

BOSCH INJ. PUMP TEST SPECIFICATIONS

Note remarks

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

Edition : 22.06.94
Test oil : ISO 4113
Part no. : 0 460 494 370
Pump designation : VE4/9F2250R445-3

Customer-spec. information

Customer : PSA
Motor : XUD 9 TE-L;P.306

TEST BENCH REQUIREMENTS

Overflow restriction mm : 0.55

Inlet press. bar : 0.35
Tolerance bar + : 0.05

Test nozzle holde assembly : 1 688 901 022

Opening pressure bar : 130
Tolerance bar + : 3

Test lines : 1 680 750 073

Outside diameter : 6.00

x inside diameter : 2.00
x length mm : 450

REMARKS

BEGINNING OF DELIVERY

Start of delivery blocking

Plunger stroke mm : 0,3
Tolerance mm + : +0,02
Outlet : A

INJECTION PUMP SETTING VALUES

TIMING DEVICE TRAVEL

Rated speed rpm : 1500
Aneroid pressure hPa : 1000
Setting mm : 4.1
Tolerance mm + : 0.2
Shutoff solenoid Volt : 12

SUPPLY PUMP PRESSURE

Rated speed rpm : 1500
Aneroid pressure hPa : 1000
Supply pump pressure bar : 5.7
Tolerance bar + : 0.3
Shutoff solenoid Volt : 12

FULL-LOAD DELIVERY WITH BOOST PRESSURE

Rated speed rpm : 1250
Aneroid pressure hPa : 1000
Del. quantity cm3/1000 strokes : 54.5
Tolerance cm3/1000 str. + : 0.5
Spread cm3/1000 strokes : 2.0
Check tolerance cm3/1000S. : 3.0
Shutoff solenoid Volt : 12

FULL-LOAD DELIV. WITHOUT BOOST PRESSURE

Rated speed rpm : 500
Del. quantity cm3/1000 strokes : 37.0
Tolerance cm3/1000 str. + : 0.5
Shutoff solenoid Volt : 12
Check tolerance cm3/1000S. : 3.0

HOUSING-FIXED IDLE SPRING RESIDUAL QUANTITY SETTING

Rated speed rpm : 490

Del. quantity
cm3/1000 strokes : 8.5
Tolerance
cm3/1000 str. +- : 0.5
Shutoff solenoid
Volt : 12

IDLE DELIVERY

Rated speed rpm : 440
Del. quantity
cm3/1000 strokes : 16.0
Tolerance
cm3/1000 str. +- : 1.0
Spread
cm3/1000 strokes : 2.0
Shutoff solenoid
Volt : 12

HIGH IDLE SETTING

Rated speed rpm : 490
Del. quantity
cm3/1000 strokes : 16.0
Tolerance
cm3/1000 str. +- : 1.0
Shutoff solenoid
Volt : 12

FULL-LOAD SPEED REGULATION

Rated speed rpm : 2575
Pressure hPa : 1000
Del. quantity
cm3/1000 strokes : 14.0
Tolerance
cm3/1000 str. +- : 2.0
Shutoff solenoid
Volt : 12

STARTING FUEL DELIVERY

Rated speed rpm : 150
Del. quantity
cm3/1000 strokes : 52.0
Tolerance
cm3/1000 str. +- : 15.0
Shutoff solenoid
Volt : 12

SET GRADUATED STARTING DELIVERY CONTROL LEVER, IDLE STOP

Rated speed rpm : 200
Del. quantity
cm3/1000 strokes : 53.0
Tolerance
cm3/1000 str. +- : 3.0
Shutoff solenoid
Volt : 12

INJECTION-PUMP TEST SPECIFICATIONS

TIMING DEVICE CHARACTERISTIC

Rated speed rpm : 2000
Aneroid pressure
hPa : 1000
SV travel mm : 6.5
Tolerance mm +- : 0.4
Check
tolerance mm +- : 0.7
Shutoff solenoid
Volt : 12

Rated speed rpm : 900
Aneroid pressure
hPa : 1000
SV travel mm : 1.2
Tolerance mm +- : 0.4
Check
tolerance mm +- : 0.7
Shutoff solenoid
Volt : 12

