

Contents

23 - Mixture preparation - injection	1
1 Safety precautions and rules for cleanliness	1
1.1 Safety precautions when using testers and measuring instruments during a road test	1
1.2 Safety precautions for vehicles with start/stop system	2
1.3 Safety precautions when working on the fuel system	2
1.4 Safety precautions when working on the injection and glow plug system	4
1.5 Safety precautions when working on the injection and glow plug system	4
1.6 Checking vacuum system	4
2 Overview of fitting locations - injection system	6
3 Overview - fuel system	14
4 Filling and bleeding fuel system	16
5 Air cleaner	17
5.1 Exploded view - air cleaner	17
5.2 Removing and installing engine cover panel	18
5.3 Removing and installing air filter element	19
5.4 Removing and installing air cleaner housing	20
6 Intake manifold	23
6.1 Exploded view - intake manifold	23
6.2 Removing and installing throttle valve module J338	24
6.3 Removing and installing intake manifold	24
7 High-pressure pump	28
7.1 Exploded view - high-pressure pump	28
7.2 Removing and installing high-pressure pump	29
7.3 Performing first fuel filling after installing high-pressure pump	31
7.4 Checking fuel system for leaks	32
8 Injectors	34
8.1 Injectors - exploded view	34
8.2 Checking injectors	37
8.3 Performing adaption of correction values for injectors	37
8.4 Checking return flow rate of injectors with engine running	38
8.5 Checking return flow rate of injectors at starter cranking speed	40
8.6 Checking for injectors sticking open	41
8.7 Removing and installing injectors	43
9 Senders and sensors	48
9.1 Removing and installing air mass meter G70	48
9.2 Removing and installing fuel rail	48
9.3 Installing high-pressure pipes	51
9.4 Checking fuel pressure (low pressure)	52
9.5 Checking fuel pressure regulating valve N276	54
9.6 Removing and installing fuel pressure regulating valve N276	55
9.7 Removing and installing fuel pressure sender G247	56
10 Lambda probe	60
10.1 Lambda probe and exhaust gas temperature senders - exploded view	60
10.2 Removing and installing Lambda probe G39 with Lambda probe heater Z19	61
10.3 Removing and installing NOx sender 2 G687 - vehicles with reducing agent system (AdBlue system) only	62
10.4 Removing and installing pressure differential sender G505	63
11 Engine control unit	64
11.1 Wiring and component check with test box V.A.G 1598/42	64
11.2 Removing and installing engine control unit J623	65
28 - Glow plug system	69

1	Glow plug system	69
1.1	Checking glow plug system	69
1.2	Exploded view - glow plugs, Hall sender, engine speed sender	70
1.3	Removing and installing glow plugs	70
1.4	Removing and installing Hall sender G40	72
1.5	Removing and installing engine speed sender G28	73