

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : VWV 1,6 W16
Compl. date: : 12.02.88
Edition : 12.02.88
replaces : 12.85
Calibrating oil : ISO 4113

Injection pump : VE 4/ 9F2250 R223
Type number : 0 460 494 182

Customer-specific information
Customer : VW

Engine : 086T-1.6L

TEST BENCH REQUIREMENTS

Calibrating-oil
return temp. °C
with thermometer : 40...48
electronically : 42...50

Inlet press., bar : 0,35

Calibrating nozzle-holder
assembly : 1 688 901 000

Opening
pressure bar : 147...150

Test inj. tubing : 1 680 750 017

Outside diameter : 6
x Wall thickness : 2
x Length mm : 840

Injection-pump setting values
Test specifications in parentheses

Timing-device travel:

Speed 1/min: 1250
Charge press. hPa: 750
Setting value mm: 2,9...3,3

Supply-pump pressure:

Speed 1/min: 1250
Charge press. hPa: 750
Setting value bar: 4,2...4,8

Full-load del. with charge press.:

Speed 1/min: 1500

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Charge press. hPa: 750
Del. quantity cm³/
1000H.: 43,5...44,5
Dispersion cm³/
1000H : 2,5
1000H : (3,0)

Full-load del. w/out charge press.:

Speed 1/min : 600
Del. quantity cm³/
1000H.: 23,5...24,5

Low-idle speed regulation:

Speed 1/min: 375
Del. quantity cm³/
1000H.: 11,0...13,0

Residual-Delivery Setting

Speed 1/min: 800
Del. quantity cm³/
1000H.: 2,5...3,5

Full-load speed regulation:

Speed 1/min: 2525
Charge press. hPa: 750
Del. quantity cm³/
1000H: 13,0...19,0

Start:

Speed 1/min: 100
Del. quantity : -
mind cm³/1000H.: 35,0

Load-dependent start of delivery:

Speed 1/min: 1250

Inspection-pump test specifications
Test specifications in parentheses

Timing-device characteristic:

1st speed 1/min: 1000
Charge press. hPa: 750
TD travel mm: 1,8...2,6
mm: (1,5...2,9)

2nd speed 1/min: 1250
Charge press. hPa: 750
TD travel mm: 2,9...3,3
mm: (2,4...3,8)

3rd speed 1/min: 1800
Charge press. hPa: 750
TD travel mm: 4,9...5,7
mm: (4,6...6,0)

4th speed 1/min: 2250
Charge press. hPa: 750

TD travel mm: 6,1...6,9
mm: (5,8...7,2)

Supply-pump pressure characteristic:

1st speed 1/min: 600
Charge press. hPa: 750
Supply-pump pressure bar: 2,3...2,9
2nd speed 1/min: 2250
Charge press. hPa: 750
Supply-pump pressure bar: 7,0...7,6

Overflow quantity at overflow valve:

1st speed 1/min: 600
Overflow quantity cm³/10s: 41...83
(26...98)
2nd speed 1/min: 2250
Charge press. hPa: 750
Overflow quantity cm³/10s: 55...138
(40...153)

Delivery-quant. and breakaway char.:

1st speed 1/min: 1000
Charge-air pressure-setting point hPa: 300
LDA stroke mm: 6,8
Del. quantity cm³/1000H.: 33,5...34,5
(31,0...37,0)
2nd speed 1/min: 2700
Charge press. hPa: 750
Del. quantity cm³/1000H.: 0,0...4,0
3rd speed 1/min: 2525
Charge press. hPa: 750
Del. quantity cm³/1000H.: 13,0...19,0
(12,0...20,0)
4th speed 1/min: 2425
Charge press. hPa: 750
Del. quantity cm³/1000H.: 23,0...33,0
(22,0...34,0)
5th speed 1/min: 2250
Charge press. hPa: 750
Del. quantity cm³/1000H.: 37,5...39,5
(36,3...40,7)
6th speed 1/min: 1500
Charge press. hPa: 750
Del. quantity cm³/1000H.: 43,5...44,5
(41,8...46,2)
7th speed 1/min: 600
Charge press. hPa: 750
Del. quantity cm³/1000H.: 32,0...35,0
(30,5...36,5)
8th speed 1/min: 600
Del. quantity cm³/1000H.: 23,5...24,5
(21,0...27,0)

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Zero delivery (stop):

Electr. shutoff:

Speed 1/min: 425
ELAB volt: -
Del. quantity cm³/1000H.: 0,0...3,0
max. 1000H.: -

Idle delivery:

1st speed 1/min: 375
Del. quantity cm³/1000H.: 11,0...13,0
(8,0...16,0)
2nd speed 1/min: 425
Del. quantity cm³/1000H.: 5,5...8,5
(3,0...11,0)

High Idle:

Speed 1/min: 525
Del. quantity cm³/1000H.: 7,0...9,0
(4,0...12,0)

Residual:

Speed 1/min: 800
Del. quantity cm³/1000H.: 2,5...3,5
(1,0...5,0)

Automatic starting fuel delivery:

1st speed 1/min: 100
Del. quantity cm³/ind.: -
1000H.: 35,0
2nd speed 1/min: 250
Del. quantity cm³/max. 1000H.: -
40,0

Shutoff electromagnet:

Cut-in min. voltage : 10,0
Rated voltage : 12,0

Mounting and assembly dimensions:

Designation

K mm : 3,2...3,4
KF mm : 5,6...6,0
MS mm : 1,1...1,5
SVS max. mm : 3,0
XK mm : 17,0...19,0
XL mm : 9,8...13,2

Remarks:

Correction at adjusting nut (46)