” – Selector lever in “P”, “R”, “N” or “2” 	Approx. battery voltage Less than 5 V	<ul style="list-style-type: none"> – Check wiring according to current flow diagram – Perform test step No. 4 → Anchor

Test step No. 4

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
36 + 6	Multi-function switch - F125-	<ul style="list-style-type: none"> ┌ Ignition switched on ┌ Switch to voltage measuring range – Selector lever in “P”, “N”, “D” – Selector lever in “R”, “S” or “4”, “3”, “2” 	Approx. battery voltage Less than 1 V	<ul style="list-style-type: none"> – Check multi-function switch connector for contact corrosion – Check multi-function switch → Chapter „Checking multi-function switch -F125- with 8-pin connector“ or → Chapter „Checking multi-function switch -F125- with 10-pin connector“ – Perform test step No. 5 → Anchor
8 + 6		<ul style="list-style-type: none"> – Selector lever in “R”, “N”, “S” or “4” – Selector lever in “P”, “D”, “3”, “2” 	Approx. battery voltage Less than 1 V	
37 + 6		<ul style="list-style-type: none"> – Selector lever in “N”, “D”, “S” or “4”, “2” – Selector lever in “P”, “R”, “3” 	Approx. battery voltage Less than 1 V	
9 + 6		<ul style="list-style-type: none"> – Selector lever in “D”, “S” or “4”, “3” – Selector lever in “P”, “R”, “N”, “2” 	Approx. battery voltage Less than 1 V	

Test step No. 5

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
36 + 55	Multi-function switch - F125-	<ul style="list-style-type: none"> ┌ Ignition switched off ┌ Switch to resistance measuring range – Selector lever in “P”, “N”, “D” – Selector lever in “P”, “R”, “D”, “S” or “4”, “3”, “2” 	Less than 1 Ω ∞ Ω	<ul style="list-style-type: none"> – Check multi-function switch connector for contact corrosion – Check multi-function switch → Chapter „Checking multi-function switch -F125- with 8-pin connector“ or → Chapter „Checking multi-function switch -F125- with 10-pin connector“ – Perform test step No. 4 → Anchor
8 + 55		<ul style="list-style-type: none"> – Selector lever in “R”, “N”, “S” or “4” – Selector lever in “P”, “D”, “3”, “2” 	Less than 1 Ω ∞ Ω	

37 + 55		– Selector lever in “N”, “D”, “S” or “4”, “2”	Less than 1 Ω
		– Selector lever in “P”, “R”, “3”	$\infty \Omega$
9 + 55		– Selector lever in “D”, “S” or “4”, “3”	Less than 1 Ω
		– Selector lever in “P”, “R”, “N”, “2”	$\infty \Omega$

Test step No. 6

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
6 + earth at battery	Earth connections for automatic gearbox control unit -J217-	I Ignition switched off – Switch to resistance measuring range	Less than 1 Ω	– Check wiring according to current flow diagram
28 1) + earth at battery			Less than 1 Ω	
34 + earth at battery			Less than 1 Ω	
I 1) Terminal 28 is used up to model year 1999 only.				

Test step No. 7

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
18 + 54	Kick-down switch -F8-	I Ignition switched on I Switch to voltage measuring range		<ul style="list-style-type: none">– Check wiring and connectors according to current flow diagram– Vehicles with throttle cable: Adjust throttle cable; renew if necessary →Rep. Gr.20– Renew kick-down switch →Rep. Gr.20
		– Accelerator pedal not operated	Less than 5 V	
		– Accelerator pedal pressed down past kick-down point	Approx. battery voltage	
		I Ignition switched off I Switch to resistance measuring range		
		– Accelerator pedal not operated	$\infty \Omega$	
– Accelerator pedal pressed down past kick-down point	Less than 1.5 Ω			

