

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 vehicle diagnosis, measurement and information system VAS 5051 or fault reader V.A.G 1551 and selecting functions	1
2 Interrogating and erasing fault memory	4
2.1 Interrogating and erasing fault memory	4
2.2 Fault table	6
3 Final control diagnosis	11
3.1 Final control diagnosis	11
3.2 Preparing differential pressure regulator for pressure regulator measurement	12
3.3 Performing final control diagnosis	13
4 Basic setting	14
4.1 Basic setting	14
5 Coding control unit	16
5.1 Coding control unit	16
6 Reading measured value block	17
6.1 Reading measured value block	17
7 Testing diagnostic connector wiring connections	21
7.1 Testing diagnostic connector wiring connections	21
7.2 Checking voltage supply to black diagnostic connector	22
7.3 Testing wiring between white diagnostic connector and engine control unit	22
7.4 Testing wiring for coding connector	24
25 - Mixture preparation, Injection	25
1 Servicing KE-Motronic fuel injection system	25
1.1 Servicing KE-Motronic fuel injection system	25
1.2 Safety precautions	25
1.3 Rules for cleanliness	25
1.4 Technical data	26
1.5 Fitting locations overview	27
1.6 Checking wiring and components with test box V.A.G 1598	31
1.7 Renewing engine control unit	32
1.8 Fuel pump relay -J17 and actuation	35
1.9 Checking cold start valve -N17	42
1.10 Checking idling stabilisation valve -N71	48
1.11 Checking idling switch -F60 and full throttle switch -F81	52
1.12 Checking air flow meter potentiometer -G19	56
1.13 Checking pressure regulator -N73	61
1.14 Checking and adjusting dashpot	63
1.15 Basic setting of throttle valve setting	64
1.16 Checking intake air system for leaks (unmetered air)	64
2 Servicing fuel system	66
2.1 Servicing fuel system	66
2.2 Fuel distributor - overview	66
2.3 Removing and installing injection system components	71
2.4 Checking idling speed, CO content and ignition point	76
2.5 Connecting remote control V.A.G 1348/3A with adapter cable V.A.G 1348/3-2	80
2.6 Connecting pressure meter V.A.G 1318 with test adapter 1318/4	80
2.7 Checking system pressure, differential pressure and holding pressure	82
2.8 Removing and installing injectors	86



2.9	Checking injectors	88
2.10	Leakage test of air-flushed injectors and inserts	92
2.11	Removing and installing injector insert	92
2.12	Checking adjustment lever and control piston	93
2.13	Checking and adjusting resting position and idling path of baffle plate	94
2.14	Basic setting of adjustment lever	97
2.15	Checking cold acceleration enrichment and deceleration fuel cutoff	97
2.16	Checking late start- and warm run enrichment	99
3	Checking lambda control	101
3.1	Checking lambda control	101
3.2	Testing Lambda probe -G39 and Lambda control	101
3.3	Checking lambda probe heater -Z19	103
3.4	Removing and installing lambda probe	105
4	Checking fuel tank breather	106
4.1	Checking fuel tank breather	106
4.2	Checking solenoid valve 1 for activated charcoal filter -N80	106
5	Checking auxiliary signals	111
5.1	Checking auxiliary signals	111
5.2	Checking the air conditioner compressor shut-off	112
5.3	Checking engine speed signal	113
5.4	Checking consumption signal for on-board computer	113
5.5	Checking vehicle speed signal	113
28	- Ignition system	115
1	Checking ignition system	115
1.1	Checking ignition system	115
1.2	Safety precautions	115
1.3	Technical data	115
1.4	Servicing ignition system	116
1.5	Installing distributor	120
1.6	Testing ignition coils	121
1.7	Checking output stage for ignition coil	123
1.8	Checking coolant temperature sender -G62	127
1.9	Checking control unit power supply	130
1.10	Testing knock sensor -G61	133
1.11	Checking Hall sender -G40	135