

# Test Specifications Fuel Injection Pumps and Governors

PES 4 M 50 C 320 RS 103 )  
RSF 375/2300 M 13 ) 0 400 074 988  
See page 2!  
Sales model 0 400 074 986

supersedes 3.79  
company Daimler-Benz  
engine OM 615

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

## A. Fuel Injection Pump Settings

Port closing at prestroke  $1,70 - 1,80$  mm (from BDC)  $20$  mm Control rod travel  
 $(1,65 - 1,85)$

Rotational speed rev/min	Control rod travel mm	Fuel delivery cm <sup>3</sup> /100 strokes	Difference cm <sup>3</sup> /100 strokes	Control rod travel mm	Fuel delivery cm <sup>3</sup> /100 strokes	Spring pre-tensioning (compensating valve) mm
1	2	3	4	2	3	6
1000	12,7+0,1	3,20 - 3,30	0,25(0,30)			
375	6,9-7,1	0,65 - 0,75	0,1(0,15)			

Set uniform delivery according to the values in

Checking values in brackets

## B. Governor Settings

Lower rated speed			Upper rated speed			Variations in control rod travel		
Degree of deflection of control lever	Control rod travel	Rotational speed	Degree of deflection of control lever	Control rod travel	Rotational speed		Rotational speed	Control rod travel
1	mm	rev/min	4	mm	rev/min	7	rev/min	mm
	2	3		5	6		8	9
13-17	11,5	250-300	50	12,0+0,2	2200		100	min. 20,3
	6,9-7,1	375		8,6-9,0	2550		1600	12,4-12,6
	**	395		-	-		1000	12,7-12,8
	-	-		0-1,0	2950			
	2,5	720-820		-	-			
							Switching point	

Testoil-ISO 4113

## C. Settings for Fuel Injection Pump with Governor Mounted

Full-load delivery		Full-load speed regulation	Variations in fuel delivery		Starting fuel delivery		Difference
Test oil temp. 40°C (104°F)			rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	cm <sup>3</sup> /1000 strokes
1	2	3	4	5	6	7	8
2200	33,5-35,5 (32,5-36,5)	2550* RW=8,6-9,0	1600	32,5-34,5 (31,5-35,5)	100	min. 54,0	6,0
			1000	32,0-33,0 (31,0-34,0)	375	6,5-7,5 (6,0-8,0)	1,0
					2550	20,5-24,5 (19,5-25,5)	2,5
							(3,0) See point 8a

Checking values in brackets

\*3,9 less control rod travel than in Column 2

1. \*\* Position the idle-speed auxiliary spring at  $n = 395 \text{ min}^{-1}$  so that the control-rod travel is forced further by 0.1 - 0.2 mm.
2. Adjusting the idle control-lever position:  
At  $1000 \text{ min}^{-1}$ , control-rod travel 1.9 - 2.0 mm
3. Testing the idle-speed auxiliary spring shutoff  
Control-lever position  $45^\circ$ . No change in control-rod travel after switching point up to  $550 \text{ min}^{-1}$ .  
Control-lever position  $28^\circ$ . Rotational-speed range  $350 \text{ min}^{-1}$  -  $450 \text{ min}^{-1}$ .
4. Testing the pneumatic shutoff box  
Control lever against idle stop.  
At  $n = 375 \text{ min}^{-1}$  and 450 mbar (vacuum) (338 mmHg) the control rod must move briskly to RW (control-rod travel) = 0 mm.

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# условия для проверки

Test oil inlet

temp. °C : 40  
Tolerance °C : ± 2.0

Overflow valve : 1417413012

Inlet press. bar : 1.0

Test nozzle holde  
assembly : 1688901111

Opening pressure  
bar : 148.5  
Tolerance bar : ± 1.5

Test Lines : 1680750003

Outside diameter : 6.0

x inside diameter : 2.0  
x length mm : 600

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