

Test Specifications for Injection Pump and Governor

Injection Pump
PES 4 A 50 B 410 RS 144 z

with Governor
EP/MZ 60 A 94 d
or A 99 d

DAI Sheet
1,8 p

dated: March 12 th 1957
and/or Aug. 1st 1959

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	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	9	0.9–1.5			
	12	2.3–2.8	0.2		
	18	4.6–1.2			
200	9	0.7–1.2			

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 Water Col.	sec.	mm Water Col.	mm	Design	mm Water Col.	mm	mm Water Col.	mm	
0.6±0.1	500–480	10	575	11.7 *	— —	* 600 630 680 2000	11.7 9.7–11.3 7.1– 8.9 3.8– 4.6	300 350 450	12.2–12.4 12.1–12.4 11.8–12.1	

* Exactly adjust these values by placing washers WMS 22 S 18 . . . 19 × below the control 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		
		Vacuum			Vacuum			Vacuum	Control Rod Travel from Full-Load to Idling
	r.p.m.	mm Water Col.	cm ³ /1000 strokes	r.p.m.	mm Water Col.	cm ³ /1000 strokes	r.p.m.	mm Water Col.	mm
RS 144 z	1600	580	24.4–25.5	1200 900 250	360 180	24.5–26.5 24.5–26.5 7–9 *	0	0	5.2–5.5

* 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