



## Contents

<b>00 - Technical data</b> .....	<b>1</b>
<b>1 Technical data</b> .....	<b>1</b>
1.1 Technical data .....	1
1.2 Engine number .....	1
1.3 Engine data .....	1
<b>10 - Removing and installing engine</b> .....	<b>3</b>
<b>1 Removing and installing engine</b> .....	<b>3</b>
1.1 Removing and installing engine .....	3
1.2 Notes on removing .....	3
1.3 Notes on installing .....	6
1.4 Tightening torques .....	8
1.5 Additional information and removal instructions for vehicles with air conditioner .....	8
<b>13 - Crankshaft group</b> .....	<b>9</b>
<b>1 Dismantling and assembling engine</b> .....	<b>9</b>
1.1 Dismantling and assembling engine .....	9
1.2 Removing and installing ribbed belt for air conditioner compressor .....	18
1.3 Removing and installing ribbed belt .....	18
1.4 Removing and installing toothed belt .....	19
<b>2 Removing and installing sealing flanges and flywheel/drive plate</b> .....	<b>23</b>
2.1 Removing and installing sealing flanges and flywheel/drive plate .....	23
2.2 Renewing crankshaft oil seal -pulley side- .....	27
2.3 Removing and installing drive plate .....	29
<b>3 Removing and installing crankshaft</b> .....	<b>32</b>
3.1 Removing and installing crankshaft .....	32
3.2 Pulling needle bearing out of crankshaft and driving in .....	34
3.3 Crankshaft dimensions .....	36
<b>4 Dismantling and assembling pistons and conrods</b> .....	<b>37</b>
4.1 Dismantling and assembling pistons and conrods .....	37
4.2 Piston and cylinder dimensions .....	43
<b>15 - Cylinder head, Valve gear</b> .....	<b>44</b>
<b>1 Removing and installing cylinder head</b> .....	<b>44</b>
1.1 Removing and installing cylinder head .....	44
1.2 Removing and installing cylinder head .....	47
1.3 Checking compressions .....	49
<b>2 Servicing valve gear</b> .....	<b>49</b>
2.1 Servicing valve gear .....	49
2.2 Reworking valve seats .....	55
2.3 Removing and installing camshaft oil seal .....	57
2.4 Removing and installing camshaft .....	59
2.5 Checking hydraulic bucket tappets .....	61
2.6 Checking valve guides .....	62
2.7 Renewing valve guides .....	62
2.8 Renewing valve stem seals .....	63
<b>17 - Lubrication</b> .....	<b>65</b>
<b>1 Removing and installing parts of the lubrication system</b> .....	<b>65</b>
1.1 Removing and installing parts of the lubrication system .....	65
1.2 Removing and installing sump .....	71
1.3 Checking oil pressure and oil pressure switch .....	75



<b>19 - Cooling system</b> . . . . .	<b>77</b>
<b>1 Removing and installing parts of cooling system</b> . . . . .	<b>77</b>
1.1 Removing and installing parts of cooling system . . . . .	77
1.2 Parts of cooling system body side . . . . .	78
1.3 Parts of cooling system engine side . . . . .	82
1.4 Removing and installing coolant pump and compact bracket . . . . .	87
1.5 Dismantling and assembling coolant pump . . . . .	91
1.6 Coolant hose connection diagram . . . . .	93
1.7 Draining and filling cooling system . . . . .	95
1.8 Removing and installing radiator . . . . .	98
1.9 Removing and installing viscous fan coupling . . . . .	99
1.10 Removing and installing viscous fan coupling bush . . . . .	100
1.11 Removing and installing coolant pump V-belt . . . . .	101
<b>20 - Fuel supply system</b> . . . . .	<b>103</b>
<b>1 Removing and installing parts of fuel supply system</b> . . . . .	<b>103</b>
1.1 Removing and installing parts of fuel supply system . . . . .	103
1.2 Removing and installing fuel tank with its attachments and fuel filter . . . . .	104
1.3 Safety precautions when working on the fuel supply system . . . . .	111
1.4 Rules for cleanliness . . . . .	112
1.5 Removing and installing fuel delivery unit . . . . .	112
1.6 Removing and installing fuel tank . . . . .	115
1.7 Checking fuel pump . . . . .	116
1.8 Servicing accelerator mechanism . . . . .	123
1.9 Adjusting throttle cable . . . . .	126
1.10 Servicing parts of the activated charcoal filter system . . . . .	128
1.11 Checking fuel tank breather . . . . .	130
<b>26 - Exhaust system</b> . . . . .	<b>133</b>
<b>1 Removing and installing parts of exhaust system</b> . . . . .	<b>133</b>
1.1 Removing and installing parts of exhaust system . . . . .	133
1.2 Exhaust manifold, front exhaust pipe and catalyst with attachments . . . . .	133
1.3 Silencer with mountings . . . . .	136