Test step No. 8

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
10 + 6	Only vehicles up to model year 2000: Brake light switch -F-	I Ignition switched off I Switch to voltage measuring range		<div>– Check wiring and connectors according to current flow diagram</div> <div>– Renew brake light switch -F- →Brake system; Rep. Gr.46</div>
		– Brake pedal not depressed	Less than 1 V	
		– Brake pedal depressed	Approx. battery voltage	

Test step No. 9

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
52 + 53	Voltage supply wires to solenoid valves	I Ignition switched off		

		– Switch to resistance measuring range		<ul style="list-style-type: none"> – Check wiring according to current flow diagram – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Perform test step No. 1 → Anchor – Check wiring harness in gearbox according to current flow diagram; renew if necessary
		Up to model year 2001	Less than 1.5 Ω	
		From model year 2002 onwards	∞ Ω	

Test step No. 10

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
30 + 52	Solenoid valve 1 -N88-	<ul style="list-style-type: none"> – Ignition switched off – Switch to resistance measuring range 	25 ... 35 Ω	<ul style="list-style-type: none"> – Check 16-pin connector to gearbox for contact corrosion – Perform test step No. 9 → Anchor – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Check wiring harness in gearbox according to current flow diagram; renew if necessary – Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
30 + 34			∞ Ω	

Test step No. 11

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
33 + 52	Solenoid valve 2 -N89-	<ul style="list-style-type: none"> – Ignition switched off – Switch to resistance measuring range 	25 ... 35 Ω	<ul style="list-style-type: none"> – Check 16-pin connector to gearbox for contact corrosion – Perform test step No. 9 → Anchor – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Check wiring harness in gearbox according to current flow diagram; renew if necessary – Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
33 + 34			∞ Ω	

Test step No. 12

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
32 + 52	Solenoid valve 3 -N90-	<ul style="list-style-type: none"> – Ignition switched off – Switch to resistance measuring range 	25 ... 35 Ω	<ul style="list-style-type: none"> – Check 16-pin connector to gearbox for contact corrosion – Perform test step No. 9 → Anchor – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Check wiring harness in gearbox according to current flow diagram; renew if necessary – Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
32 + 34			∞ Ω	

Test step No. 13

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
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5 + 52	Automatic gearbox pressure regulating valve 1 -N215-	I Ignition switched off – Switch to resistance measuring range	6 ... 10 Ω	– Check 16-pin connector to gearbox for contact corrosion – Perform test step No. 9 → Anchor – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Check wiring harness in gearbox according to current flow diagram; renew if necessary – Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
5 + 34			∞ Ω	

Test step No. 14

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
1 + 53	Automatic gearbox pressure regulating valve 2 -N216-	I Ignition switched off – Switch to resistance measuring range	6 ... 10 Ω	– Check 16-pin connector to gearbox for contact corrosion – Perform test step No. 9 → Anchor – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Check wiring harness in gearbox according to current flow diagram; renew if necessary – Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
1 + 34			∞ Ω	

Test step No. 15

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
29 + 53	Automatic gearbox pressure regulating valve 3 -N217-	I Ignition switched off – Switch to resistance measuring range	6 ... 10 Ω	– Check 16-pin connector to gearbox for contact corrosion – Perform test step No. 9 → Anchor – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Check wiring harness in gearbox according to current flow diagram; renew if necessary – Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
29 + 34			∞ Ω	

Test step No. 16

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
4 + 52	Automatic gearbox pressure regulating valve 4 -N218-	I Ignition switched off – Switch to resistance measuring range	6 ... 10 Ω	– Check 16-pin connector to gearbox for contact corrosion – Perform test step No. 9 → Anchor – Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter – Check wiring harness in gearbox according to current flow diagram; renew if necessary – Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
4 + 34			∞ Ω	

Test step No. 17

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
51 + 53	Automatic gearbox pressure regulating valve 5 -N233-	<ul style="list-style-type: none"> Ignition switched off Switch to resistance measuring range 	6 ... 10 Ω	<ul style="list-style-type: none"> Check 16-pin connector to gearbox for contact corrosion Perform test step No. 9 → Anchor Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter Check wiring harness in gearbox according to current flow diagram; renew if necessary Renew solenoid valve → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
51 + 34			$\infty \Omega$	

