



# Service

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## Workshop Manual FOX 2004 ➤

4-Cyl. injection engine (2 valve Roller Rocker Finger)									
Engine ID	BLH								

Edition 03.2006





## List of Workshop Manual Repair Groups

### Repair Group

- 00 - Technical data
- 10 - Removing and installing engine
- 13 - Crankshaft group
- 15 - Cylinder head, Valve gear
- 17 - Lubrication
- 19 - Cooling system
- 20 - Fuel supply system
- 24 - Mixture preparation, Injection
- 26 - Exhaust system
- 28 - Ignition system

Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

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## Contents

<b>00 - Technical data</b>	<b>1</b>
<b>1 Technical data</b>	<b>1</b>
1.1 Engine number	1
1.2 Engine features	1
<b>10 - Removing and installing engine</b>	<b>3</b>
<b>1 Removing and installing engine</b>	<b>3</b>
1.1 Removal - indications	4
1.2 Fastening the engine to the assembly stand	7
1.3 Notes on installation	7
1.4 Tightening torque	9
1.5 Engine group mounting	10
1.6 Additional indications and installation jobs in vehicles with air conditioning	10
<b>13 - Crankshaft group</b>	<b>12</b>
<b>1 Dismantling and assembling - engine</b>	<b>12</b>
1.1 Removing and installing Poly-V belt	16
<b>2 Removing and installing crankshaft flanges (flywheel side)</b>	<b>20</b>
2.1 Renewing crankshaft seal (pulley side)	21
2.2 Renewing crankshaft flange (flywheel side)	23
<b>3 Removing and installing crankshaft</b>	<b>31</b>
3.1 Identification of engine bearing shells	32
3.2 Colour codes	32
3.3 Crankshaft dimensions	32
<b>4 Removing and installing pistons and conrods</b>	<b>33</b>
4.1 Piston and cylinder dimensions	35
<b>15 - Cylinder head, Valve gear</b>	<b>36</b>
<b>1 Assembling and dismantling head</b>	<b>36</b>
1.1 Checking semi-automatic tension pulley of toothed belt	38
1.2 Removing, installing and adjusting toothed belt	40
1.3 Removing and installing head	44
1.4 Checking compression	48
<b>2 Servicing camshaft</b>	<b>51</b>
2.1 Check axial gap - valve camshaft	52
2.2 Reworking valve seats	54
2.3 Renewing camshaft seal	56
2.4 Removing and installing camshaft head cover	57
2.5 Checking valve guides	60
2.6 Renewing valve stem seal	61
<b>17 - Lubrication</b>	<b>63</b>
<b>1 Removing and installing parts of the lubrication system</b>	<b>63</b>
1.1 Removing and installing oil sump	65
1.2 Removing and installing oil pump	68
1.3 Checking oil pressure and oil pressure switch	70
<b>19 - Cooling system</b>	<b>72</b>
<b>1 Removing and installing parts of cooling system</b>	<b>72</b>
1.1 Cooling system components, body side	73
1.2 Cooling system components on engine side	74
1.3 Coolant hoses connections diagram	76



1.4	Draining and filling coolant	77
1.5	Removing and installing the radiator	80
1.6	Removing and installing coolant pump	82
<b>20</b>	<b>- Fuel supply system</b>	<b>84</b>
<b>1</b>	<b>Removing and installing fuel supply system components</b>	<b>84</b>
1.1	Remove and install fuel tank with accessory parts and fuel filter - removing and installing	85
1.2	Safety precautions for jobs on fuel supply system	86
1.3	Rules for cleanliness	87
1.4	Connecting and disconnecting "Pop Top" quick coupling	87
1.5	Removing and installing parts of the lubrication system	89
1.6	Removing and installing fuel pump	92
1.7	Removing and installing fuel level sensor	94
1.8	Removing and installing fuel tank	94
1.9	Checking fuel delivery unit	97
<b>2</b>	<b>Engine output electronic regulation (electronic throttle). check</b>	<b>103</b>
2.1	Electronic throttle system operation (E-gas)	103
<b>3</b>	<b>Activated charcoal system</b>	<b>105</b>
3.1	Operation	105
3.2	Activated charcoal filter system components - repair	106
3.3	Fuel container ventilation - checking	106
<b>24</b>	<b>- Mixture preparation, Injection</b>	<b>108</b>
<b>1</b>	<b>Servicing injection system</b>	<b>108</b>
1.1	General indications related to injection	108
1.2	Component location	108
1.3	Removing and installing parts of the injection system	110
1.4	Intake manifold - remove and install	113
1.5	Fuel distributor with injectors - remove and install	114
1.6	Dismantling and assembling air filter set	114
1.7	Safety precautions	116
1.8	Rules for cleanliness	117
1.9	Technical data	117
<b>2</b>	<b>Component checking</b>	<b>119</b>
2.1	Checking injection valves	119
2.2	Fuel pressure regulator and retaining pressure - check	121
<b>3</b>	<b>Código READINESS</b>	<b>126</b>
3.1	Read and generate READINESS code	126
<b>4</b>	<b>Engine control unit</b>	<b>127</b>
4.1	Removing and installing engine control unit	127
4.2	Adjust components	128
4.3	Again interrogate the control unit fault memory.	128
<b>26</b>	<b>- Exhaust system</b>	<b>130</b>
<b>1</b>	<b>Removal and installing of exhaust system parts</b>	<b>130</b>
1.1	Exhaust collector, front pipe with catalyst and installation parts	130
1.2	Silencer with brackets	131
<b>28</b>	<b>- Ignition system</b>	<b>133</b>
<b>1</b>	<b>Injection system - repair</b>	<b>133</b>
1.1	General indications on the ignition system	133
1.2	Removing and installing injection system components	133
1.3	Safety precautions	134
1.4	Test data, spark plugs	135



