

Test Specifications for Injection Pump and Governor

Injection Pump
PES 4 A 50 B 410 RS 204

with Governor
EP/MZ 60 A 89 d

DAI Sheet
1,8 g

Special Characteristics:
Pump element with upper and lower helix (pitch of each helix: 7.5 mm and starting groove.

dated: April 1st 1957

A. Adjustment Data of the Injection Pump

Feed Begin at a Pre-stroke of 1.7 + 0.1 mm (from BDC)

1	2	3	4	5	6
Speed	Control Rod Travel	Feed Quantity	Differential	Feed Quantity Drop	Pre-tension of Spring
r.p.m.	mm	cm ³ /100 strokes	cm ³ /100 strokes	(between 1000 and 200 r.p.m.) cm ³ /100 strokes	(Adaptation Valve) mm
1000	6	0.6-1.0			
	12	2.1-2.5	0.2		
	18	3.0-3.8			
200	6	0.3-0.7			
	21	8.5-9.7			

Adjust delivery of equal quantities within outlined limits

B. Adjustment Data of the Governor

1	2	3	4	5	6	7	8	9	10	11
Travel of Adaptation	Leak-proof Test		Point of Adjustment Control Rod Travel Limit		Control Rod Travel Test			Adaptation		
	Vacuum Drop	Time Min.	Vacuum	Control Rod Travel	with Governor	Vacuum	Control Rod Travel	Vacuum	Control Rod Travel	
mm	mm Water Col.	sec.	mm Water Col.	mm	Design	mm Water Col.	mm	mm Water Col.	mm	
1.2±0.1	500-480	10	580	13.0	— —	* 580 620 700 1800	13.0 10.3-12.5 5.5- 8.5 1.9- 2.9	180 250 500	14.1-14.3 13.9-14.1 13.1-13.3	

* Exactly adjust these values by placing washers WMS 22 S 18 . . . 19 X below the control rod spring

For Testing Control Rod Travel (column 4-11) n = 500 r.p.m.

C. Adjustment of Injection Pump with Mounted Governor

0	1	2	3	4	5	6	7	8	9
Injection Pump	Adjustment of Full-Load Stop Screw			Testing of Feed Quantity Characteristics			Adjustment of Idling Stop		
	r.p.m.	Vacuum mm Water Col.	cm ³ /1000 strokes	r.p.m.	Vacuum mm Water Col.	cm ³ /1000 strokes	r.p.m.	Vacuum mm Water Col.	Control Rod Travel from Full-Load to Idling mm
RS 204	1600	580	30-31	1200 900 250	360 180	30-32 30-32 7-9*	500	800	8.8-9.0

* increase water column up to the max. feed quantity differential being: 1.5

After full-load adjustment, repeat check according to section B, columns 8, 9 and 2, 3!

The values in col.3 and 6 are obtained by dividing the total quantity through the number of pump elements