SUPPLY PUMP PRESSURE CHARACTERISTIC

Rated speed rpm : 2000
Aneroid pressure
hPa : 1000
Supply pump
pressure bar : 6.8
Tolerance bar +- : 0.3
Shutoff solenoid
Volt : 12

Rated speed rpm : 900
Aneroid pressure
hPa : 1000
Supply pump
pressure bar : 4.2
Tolerance bar +- : 0.3
Shutoff solenoid
Volt : 12

OVERFLOW QUANTITY

Rated speed rpm : 2150
Aneroid pressure
hPa : 1000
Overflow quantity
ccm/10s : 97.2
Tolerance
ccm/10s +- : 41.6

Check tolerance
ccm/10s + : 41.6
Shutoff solenoid
Volt : 12

Rated speed rpm : 500
Aneroid pressure
hPa : 1000
Overflow quantity
ccm/10s : 62.5
Tolerance
ccm/10s + : 20.8

Check tolerance
ccm/10s + : 20.8
Shutoff solenoid
Volt : 12

DELIVERY AND BREAKAWAY CHARACTERISTIC

Rated speed rpm : 2575
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 14.0
Tolerance
cm³/1000 str. + : 2.0
Check tolerance
cm³/1000S. + : 4.0
Shutoff solenoid
Volt : 12

Rated speed rpm : 2375
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 39.0
Tolerance
cm³/1000 str. + : 5.0
Check tolerance
cm³/1000S. + : 6.0
Shutoff solenoid
Volt : 12

Rated speed rpm : 2750
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 3.0
Tolerance
cm³/1000 str. + : 3.0
Check tolerance
cm³/1000S. + : 3.0
Shutoff solenoid
Volt : 12

Rated speed rpm : 750

Aneroid pressure
hPa : 350

LDA/
HBA stroke mm : 5,9
Del. quantity
cm³/1000 strokes : 46.0
Tolerance
cm³/1000 str. + : 0.5
Check tolerance
cm³/1000S. + : 3.0
Shutoff solenoid
Volt : 12

Rated speed rpm : 2150
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 50.1
Tolerance
cm³/1000 str. + : 1.0
Check tolerance
cm³/1000S. + : 2.2
Shutoff solenoid
Volt : 12

Rated speed rpm : 2000
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 52.0
Tolerance
cm³/1000 str. + : 1.0
Check tolerance
cm³/1000S. + : 2.2
Shutoff solenoid
Volt : 12

Rated speed rpm : 500
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 48.3
Tolerance
cm³/1000 str. + : 1.5
Check tolerance
cm³/1000S. + : 3.0
Shutoff solenoid
Volt : 12

Rated speed rpm : 1250
Aneroid pressure
hPa : 1000
Del. quantity
cm³/1000 strokes : 54.5
Tolerance
cm³/1000 str. + : 0.5
Check tolerance
cm³/1000S. + : 2.2

Shutoff solenoid
Volt : 12

MECHANICAL SHUTOFF

Rated speed rpm : 2000
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 : 12

ELECTR. SHUTOFF
CONTROL LEVER, IDLE STOP

Rated speed rpm : 400
Del. quantity
cm³/1000 strokes : 1.5
Tolerance
cm³/1000 str. ± : 1.5
Check tolerance
cm³/1000S. ± : 1.5

FULL-LOAD STOP CONTROL LEVER

Rated speed rpm : 400
Del. quantity
cm³/1000 strokes : 1.5
Tolerance
cm³/1000 str. ± : 1.5
Check tolerance
cm³/1000S. ± : 1.5

START TRANSITION

Rated speed rpm : 380
Del. quantity
cm³/1000 strokes : 35.0
Tolerance
cm³/1000 str. ± : 10.0
Shutoff solenoid
Volt : 12

ASSEMBLY AND ADJUSTMENT DIMENSIONS

LDA/
HBA stroke mm : 5,9
Dimension K mm : 3,3
Tolerance mm ± : ±0,1
Dimension KF mm : 6,0
Tolerance mm ± : ±0,2
Dimension MS mm : 1,3
Tolerance mm ± : ±0,2

CONTROL LEVER POSITION
SET

Control lever
position YA mm : 28,8..32,8

Control lever
position YB mm : 68,0..82,0

End of test-specification sheet