



Contents

01 - Self-diagnosis	1
1 Self-diagnosis	1
1.1 Self-diagnosis	1
1.2 Tools	1
1.3 Connecting fault reader	1
2 Self-diagnosis of immobilizer	3
2.1 Self-diagnosis of immobilizer	3
2.2 Additional information and prerequisites for work requiring the 7-digit PIN	4
2.3 Performing self-diagnosis of immobilizer	5
2.4 Reading measured value block	12
2.5 Adapting ignition keys	15
2.6 Lost key procedure	20
2.7 Setting when changing immobilizer control unit (coding control unit)	20
2.8 Procedure after changing immobilizer control unit	21
2.9 Procedure after changing engine control unit (Adaption)	24
2.10 Procedure when immobilizer control unit and engine control unit have been changed . . .	27
2.11 Procedure for immobilizer malfunctions	28
2.12 Activating used engine control unit	29
3 Self-diagnosis of radio systems for Golf Convertible 05.98 >	29
3.1 Self-diagnosis of radio systems for Golf Convertible 05.98 >	29
3.2 Self-diagnosis of radio systems	29
3.3 Final control diagnosis	35
3.4 Coding radio functions	37
3.5 Read measured value block	38
27 - Starter, Current supply	40
1 Battery	40
1.1 Battery	40
1.2 Battery handling instructions	40
1.3 Removing and installing battery	40
1.4 Visual check	42
1.5 Checking electrolyte level	42
1.6 No load voltage measurement	44
1.7 Checking specific gravity of all cells	45
1.8 Battery load test	47
1.9 Battery charging	48
1.10 Quick charging/starting boost	49
1.11 Checking main and auxiliary battery, only Ecomatic vehicles	49
2 Starter	50
2.1 Starter	50
2.2 Removing and installing starter	50
3 Alternator with ribbed belt	55
3.1 Alternator with ribbed belt	55
3.2 4-Cylinder Diesel and petrol engines with power-assisted steering	55
3.3 Diesel engine with power-assisted steering and air conditioner compressor	57
3.4 4-Cylinder injection engine with power-assisted steering and air conditioner compressor . .	59
3.5 6-Cyl. petrol engine	61
3.6 Belt drive	63
3.7 Checking and adjusting ribbed belt tension	67
3.8 Removing and installing ribbed belt, 4 cylinder engine	67
3.9 Removing and installing ribbed belt, 6-Cyl. engine	70
3.10 Checking alternator carbon brushes	71
3.11 Replacing ribbed belt pulley on alternator	72



3.12	Removing and installing ribbed belt pulley with freewheel	72
4	Mechanical cruise control system (CCS) in petrol and diesel engine vehicles (not TDI and SDI)	74
4.1	Mechanical cruise control system (CCS) in petrol and diesel engine vehicles (not TDI and SDI)	74
4.2	Assembly overview: Cruise control system (CCS)	74
4.3	Removing positioning element	77
4.4	Adjusting positioning element	77
4.5	Removing and installing vent valve	78
4.6	Removing and installing CCS control unit (J213)	78
4.7	Removing and installing CCS vacuum pump (V18)	79
4.8	Checking vacuum system for leaks	79
5	Electronic cruise control system (CCS) in vehicles with TDI and SDI engines	80
5.1	Electronic cruise control system (CCS) in vehicles with TDI and SDI engines	80
90	- Gauges, Instruments	81
1	Dash panel insert	81
1.1	Dash panel insert	81
1.2	Removing and installing dash panel insert	81
1.3	Renewing bulbs in dash panel insert	83
1.4	Dash panel insert connector pin assignment	85
1.5	Ecomatic pin assignment, from August 1995	87
2	Service interval display	88
2.1	Service interval display	88
2.2	Zeroing service interval display	88
2.3	Setting service interval display	89
2.4	Flexible service interval display	90
2.5	Zeroing flexible service interval display	91
2.6	Entering service interval data	92
91	- Radio, telephone, navigation	94
1	Radio systems	94
1.1	Radio systems	94
1.2	Radio system overview	94
1.3	Radio system "alpha"	94
1.4	Radio system "beta"	96
1.5	Radio system "gamma"	98
1.6	Radio system "gamma" with active loudspeaker system	102
1.7	Removing and installing radio >1993	106
1.8	Removing and installing radio 1994 >	107
1.9	Electronic anti-theft system for radio units 1994 >	108
1.10	Activating electronic anti-theft system for radio units 1994 >	109
1.11	Removing and installing cassette storage box	109
1.12	Removing and installing CD changer in Golf Convertible	110
2	Radio systems for Golf Convertible 05.98 >	111
2.1	Radio systems for Golf Convertible 05.98 >	111
2.2	Radio system overview	111
2.3	Radio system "BETA"	112
2.4	Radio system "GAMMA"	114
2.5	Removing and installing CD changer	116
2.6	Removing and installing radio	117
2.7	Electronic anti-theft system	118
2.8	Activating electronic anti-theft coding	119
2.9	Installing radios > 04.98 in vehicles from 05.98 >	119
2.10	Installing radios of radio generation 05.98 > in vehicles >04.98	121
3	Loudspeaker system	123
3.1	Loudspeaker system	123



