

Contents

24 - Mixture preparation - injection	1
1 Safety precautions and rules for cleanliness	1
1.1 General notes on self-diagnosis	1
1.2 Safety precautions when using testers and measuring instruments during a road test	2
1.3 Safety precautions	2
1.4 Safety precautions when working on vehicles with start/stop system	3
1.5 Rules for cleanliness when working on the injection system	3
1.6 Important: Required procedure prior to opening high-pressure injection system	4
1.7 Checking for leaks in the fuel system	5
1.8 Checking vacuum system	5
2 Technical data	6
3 Overview of fitting locations	7
4 Air cleaner	17
4.1 Air cleaner - exploded view	17
4.2 Removing and installing air filter element	18
4.3 Removing air cleaner housing	19
5 Intake manifold (bottom section), fuel rail, injectors	21
5.1 Intake manifold (top section) - exploded view	21
5.2 Intake manifold (bottom section) with fuel rail - exploded view	23
5.3 Removing and installing intake manifold (top section)	24
5.4 Removing and installing intake manifold (bottom section) with fuel rail	26
5.5 Removing and installing injectors	28
5.6 Removing and installing fuel pressure sender G247	33
5.7 Checking fuel pressure and residual pressure (up to high-pressure pump)	34
6 High-pressure pump	37
6.1 High-pressure pump - exploded view	37
6.2 Removing and installing high-pressure pipes	39
6.3 Removing and installing high-pressure pump	39
7 Lambda probes	44
7.1 Lambda probes - overview	44
7.2 Removing and installing Lambda probe G39 - bank 1 (right-side)	45
7.3 Removing and installing Lambda probe after catalytic converter G130 - bank 1 (right-side)	47
7.4 Removing and installing Lambda probe 2 G108 before catalytic converter - bank 2 (left-side)	49
7.5 Removing and installing Lambda probe 2 after catalytic converter G131 - bank 2 (left-side)	51
8 Engine control unit	54
8.1 Wiring and component check with test box V.A.G 1598/42	54
8.2 Removing and installing engine control unit J623	56
28 - Ignition system	57
1 General notes and safety precautions	57
1.1 General notes on ignition system	57
1.2 Safety precautions when working on the injection and ignition system	57
1.3 Safety precautions when working on vehicles with start/stop system	58
1.4 Safety precautions when using testers and measuring instruments during a road test	58
2 Servicing ignition system	59
2.1 Test data	59
2.2 Ignition system - exploded view	60
2.3 Removing and installing ignition coils	61
2.4 Removing and installing knock sensors	63



2.5	Removing and installing Hall senders	64
2.6	Removing and installing engine speed sender G28	65