Test step No. 18

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
2 + 54	Selector lever lock solenoid -N110-	<ul style="list-style-type: none"> Ignition switched off Selector lever at position "P" Switch to resistance measuring range 	14 ... 28 Ω	<ul style="list-style-type: none"> Check wiring according to current flow diagram Renew selector lever lock solenoid → Automatic gearbox 01L, four-wheel drive; Rep. Gr.37

Test step No. 19

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
14 + 42	Gearbox output speed sender -G195-	<ul style="list-style-type: none"> Ignition switched off Switch to resistance measuring range 	Min. 0.8 k Ω	<ul style="list-style-type: none"> Check wiring according to current flow diagram Renew gearbox output speed sender → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
14 + 34 14 + 54 42 + 54 42 + 34			Max. 1.2 k Ω $\infty \Omega$	
15 + 34 15 + 54	Screening for gearbox output speed sender -G195-		$\infty \Omega$	<ul style="list-style-type: none"> Check wiring according to current flow diagram

Test step No. 20

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
16 + 44	Gearbox input speed sender -G182-	<ul style="list-style-type: none"> Ignition switched off 88-pin connector disconnected from control unit Switch to resistance measuring range 	Min. 230 Ω	<ul style="list-style-type: none"> Check wiring according to current flow diagram Renew gearbox input speed sender → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
44 + 34 44 + 54 16 + 54 16 + 34			Max. 300 Ω $\infty \Omega$	
23 + 34 23 + 54	Screening for gearbox input speed sender -G182-		$\infty \Omega$	<ul style="list-style-type: none"> Check wiring according to current flow diagram

Test step No. 21



-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
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21 + 22	Gearbox oil temperature sender -G93- (ATF)	<ul style="list-style-type: none"> Ignition switched off Switch to resistance measuring range Measure ATF temperature 	Approx. 20 °C	Approx. 0.83 kΩ1)	<ul style="list-style-type: none"> Check wiring from automatic gearbox control unit -J217- to 16-pin connector → Chapter Check wiring harness in gearbox according to current flow diagram; renew if necessary (the gearbox oil (ATF) temperature sender is integrated in wiring harness) → Automatic gearbox 01L, four-wheel drive; Rep. Gr.38
21 + 34 22 + 34			Approx. 60 °C	Approx. 1.28 kΩ1)	
21 + 54 22 + 54			Approx. 120 °C	Approx. 1.88 kΩ1)	
				∞ Ω	
				∞ Ω	
<ul style="list-style-type: none"> 1) Permissible tolerance: ± 0.1 kΩ. 					

Test step No. 22

-V.A.G 1598/20-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
13 + 54	tiptronic switch -F189- (recognition)	<ul style="list-style-type: none"> Ignition switched on Switch to voltage measuring range Selector lever not in tiptronic gate Selector lever in tiptronic gate 	Less than 1 V Approx. battery voltage	<ul style="list-style-type: none"> Check wiring according to current flow diagram Renew tiptronic switch → Automatic gearbox 01L, four-wheel drive; Rep. Gr.37

Test step No. 23

-V.A.G 1598 A-sockets	Items tested	Test conditions and additional steps	Specification	Fault rectification if readout does not match specification
46 + 54 47 + 54	tiptronic switch -F189- (shift up/shift down)	<ul style="list-style-type: none"> Ignition switched on Switch to voltage measuring range Shift up button (+) or shift down button (–) not operated 	Less than 1 V	<ul style="list-style-type: none"> Check wiring according to current flow diagram Renew tiptronic switch → Automatic gearbox 01L, four-wheel drive; Rep. Gr.37
46 + 54		Operate shift up function (+) and keep selector lever pressed forwards or press and hold  button on multi-function steering wheel	Approx. battery voltage	
47 + 54		Operate shift down (–) function and keep selector lever pressed towards the rear or press and hold  button on multi-function steering wheel	Approx. battery voltage	