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Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 MB 11,0 c 2

4. Edition

PE6P110A 320LS 3805
Komb.-Nr. 0 401 846 748

RQV 300-1150PA 524-4

supersedes 5.84
company: Daimler-Benz
engine: OM 421
159 kW (216 PS)

1 - 6 - 3 - 5 - 2 - 4
0 - 75-120-195-240-315° ±0,5° (±0,75°)
Note VDT - I - 401/102

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

A. Fuel Injection Pump Settings

Port closing at prestroke (3,95-4,15) mm (from BDC/Zyl. 6; PIV=9,0-12,0 mm)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery * cm ³ /100 strokes 3	Difference cm ³ /100 strokes 4	Control rod travel mm 2	Fuel delivery ** cm ³ /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1150	12,5+0,1	12,8-13,0	0,4(0,8)	11,7+0,1	13,2-13,4	
300	8,3-8,5	1,2-1,8	0,4(0,7)	7,8-8,0	1,2-1,8	
600	-	C, Sp. 4 u.5	0,6(0,9)	-	C, Sp. 4 u.5	
* with return throttle (1)				** without return throttle (2)		

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
max.	1150	15,2-17,8	-	-	-	ca.19	100	min.10,0	250	1,0-1,2
ca.65	11,5	1190-1200					300	8,3-8,5	550	3,4-3,7
	4,0	1240-1270							850	4,9-5,3
	1400	0-1,0				330-730			1150	7,7

Torque control travel a = mm

C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b	Fuel delivery characteristics high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm ³ /1000 strokes 2	rev/min 3	rev/min 4	cm ³ /1000 strokes 5	rev/min 6	cm ³ /1000 strokes 7	rev/min 8	Control rod travel mm 9
1150 (1)	128,0-130,0 (125,0-133,0)	1190-1200*	600	120,0-124,0 (117,0-127,0)	100	130,0-150,0	-	

Checking values in brackets

* 1 mm less control rod travel than col. 2

4.85

BOSCH

Geschäftsbereich KM, Kundendienst, Kfz-Ausrüstung.
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BOSCH INJ. PUMP TEST SPECIFICATIONS

Note inst. in remarks column

Test sheet : MB 11,0 C 2
 Edition : 10.08.87
 Superceeded : 4.85
 Calibrating oil : ISO-4113
 Combination no. : 0 401 846 748
 Injection pump
 Pump designation : PE6P110A32OLS3805-10
 EP type number : 0 411 816 740
 Governor
 Governor design. : RGV300...1150PA524-4
 Governor no. : 0 421 813 315

Customer-spec. information
 Customer : DAIMLER-BENZ

Engine : OM421
 1st version kW : 159.0
 Speed 1/min: 2300
 2nd version kW : 159.0
 Speed 1/min: 2300

TEST BENCH REQUIREMENTS

Calibrating-oil
 inlet temp. °C : 38...42
 Overflow valve : 1 417 413 025
 Inlet press., bar : 1.50
 Overflow
 quantity min. 1/h: 100...120
 Calibrating nozzle-holder
 assembly : 0 681 343 009
 Opening
 pressure, bar : 172...175
 Test inj. tubing : 1 680 750 015
 Outside diameter
 x Wall thickness
 x Length mm : 6.00X1.50X600

(A) Injection pump setting values
 Insp. values in parentheses
 Set constant delivery quant.
 per values -----

START OF DELIVERY

H10

Test pressure, bar: 25...27
 Prestroke mm : 4.00...4.10
 : (3.95...4.15)
 Contr.-rod trav.mm: 9.00...12.00
 Cam sequence : 6- 3- 5- 2- 4- 1

SD ang. spacing⁰CS: 0-45-120-165-240-285
 Tolerance + - : 0.50 (0.75)

SD mark cyl. no. : 6

BASIC SETTING

1st speed 1/mi: 1150

 Contr.-rod trav.mm: 11.70...11.80

 Del.quantity cm3/ : 13.2...13.4

 100H.: (12.9...13.6)

 Dispersion cm3/ : 0.4

 100H.: (0.8)

 2nd speed 1/min: 300.0
 Contr.-rod trav. m: 7.8...8.0
 Del.quantity cm3/ : 1.2...1.8
 100H.: (0.9...2.0)
 Dispersion cm3/ : 0.4
 100H.: (0.7)

 1st speed 1/min: 1150
 Contr.-rod trav.mm: 12.5...12.6
 Del.quantity cm3/ : 12.8...13.0
 100H.: (-)
 Dispersion cm3/ : 0.4
 100H.: (0.8)
 2nd speed 1/min: 300
 Contr.-rod trav.mm: 8.30...8.50
 Del.quantity cm3/ : 1.2...1.8
 100H.: (-)
 Dispersion cm3/ : 0.4
 100H.: (0.7)

(B) Setting of injection pump with
 externally-mounted governor

SLEEVE TRAVELS

1st speed 1/min: 300
 Sleeve travel mm: 1.60...1.80
 2nd speed 1/min: 800
 Sleeve travel mm: 5.80...6.20
 3rd speed 1/min: 1200
 Sleeve travel mm: 8.20...8.40
 4th speed 1/min: 1260
 Sleeve travel mm: 9.60...10.40