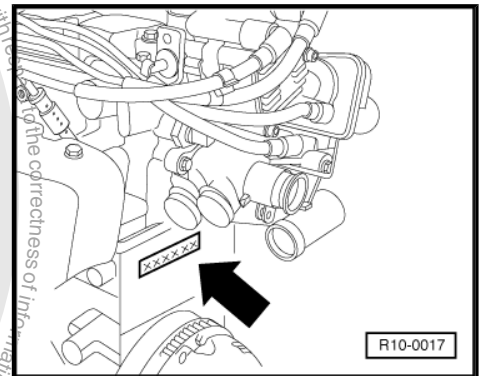
# 00 – Technical data

## 1 Technical data

### 1.1 Engine number

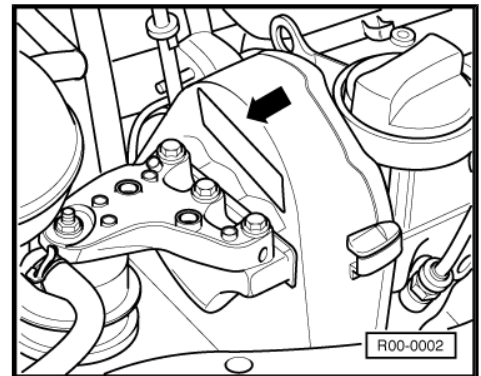
Engine number is formed by up to nine digits (alphanumeric). First part (at most 3 identification letters) represents the “engine identification letters”, the second part (6 digits) is the “serial number”. If more than 999,999 engines are manufactured under the same identification letters, the first digit of the 6-digit group is replaced by a letter.

Engine number (“identification letters” and “serial number”) are on the engine block, under the thermostatic valve body.



Additionally, an adhesive is installed on upper part of mechanical distribution -arrow- with “engine identification letters” and “serial number”.

Engine identification letters are also indicated on vehicle data plate.



### 1.2 Engine features

Engine code letters	BLH	
Manufactured		09.03 ▶
Capacity	cm <sup>3</sup>	1599
Output	cv(kW)/rpm	101.0(74.0)/5750
Torque	Nm(mkgf)/rpm	140.0(14.3)/3250
Diameter	Ømm	76.5
Stroke	mm	87.0
Compression rate		10.8:1
Octanage	at least	91 lead free
Injection, ignition		Bosch ME 7.5.10
Knock control		1 knock sensor
Selfdiagnosis		yes
Lambda control		2 probe