3.2	Removing and installing front right treble loudspeaker	123
3.3	Removing and installing front left treble loudspeaker	123
3.4	Removing and installing rear bass loudspeakers (2-door)	124
3.5	Removing and installing rear treble loudspeakers (2-door)	124
3.6	Removing and installing rear bass loudspeakers (4-door)	125
3.7	Removing and installing rear treble loudspeakers (4-door)	125
3.8	Removing and installing front (bass) active loudspeakers	126
3.9	Removing and installing rear bass speakers with integrated dome type treble speakers (Golf Convertible)	126
4	Aerial systems	128
4.1	Aerial systems	128
4.2	Removing and installing telescopic aerial	128
4.3	Removing and installing short rod aerial in Golf Convertible	130
4.4	Removing and installing roof aerial up to Model year 1993	132
4.5	Removing and installing roof aerial from Model year 1994 >	134
4.6	Vento window aerial	135
4.7	Aerial amplifier	136
4.8	Suppression measures	136
5	Digital Sound System (DSP), Golf saloon	137
5.1	Digital Sound System (DSP), Golf saloon	137
5.2	Removing and installing housing with amplifier and bass loudspeaker	141
5.3	Removing and installing amplifier	143
5.4	Removing and installing operating unit in centre console	143
6	Digital Sound System (DSP), Golf Convertible	145
6.1	Digital Sound System (DSP), Golf Convertible	145
6.2	Removing and installing amplifier	148
6.3	Removing and installing operating unit in centre console	148
6.4	DSP system in conjunction with "GAMMA" Radio 05.98 >	149
92	- Windscreen wipe and wash system	150
1	Windscreen wiper system	150
1.1	Windscreen wiper system	150
1.2	Windscreen wiper assembly overview	150
1.3	Adjusting wiper blade rest position	153
1.4	Removing and installing wiper blade rubber	154
2	Windscreen washer system	155
2.1	Windscreen washer system	155
2.2	Windscreen washer system assembly overview	155
2.3	Adjusting jets	156
2.4	Windscreen washer pump connection	157
3	Rear window wipe and wash system	158
3.1	Rear window wipe and wash system	158
3.2	Assembly overview: Rear window wipe and wash system, Golf saloon	158
3.3	Adjusting rear window wiper rest position	161
4	Headlight washer system	162
4.1	Headlight washer system	162
4.2	Assembly overview: Headlight washer system	162
4.3	Adjusting jets	164
5	Headlight washer system for Golf Convertible from March 1998	165
5.1	Headlight washer system for Golf Convertible from March 1998	165
5.2	Assembly overview: Headlight washer system	165
5.3	Adjusting jets	167
5.4	Removing and installing spray jet retainer	168
5.5	Removing and installing spray jet lift cylinder	168
94	- Lights, Lamps, Switches - exterior	170



