

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 20.08.96
Test oil : ISO 4113

Part no. : 0 460 424 078
Pump designation : VE4/12F1100R389-2

Customer-spec. information
Customer : CDC
Motor : 4 BT- 390 AUTOM.

TEST BENCH REQUIREMENTS

Overflow restriction mm : 0.55

Inlet press. bar : 0.35
Tolerance bar +- : 0.05

Test nozzle holde assembly : 1 688 901 027

Opening pressure bar : 250
Tolerance bar +- : 3

Test lines : 1 680 750 000

Outside diameter : 6.00

x inside diameter : 2.00
x length mm : 840

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm : 1,55
Tolerance mm +- : 0,02(0,06)
Outlet : A

Prestroke

N06

(as of UT) mm : 0,3
Tolerance mm +- : 0,02
Check tolerance mm +- : 0,04

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm : 750
Aneroid pressure hPa : 1000

Setting mm : 5.3
Tolerance mm +- : 0.5
Shutoff solenoid Volt : 24

SUPPLY PUMP PRESSURE

Rated speed rpm : 900
Aneroid pressure hPa : 1000
Shutoff solenoid Volt : 24

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 750
Aneroid pressure hPa : 1000
Del. quantity cm3/1000 strokes : 81.0
Tolerance cm3/1000 str. +- : 1.5
Spread cm3/1000 strokes : 4.0
Check tolerance cm3/1000S. : 4.5
Shutoff solenoid Volt : 24

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500
Del. quantity cm3/1000 strokes : 70.5
Tolerance cm3/1000 str. +- : 3.5
Shutoff solenoid Volt : 24
Check tolerance cm3/1000S. : 4.5

IDLE SETTING

Rated speed rpm : 425

Del. quantity
cm³/1000 strokes : 12.0
Tolerance
cm³/1000 str. + : 4.0
Shutoff solenoid
Volt : 24
Spread
cm³/1000 strokes : 5.5
Check tolerance
cm³/1000S. : 7.0

FULL-LOAD SPEED REGULATION

Rated speed rpm : 1145
Pressure hPa : 1000
Del. quantity
cm³/1000 strokes : 58.0
Tolerance
cm³/1000 str. + : 5.0
Shutoff solenoid
Volt : 24

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm³/1000 strokes : 100.0
Tolerance
cm³/1000 str. + : 40.0
Shutoff solenoid
Volt : 24

INJECTION-PUMP TEST SPECIFICATIONS

TIMING DEVICE CHARACTERISTIC

Rated speed rpm : 1050
Aneroid pressure
hPa : 1000
SV travel mm : 6.6
Tolerance mm + : 0.5
Check
tolerance mm + : 0.7
Shutoff solenoid
Volt : 24
Rated speed rpm : 500
Aneroid pressure
hPa : 1000
SV travel mm : 4.2
Tolerance mm + : 0.5

Check
tolerance mm + : 0.7
Shutoff solenoid
Volt : 24

SUPPLY PUMP PRESSURE CHARACTERISTIC

Rated speed rpm : 1050
Aneroid pressure
hPa : 1000
Supply pump
pressure bar : 6.6
Tolerance bar + : 0.3
Shutoff solenoid
Volt : 24

Rated speed rpm : 750
Aneroid pressure
hPa : 1000
Supply pump
pressure bar : 5.3
Tolerance bar + : 0.3
Shutoff solenoid
Volt : 24

Rated speed rpm : 500
Aneroid pressure
hPa : 1000
Supply pump
pressure bar : 4.2
Tolerance bar + : 0.3
Shutoff solenoid
Volt : 24

OVERFLOW QUANTITY

Rated speed rpm : 500
Overflow quantity
ccm/10s : 62.5
Tolerance
ccm/10s + : 20.8

Check tolerance
ccm/10s + : 20.8
Shutoff solenoid
Volt : 24

Rated speed rpm : 1100
Aneroid pressure
hPa : 1000
Overflow quantity
ccm/10s : 97.2
Tolerance
ccm/10s + : 41.6

Check tolerance
ccm/10s + : 41.6
Shutoff solenoid
Volt : 24

DELIVERY AND BREAKAWAY CHARACTERISTIC

Rated speed rpm : 1145
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 58.0
 Tolerance
 cm³/1000 str. ± : 5.0
 Check tolerance
 cm³/1000S. ± : 6.0
 Shutoff solenoid
 Volt : 24

Rated speed rpm : 1120
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 35.0
 Check tolerance
 cm³/1000S. ± : 20.0
 Shutoff solenoid
 Volt : 24

Rated speed rpm : 1200
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 1.5
 Tolerance
 cm³/1000 str. ± : 1.5
 Check tolerance
 cm³/1000S. ± : 1.5
 Shutoff solenoid
 Volt : 24

Rated speed rpm : 700
 Aneroid pressure
 hPa : 430
 Del. quantity
 cm³/1000 strokes : 77.5
 Tolerance
 cm³/1000 str. ± : 3.0
 Check tolerance
 cm³/1000S. ± : 4.0
 Shutoff solenoid
 Volt : 24

Rated speed rpm : 1100
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 73.0
 Tolerance
 cm³/1000 str. ± : 2.5
 Check tolerance
 cm³/1000S. ± : 1.5
 Shutoff solenoid
 Volt : 24

Rated speed rpm : 750
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 81.0
 Tolerance
 cm³/1000 str. ± : 1.5
 Check tolerance
 cm³/1000S. ± : 3.0
 Shutoff solenoid
 Volt : 24

MECHANICAL SHUTOFF

Rated speed rpm : 1050
 Aneroid pressure
 hPa : 1000
 Del. quantity
 cm³/1000 strokes : 1.5
 Tolerance
 cm³/1000 str. ± : 1.5
 Check tolerance
 cm³/1000S. ± : 1.5
 Shutoff solenoid
 Volt : 24

ELECTR. SHUTOFF
CONTROL LEVER, IDLE STOP

Rated speed rpm : 425
 Del. quantity
 cm³/1000 strokes : 1.5
 Tolerance
 cm³/1000 str. ± : 1.5
 Check tolerance
 cm³/1000S. ± : 1.5

IDLE DELIVERY

Rated speed rpm : 475
 Del. quantity
 cm³/1000 strokes : 2.0
 Tolerance
 cm³/1000 str. ± : 2.0
 Check tolerance
 cm³/1000S. ± : 2.0
 Shutoff solenoid
 Volt : 24

START TRANSITION

Rated speed rpm : 230
Del. quantity
cm³/1000 strokes : 40.0
Tolerance
cm³/1000 str. + : 20.0
Shutoff solenoid
Volt : 24

Rated speed rpm : 130
Del. quantity
cm³/1000 strokes : 100.0
Tolerance
cm³/1000 str. + : 40.0
Shutoff solenoid
Vclt : 24

ASSEMBLY AND ADJUSTMENT DIMENSIONS

Dimension KF mm : 5,2
Tolerance mm ← : 0,2
Dimension MS mm : 1,2
Tolerance mm + : 0,2
SVS dimension mm : 2,5

End of test-specification sheet