

Contents

01 - Self-diagnosis	1
1 Self-diagnosis	1
1.1 Self-diagnosis	1
1.2 Technical data of self-diagnosis	1
1.3 Safety precautions	1
1.4 Connecting fault reader V.A.G 1551	2
2 Interrogating and erasing fault memory	4
2.1 Interrogating and erasing fault memory	4
2.2 Flash codes and text output of VEZ control unit and KE III Jetronic control unit	5
2.3 Fault table	6
3 Final control diagnosis	9
3.1 Final control diagnosis	9
3.2 Preparing differential pressure regulator for differential pressure regulator current measurement	9
3.3 Performing final control diagnosis	11
4 Testing diagnostic connector wiring connections	13
4.1 Testing diagnostic connector wiring connections	13
4.2 Testing voltage supply to "black" diagnostic connector	14
4.3 Check wiring between diagnostic connector "brown" and KE III Jetronic control unit or VEZ control unit	14
25 - Mixture preparation, Injection	16
1 Servicing KE III Jetronic fuel injection system	16
1.1 Servicing KE III Jetronic fuel injection system	16
1.2 Safety precautions	16
1.3 Rules for cleanliness	16
1.4 Technical data	17
1.5 Fitting locations overview	18
1.6 Upper part of intake manifold - Overview	22
1.7 Intake manifold lower part - Overview	26
1.8 Checking wiring and components with test box V.A.G 1598	29
1.9 Replacing KE III Jetronic control unit	31
1.10 Checking power supply for KE III Jetronic control unit	33
1.11 Checking fuel pump relay -J17 and actuation	35
1.12 Testing cold start valve -N17	41
1.13 Checking idling stabilisation valve -N71	46
1.14 Testing altitude sender -F96	50
1.15 Checking and adjusting idling speed switch -F60 and full throttle switch -F81	54
1.16 Vehicles with manual gearbox	55
1.17 Vehicles with automatic gearbox:	59
1.18 Checking throttle valve potentiometer -G69 - vehicles with automatic gearbox	63
1.19 Adapting automatic gearbox control unit and throttle valve potentiometer -G69 to each other	65
1.20 Checking air flow meter potentiometer -G19	66
1.21 Checking differential pressure regulator -N73	72
1.22 Basic throttle valve setting	74
1.23 Checking intake air system for leaks (unmetered air)	75
2 Servicing fuel system	77
2.1 Servicing fuel system	77
2.2 Fuel distributor overview	77
2.3 Checking idling speed, CO content and ignition point	82
2.4 Vehicles with catalytic converter and lambda probe	85
2.5 Vehicles without catalytic converter and without lambda probe	88
2.6 Connecting remote control V.A.G 1348/3A with adapter cable V.A.G 1348/3-2	90

2.7	Connecting pressure gauge V.A.G 1318 with test adapter 1318/4	91
2.8	Checking system pressure, differential pressure and holding pressure	92
2.9	Checking injectors (comparison measurement of injection quantity)	96
2.10	Leak testing air-shrouded injectors and inserts	99
2.11	Removing and installing injectors	100
2.12	Removing and installing injector insert	102
2.13	Checking adjusting lever and control piston	103
2.14	Checking and adjusting rest position and free play of baffle plate	103
2.15	Basic setting of adjusting lever	106
2.16	Adjusting stop bolt for control piston	107
2.17	Checking cold / acceleration enrichment	108
2.18	Checking overrun cut-off and function of idling switch	111
3	Checking lambda control	113
3.1	Checking lambda control	113
3.2	Testing Lambda probe -G39 and Lambda control	113
3.3	Testing lambda probe heater -Z19	115
3.4	Removing and installing lambda probe	118
4	Checking fuel tank breather	119
4.1	Checking fuel tank breather	119
4.2	Checking activated charcoal filter system solenoid valve 1 -N80	119
5	Checking auxiliary signals	124
5.1	Checking auxiliary signals	124
5.2	Testing signal from air conditioner compressor	124
5.3	Checking engine speed signal	125
5.4	Checking vehicle speed signal	126
5.5	Checking gear signal	128
6	Vacuum diagram	129
6.1	Vacuum diagram	129
28 - Ignition system	131	
1	Checking ignition system	131
1.1	Checking ignition system	131
1.2	Safety precautions	131
1.3	Test data, spark plugs	131
1.4	Servicing ignition system	132
1.5	Basic setting of ignition distributor	136
1.6	Testing ignition coils	138
1.7	Checking output stage for ignition coil	140
1.8	Checking coolant temperature sender -G62	144
1.9	Replacing VEZ control unit	147
1.10	Checking power supply to VEZ control unit	149
1.11	Checking knock sensor	151
1.12	Checking Hall sender -G40	153