<b>Engine code letters</b>	<b>BLH</b>
Catalyst	yes



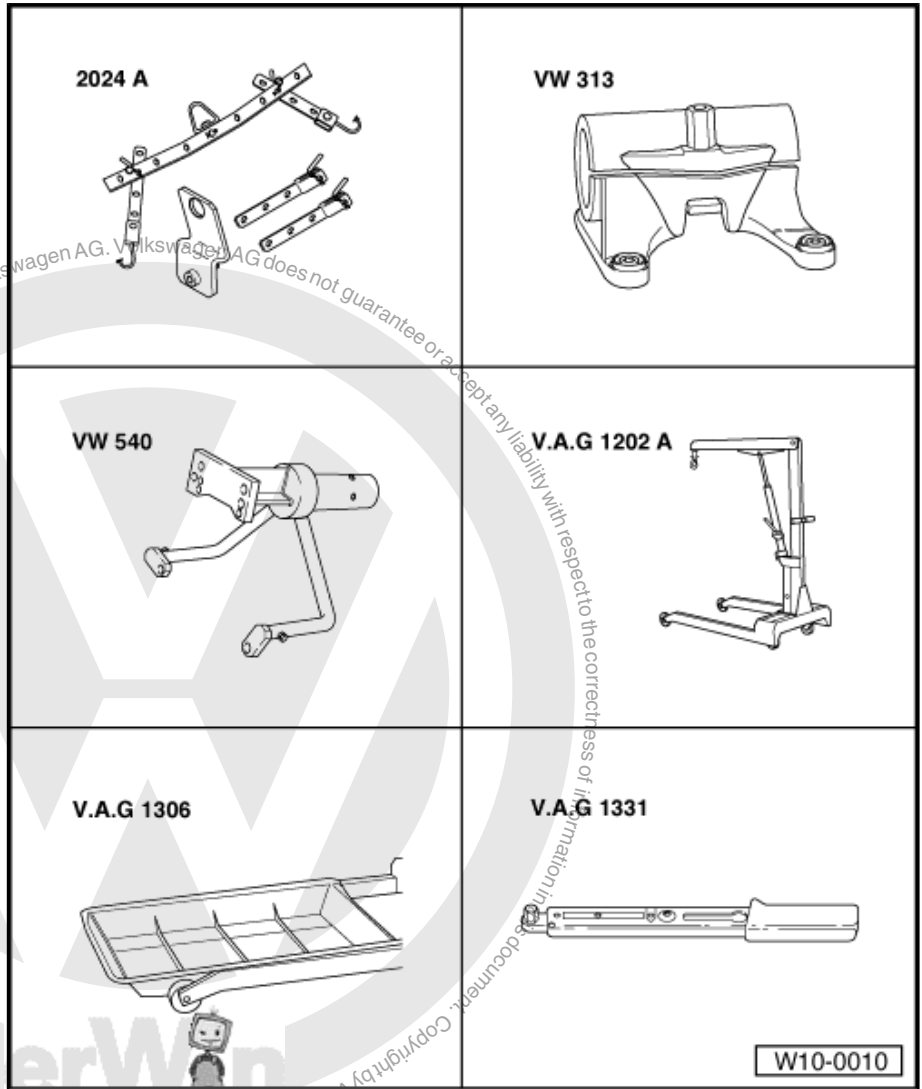


# 10 – Removing and installing engine

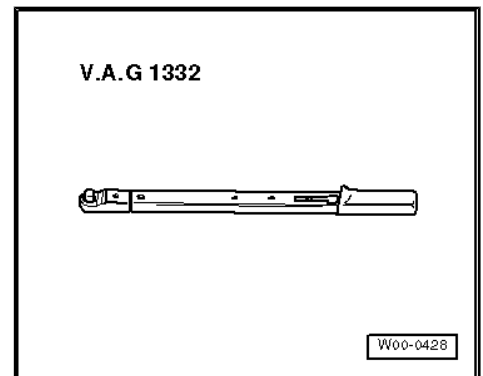
## 1 Removing and installing engine

### Special tools and workshop equipment required

- ◆ Coupling equipment -2024A-
- ◆ Tension stand -VW 313-
- ◆ Engine and transmission bracket -VW 540-
- ◆ Hydraulic winch - V.A.G 1202A-
- ◆ Oil collector -V.A.G 1306-
- ◆ Torque wrench (5...50Nm) - V.A.G 1331-

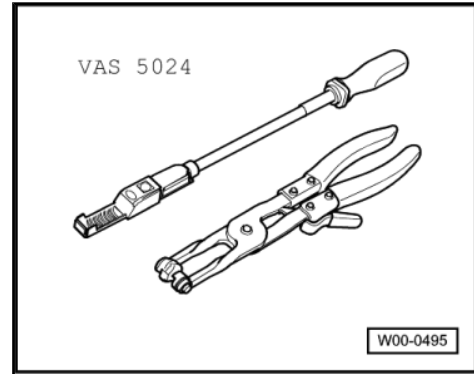


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- ◆ Suspension holes part number of replacement part -SJ 403 0103 390 F- (belt pulley side), -SJ 403 0103 390 G- (inertial flywheel side).
- ◆ Torque wrench (40...200Nm) -V.A.G 1332-
- ◆ Assembly tool for springtype clips -VAS 5024-
- ◆ Lubricating grease "G 000 100" (vehicles with mechanical transmission).
- ◆ Braces for cables.



## 1.1 Removal - indications



### Note

*Check whether vehicle has code radio, if so consult anti-theft code before disconnecting battery earth strap.*

- Engine is removed from the front, along with transmission.
- With ignition switched off disconnect battery earth strap.
- All cable fasteners that open or break during engine removal must be replaced and installed on the same locations when engine is installed.
- Remove air cleaner body ⇒ [page 115](#).
- Remove battery and battery retainer.
- Open and close cooling fluid container lid to release cooling system pressure.



