

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 for vehicles with start/stop system	2
1.4 Safety precautions when working on the fuel system	2
1.5 Safety precautions when working on the ignition system	3
1.6 Warning instructions when working on vehicles with high-voltage system	4
1.7 Reducing pressure in high-pressure section of injection system	8
1.8 Checking vacuum system	11
2 Injection system	13
2.1 Technical data	13
2.2 Overview of fitting locations - injection system (CAEB, CDNB and CDZA)	13
2.3 Overview of fitting locations - injection system (vehicles with hybrid drive - CHJA)	22
3 Air cleaner	33
3.1 Exploded view - air cleaner housing	33
3.2 Removing and installing engine cover panel	34
3.3 Removing and installing air filter element	34
3.4 Removing and installing air cleaner housing	36
4 Intake manifold	37
4.1 Exploded view - intake manifold	37
4.2 Removing and installing intake manifold (CAEB, CDNB and CDZA)	38
4.3 Removing and installing intake manifold (vehicles with hybrid drive - CHJA)	42
4.4 Exploded view - fuel rail	48
4.5 Removing and installing fuel rail	50
4.6 Removing and installing throttle valve module J338 (vehicles without hybrid drive)	51
4.7 Removing and installing throttle valve module J338 (vehicles with hybrid drive - CHJA)	52
4.8 Cleaning throttle valve module J338	53
4.9 Checking intake manifold change-over function	54
5 Injectors	56
5.1 Removing and installing injectors	56
5.2 Cleaning injectors	60
6 High-pressure pump	62
6.1 Exploded view - high-pressure pump	62
6.2 Removing and installing high-pressure pump	63
7 Senders and sensors	66
7.1 Removing and installing air mass meter G70	66
7.2 Removing and installing fuel pressure sender G247	66
7.3 Checking fuel pressure sender G247	68
7.4 Checking residual pressure in fuel system (up to high-pressure pump)	70
7.5 Checking dual non-return valve	72
8 Lambda probe	74
8.1 Exploded view - Lambda probe	74
8.2 Removing and installing Lambda probe G39 and Lambda probe heater Z19 before catalytic converter	75
8.3 Removing and installing Lambda probe after catalytic converter G130 and Lambda probe 1 heater after catalytic converter Z29	75
9 Engine control unit	77
9.1 Wiring and component check with test box V.A.G 1598/42 (engine codes CAEB, CDNB, CDZA)	77
9.2 Wiring and component check with isolator box, 198-pin VAS 6606 for vehicles with hybrid drive (engine code CHJA)	79

9.3	Removing and installing engine control unit J623	80
28 - Ignition system		83
1	General notes and safety precautions	83
1.1	General notes on ignition system	83
1.2	Safety precautions	83
2	Ignition system	85
2.1	Test data	85
2.2	Exploded view - ignition system	85
2.3	Removing and installing ignition coils with output stages	86
2.4	Removing knock sensor 1 G61	88
2.5	Removing and installing engine speed sender G28	89