1	Headlight	170
1.1	Headlight	170
1.2	Assembly overview: Headlight	170
1.3	Adjusting headlights	172
1.4	Removing and installing headlights	172
1.5	Removing and installing main and dipped beam bulb	173
1.6	Removing and installing headlight range control positioning motor	174
1.7	Assembly overview: Double headlight	175
1.8	Removing and installing main and dipped beam bulbs	177
2	Headlight for Golf Convertible from March 1998	178
2.1	Headlight for Golf Convertible from March 1998	178
2.2	Assembly overview: Headlight	178
2.3	Adjusting headlights	181
2.4	Removing and installing headlights	181
2.5	Replacing headlight bulb	182
2.6	Servicing the upper headlight securing lugs	185
2.7	Removing and installing headlight range control positioning motor	186
2.8	Converting headlights from driving on right to driving on left and visa versa	187
3	Front fog lights	188
3.1	Front fog lights	188
3.2	Removing and installing front fog lights	189
3.3	Adjusting foglight	189
3.4	Removing and installing foglight bulb	190
4	Front turn signals	190
4.1	Front turn signals	190
4.2	Removing front turn signals	191
4.3	Removing and installing turn signal bulb	191
5	Side mounted turn signals	192
5.1	Side mounted turn signals	192
5.2	Removing and installing side mounted turn signals	192
6	Tail lights	193
6.1	Tail lights	193
6.2	Assembly overview: Tail lights, Golf and Golf Convertible	193
6.3	Removing tail light bulb holder	194
6.4	Removing and installing rear light	194
6.5	Assembly overview: Tail lights, Golf Estate	195
6.6	Removing tail light bulb holder	196
6.7	Removing and installing rear light	196
6.8	Assembly overview: Tail lights, Vento	197
6.9	Removing tail light bulb holder	199
6.10	Removing and installing tail light in side panel	199
6.11	Removing and installing tail light in tailgate	200
7	Number plate lights	201
7.1	Number plate lights	201
7.2	Removing and installing number plate light	201
7.3	Removing and installing number plate light for Golf Convertible from March 1998	201
8	Additional brake light	202
8.1	Additional brake light	202
8.2	Removing and installing additional brake light for Golf and Golf Estate	202
8.3	Removing and installing additional brake light for Golf Convertible	203
8.4	Removing and installing additional brake light for Vento	205
9	Steering column switch and ignition/starter switch	206
9.1	Steering column switch and ignition/starter switch	206
9.2	Removing cover	209
9.3	Removing horn plate	209



9.4	Horn contact ring	209
9.5	Removing and installing horn plate on equipment with driver's airbag	210
9.6	Removing turn signal and windscreen wiper switch	210
9.7	Removing and installing lock cylinder	211
9.8	Wiring connections on steering column switch	211
96	- Lights, Lamps, Switches - interior	213
1	Immobilizer	213
1.1	Immobilizer	213
1.2	Removing and installing immobilizer	213
1.3	Removing and installing immobilizer reading coil -D2-	214
1.4	Retrofitting fuel shut-off valve control unit	215
1.5	Installing fuel shut-off valve control unit	216
1.6	Removing fuel shut-off valve control unit	218
1.7	Adapting fuel cut-off valve control unit to immobilizer control unit	218
1.8	Immobilizer functional check	221
2	Servicing anti-theft alarm (ATA)	222
2.1	Servicing anti-theft alarm (ATA)	222
2.2	Assembly overview: Anti-theft alarm system (ATA)	223
2.3	Removing and installing anti-theft alarm system contact switch (F120)	224
2.4	Removing anti-theft system warning lamp (K 95)	224
2.5	Removing and installing contact switch in tailgate/anti-theft warning system lock cylinder (F 124)	225
2.6	Removing and installing anti-theft alarm system horn (H8)	226
2.7	Removing and installing anti-theft alarm system control unit (J 284)	226
3	Interior lights and switches	227
3.1	Interior lights and switches	227
3.2	Removing and installing sliding roof switch -E8-	227
3.3	Removing and installing front left door contact switch	227
3.4	Removing and installing luggage compartment light switch	228
3.5	Removing and installing luggage compartment light switch for Golf Convertible from March 1998	229
3.6	Removing and installing front left electric window switch -E40-	229
3.7	Removing and installing mirror adjustment switch -E43- with mirror adjustment change-over switch -E48-	230
3.8	Removing and installing light switch	231
3.9	Removing and installing headlight range control adjuster -E102-	232
3.10	Removing and installing heated rear window switch	232
3.11	Removing and installing heated driver's seat regulating switch -E94- and heated front passenger's seat regulating switch -E95-	233
3.12	Removing and installing interior light	234
3.13	Removing and installing glove box light -W6-	235
3.14	Removing and installing luggage compartment light -W3-	236
3.15	Removing and installing hazard warning light switch in Golf Convertible 10.98 >	236
3.16	Removing and installing hazard warning light switch additional relay in Golf Convertible 10.98 >	237
97	- Wiring	239
1	Relay plate	239
1.1	Relay plate	239
1.2	Removing and installing relay plate	239
1.3	Removing and installing multi-pin plug behind relay plate	239