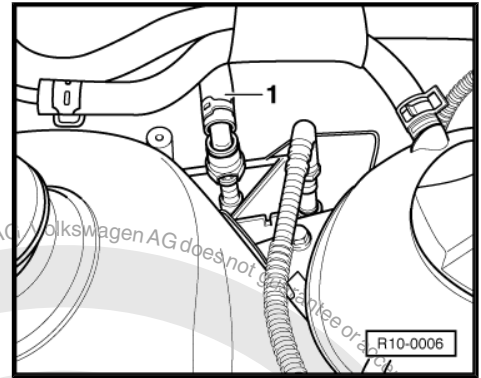
### WARNING

***Fuel supply hose is under pressure! Before loosening hose junctions, place a cloth around them. Next, eliminate pressure removing hose carefully.***





- Loosen fuel intake pipe 1 (press unlocking key).
- Loosen hose from electro-magnetic valve 1 -N80- on intake collector.
- Close tubes so that no dirt enters the fuel supply system.
- Respect cleaning rules ⇒ [page 87](#) .
- Disconnect or loosen the following components:
  - ◆ Vacuum hose of servo-brake intake collector
  - ◆ Cold start system electromagnetic valve hose
  - ◆ Engine rotation sensor connector sensor and intake collector pressure and intake air temperature sensor
  - ◆ Ignition transformer connector, Hall sender and butterfly control unit
  - ◆ Connector of coolant temperature sensor and oil pressure switch
  - ◆ Injection valve connectors
  - ◆ Lambda probe connector
  - ◆ Double connector of knock sensor (behind engine block)
- Remove/disconnect and loosen all transmission electrical cables, alternator and start engine.
- Remove/disconnect and loosen all other engine necessary electric cables.
- Remove engine vacuum and ventilation hoses.
- Remove lower engine compartment anti-noise.⇒ Rep. Gr. 50 ; Front part; Removing and installing engine lower anti-noise
- Disconnect exhaust pipe from exhaust collector ⇒ [page 130](#) , exhaust collector, front exhaust pipe and assembly parts.



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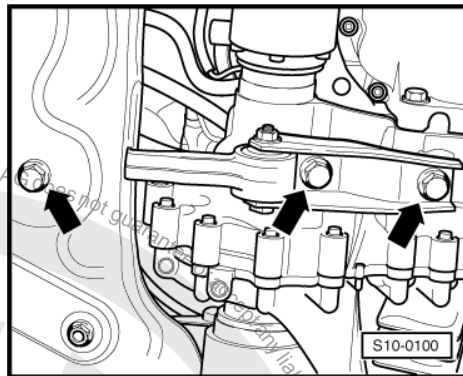
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FOX 2004 ▶

4-Cyl. injection engine (2 valve Roller Rocker Finger) - Edition 03.2006

- Loosen hanging bracket -arrows-.
- Loosen gearbox mechanism: ⇒ Rep. Gr. 34 ; Repair gearbox mechanism
- Loosen starting cylinder of hydraulic clutch: ⇒ Rep. Gr. 30 ; Repair clutch starting



**Note**

*Clutch pedal must not be started.*

- Drain coolant ⇒ [page 77](#) .
- Remove engine coolant hoses using assembly tool for spring braces -VAS 5024- .

**Vehicles with air conditioning**

- Remove Poly-V belt ⇒ [page 16](#) .
- Loosen air conditioning compressor: ⇒ Rep. Gr. 87
- See notes and installation jobs ⇒ [page 10](#) .

**Continuation for all vehicles**

- Remove power steering oil pump and push-it away along with hoses ⇒ Rep. Gr. 48 ; Steering; Hydraulic pump, compensation reservoir, hydraulic pipes; Hydraulic pump installed on upper part - removing and installing
- Loosen right and left articulated shafts and fasten them on top ⇒ Rep. Gr. 40 ; Repairing articulated shafts; Removing and installing articulated shafts.
- Remove front panel and its components ⇒ Rep. Gr. 50 ; Body, front part; Removing and installing front panel
- Loosen coolant tubes from engine head.
- Install suspension holes on coolant pipes location on the head. Tightening torque: 25Nm.
- Fasten with coupling equipment -2024A- as described below and lift a little with winch.

Belt pulley side: 3 Hole of drilled edge in position 1.

Inertial steering side: 3 Hole of drilled edge in position 5.



**WARNING**

*On hooks and pins, use safety locks -arrows-.*



**Note**

- ◆ *Positions numbered 1...4 on suspension bar face toward the pulley.*
- ◆ *Drilled holes on support are counted from the hook.*

