

BOSCH-INJ.-PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : PEU 2,1 F4
Edition : 07.10.91
replaces : -
Calibrating oil : ISO-4113

Injection pump : VE4/9F2150R281
Type number : 0 460 494 255
Customer Part-No. :

Customer-specific information
Customer : PSA

Engine : XUD11ATEY

TEST BENCH REQUIREMENTS

Calibrating-oil
return temp. °C
with thermometer : 40.00...48.00
Electronically : 42.00...50.00

Inlet press., bar : 0.30...0.40

Calibrating nozzle-holder
assembly : 1 688 901 022

Opening
Pressure bar: 130.00...133.00

Test inj. tubing : 1 680 750 073

Outside diameter : 6.00
x Wall thickness : 2.00
x Length mm: 450

Start of delivery
Prestroke mm: -
(from BDC): -

Indicator setting
Piston stroke mm: 0,3
Outlet : A

Injection-pump setting values
Test specifications in parentheses

Timing-device travel

Speed 1/min: 1250
Charge press. hPa: 1000
Setting value mm: 2.30...2.70

Shutoff
electromagnet Volt: 12

Supply-pump pressure

Speed 1/min: 1250
Charge press hPa: 1000
Setting value bar: 5.00...5.60
Shutoff
electromagnet Volt: 12

Full-load del. with charge press.:

Speed 1/min: 1250
Charge press. hPa: 1000
Del. quantity cm3/
1000S.: 61.00...62.00

Shutoff
electromagnet Volt: 12
Dispersion cm3/: 2.5
1000S.: (2.5)

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

Speed 1/min: 500
Del. quantity cm3/
1000S.: 42.00...43.00

Shutoff
electromagnet Volt: 12
Dispersion cm3/: 2.5
1000S.: (2.5)

Residual-Delivery Setting

Speed 1/min: 550
Del. quantity cm3/
1000S.: 2.50...3.50

Shutoff
electromagnet Volt: 12

Full-load speed regulation

Speed 1/min: 2250
Charge press hPa: 1000
Del. quantity cm3/
1000S.: 49.00...55.00

Shutoff
electromagnet Volt: 12

Start:

Speed 1/min: 100
Del. quantity cm3/: 70.00...80.00
mind 1000S.: 70.00

Shutoff
electromagnet Volt: 12

Inspection-pump test specifications
Test specifications in parentheses

Timing-device characteristic:

2nd speed 1/min: 2000
 Charge press hPa: 1000
 TD travel mm: 5.50...6.30
 mm: (5.20...6.60)

Shutoff
 electromagnet Volt: 12
 3rd speed 1/min: 1250
 Charge press hPa: 1000
 TD travel mm: 2.30...2.70
 mm: (2.00...3.00)

Shutoff
 electromagnet Volt: 12
 4th speed 1/min: 1000
 Charge press hPa: 1000
 TD travel mm: 0.90...1.70
 mm: (0.60...2.00)

Shutoff
 electromagnet Volt: 12

Supply-pump pressure characteristic:

1st speed 1/min: 1000
 Charge press. hPa: 1000
 Supply-pump pressure bar: 4.30...4.90
 bar: (4.00...5.20)

Shutoff
 electromagnet Volt: 12
 2nd speed 1/min: 1250
 Charge press. hPa: 1000
 Supply-pump pressure bar: 5.00...5.60
 bar: (4.70...5.90)

Shutoff
 electromagnet Volt: 12
 3rd speed 1/min: 2000
 Charge press. hPa: 1000
 Supply-pump pressure bar: 7.10...7.70
 bar: (6.80...8.00)

Shutoff
 electromagnet Volt: 12

Overflow quantity at overflow valve:

1st speed 1/min: 500
 Charge press. hPa: -
 Shutoff
 electromagnet Volt: 12
 Overflow : 41.00...83.00
 quantity cm3/10s: (26.00...98.00)
 2nd speed 1/min: 2000
 Charge press. hPa: -
 Shutoff
 electromagnet Volt: 12
 Overflow : 55.00...138.00
 quantity cm3/10s: (40.00...153.00)

Delivery-quant. and breakaway char.:

1st speed 1/min: 750
 Charge-air pressure-setting point hPa: 400
 LDA-stroke mm: 7.1
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 56.00...57.00
 1000S.: (53.50...59.50)

2nd speed 1/min: 2700
 Charge press. hPa: 1000
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 5.00...11.00
 1000S.: (4.00...12.00)

3rd speed 1/min: 2400
 Charge press. hPa: 1000
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 33.50...40.50
 1000S.: (33.00...41.00)

5th speed 1/min: 2250
 Charge press. hPa: 1000
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 49.00...55.00
 1000S.: (48.00...56.00)

9th speed 1/min: 2000
 Charge press. hPa: 1000
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 56.00...59.00
 1000S.: (55.20...59.80)

10th speed 1/min: 1000
 Charge press. hPa: 1000
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 60.50...63.50
 1000S.: (59.50...64.50)

12th speed 1/min: 1250
 Charge press. hPa: 1000
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 61.00...62.00
 1000S.: (59.20...63.80)

18th speed 1/min: 500
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 42.00...43.00
 1000S.: (40.20...44.80)

20th speed 1/min: 500
 Charge press. hPa: 1000
 Shutoff
 electromagnet Volt: 12
 Del. quantity cm3/: 60.00...63.00
 1000S.: (59.00...64.00)

Mech. shutoff:

Mech. Abststellung:

1st speed 1/min: 2000
Del. quantity cm³/: 0.00...3.00
1000S.: (0.00...3.00)

Shutoff
electromagnet volt: 12

Electr. shutoff:

1st speed 1/min: 325
Del. quantity cm³/: 0.00...3.00
1000S.: (0.00...3.00)

Damper set qty.:

LFG-setting:
solidale con carcassa:
Idle delivery:

1st speed 1/min: 325
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 12.00...14.00
1000S.: (10.00...16.00)

Dispersion cm³/: 2.5
2nd speed 1/min: 375
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 5.00...11.00

High Idle:

1st speed 1/mi: 450
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 11.00...13.00
1000S.: (9.00...15.00)

Residual:

1.Rotacao 1/min: 550
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 2.50...3.50
1000S.: (0.50...5.50)

Part-load del.at 3rd inj.-qty.
terza fermo della portata
stop (EGR set)
scarico) (ARF)
gaz d'échappement-ARF)

1st speed 1/min: 1500
Charge press. hPa: 1000
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 24.50...25.50
1000S.: (22.00...28.00)
2nd speed 1/min: 500

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Charge press. hPa: 1000
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 13.5...21.5

Automatic starting fuel delivery:

2nd speed 1/min: 325
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 37.00...44.00
1000S.: (36.50...44.50)

3rd speed 1/min: 200
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 76.00...78.00
1000S.: (74.50...79.50)

4th speed 1/min: 100
Shutoff
electromagnet Volt: 12
Del. quantity cm³/: 70.00...80.00
1000S.: (68.00...82.00)

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: 5.2...5.6
MS mm: 0.9...1.3

Ajustement Potentiometer:

Angle for
pot. °: 25
Supply voltage
pot. volt: 5.0
Output volt
pot. volt: 2.76

Remarks:

* Correction at adjusting nut (46)

For adjustment of switching point
(EGR valve), include 12.0 mm spacer
at third fuel-delivery stop.