

Contents

00 - Technical data	1
1 Safety precautions	1
1.1 Safety precautions when working on the fuel supply system	1
1.2 Safety precautions when working on vehicles with start/stop system	2
1.3 Safety precautions when using testers and measuring instruments during a road test	3
2 Repair instructions	4
2.1 Rules for cleanliness	4
2.2 General notes	4
2.3 General repair instructions	5
23 - Mixture preparation - injection	7
1 Injection system	7
1.1 Overview of fitting locations - injection system (CDUD, CPNB)	7
1.2 Overview of fitting locations - injection system (CGQB)	17
1.3 Overview - fuel system	29
1.4 Filling and bleeding fuel system	30
1.5 Checking fuel system for leaks	31
2 Vacuum system	32
2.1 Connection diagram - vacuum system	32
2.2 Checking vacuum system	32
3 Air cleaner	34
3.1 Exploded view - air cleaner	34
3.2 Removing and installing air cleaner housing	35
4 Intake manifold	39
4.1 Exploded view - intake manifold	39
4.2 Removing and installing intake manifold	40
4.3 Removing and installing throttle valve module J338	45
4.4 Removing and installing intake manifold flap motor V157	46
5 High-pressure pump	48
5.1 Exploded view - high-pressure pump	48
5.2 Removing and installing high-pressure pump	49
5.3 Performing first fuel filling after installing high-pressure pump	54
6 Injectors	57
6.1 Exploded view - injectors	57
6.2 Checking injectors	60
6.3 Performing adaption of correction values for injectors	61
6.4 Checking return flow rate of injectors with engine running	61
6.5 Checking return flow rate of injectors at starter cranking speed	65
6.6 Checking for injectors sticking open	67
6.7 Checking restrictor in fuel return line	69
6.8 Removing and installing injectors	70
6.9 Removing and installing fuel rail	76
6.10 Removing and installing high-pressure pipes	80
7 Senders and sensors	82
7.1 Removing and installing air mass meter G70	82
7.2 Checking fuel pressure regulating valve N276	82
7.3 Removing and installing fuel pressure regulating valve N276	84
7.4 Removing and installing fuel pressure sender G247	86
7.5 Removing and installing pressure differential sender G505	89
8 Lambda probe	91
8.1 Lambda probe (CDUD)	91
8.2 Lambda probe (CPNB)	93



8.3	Lambda probe (CGQB)	100
9	Engine control unit	102
9.1	Wiring and component check with isolator box VAS 6606	102
9.2	Removing and installing engine control unit J623	103
28	Glow plug system	107
1	Glow plug system	107
1.1	Checking glow plug system	107
1.2	Exploded view - glow plugs, Hall sender, engine speed sender	108
1.3	Removing and installing glow plugs	108
1.4	Removing and installing engine speed sender G28	110
1.5	Removing and installing Hall sender G40	110