

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 when working on vehicles with start/stop system	2
1.4 Safety precautions when working on the fuel system	3
1.5 Safety precautions when working on the ignition system	3
1.6 Rules for cleanliness when working on fuel supply system and injection system	4
1.7 Reducing pressure in high-pressure section of injection system	4
1.8 Fitting protective cover on bodywork	5
1.9 Checking for leaks on vehicle	6
1.10 Checking vacuum system	7
2 Injection system	8
2.1 Technical data	8
2.2 Fitting locations - overview	9
3 Air cleaner	19
3.1 Air cleaner - exploded view	19
3.2 Removing and installing air filter elements	24
3.3 Removing and installing air cleaner housing	28
3.4 Removing and installing air mass meter G70 / air mass meter 2 G246	32
4 Intake manifold, fuel rail and injectors	34
4.1 Intake manifold (top section) - exploded view	34
4.2 Removing and installing throttle valve module J338 / throttle valve module 2 J544	35
4.3 Removing and installing intake manifold (top section)	36
4.4 Intake manifold (bottom section), fuel rail and injectors - exploded view	41
4.5 Removing and installing intake manifold (bottom section) with fuel rail	43
4.6 Removing and installing injectors	46
5 High-pressure pump	51
5.1 High-pressure pump - exploded view	51
5.2 Removing and installing high-pressure pipe	52
5.3 Removing and installing high-pressure pumps	53
5.4 Removing and installing fuel pressure sender G247 / fuel pressure sender 2 G624	55
6 Lambda probes	56
6.1 Lambda probes - overview	56
6.2 Removing and installing Lambda probes	57
7 Engine control units	60
7.1 Engine control unit - exploded view	60
7.2 Wiring and component check with test box V.A.G 1598/42	60
7.3 Removing and installing engine control unit J623	62
7.4 Removing and installing engine control unit 2 J624	65
28 - Ignition system	69
1 General notes and safety precautions	69
1.1 General notes on ignition system	69
1.2 Safety precautions	70
2 Servicing ignition system	71
2.1 Test data	71
2.2 Ignition system - exploded view	72
2.3 Removing and installing ignition coils	73
2.4 Removing and installing knock sensors G61 / G66 / G198 / G199	75
2.5 Removing and installing Hall senders G40 / G163 / G300 / G301	75
2.6 Removing and installing engine speed sender G28	76