Test Specifications for Injection Pump and Governor

Injection Pump PES 4 A 50 B 410 RS 204	with Governor EP/MZ 60 A 91 d	DAI Sheet **1,8 h**
Special Characteristics: Pump element with upper and lower helix (pitch of each helix: 7.5 mm) and starting groove.		dated: March 21st 1956 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 Differental	Feed Quantity Drop	Pre-tension of Spring
r.p.m.	mm	cm³/100 strokes	cm³/100 strokes	(between 1000 and 200 r.p.m.) cm³/100 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 Vacuum Drop	Leak-proof Test Time Min.	Point of Adjustment Control Rod Travel Limit Vacuum	Point of Adjustment Control Rod Travel Limit Control Rod Travel	Control Rod Travel Test with Governor	Control Rod Travel Test with Governor	Control Rod Travel Test Vacuum	Control Rod Travel Test Control Rod Travel	Adaptation Vacuum	Adaptation 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	440	13	—	—	* 450 480 580 800 2000	13.0 10.7–12.5 5.7– 7.9 4.7– 5.2 2.5– 3.4	180 220 380	14.1–14.3 13.9–14.1 13.1–13.3

* 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	Adjustment of Full-Load Stop Screw Vacuum	Adjustment of Full-Load Stop Screw	Testing of Feed Quantity Characteristics	Testing of Feed Quantity Characteristics Vacuum	Testing of Feed Quantity Characteristics	Adjustment of Idling Stop	Adjustment of Idling Stop Vacuum	Adjustment of Idling Stop Control Rod Travel from Full-Load to Idling
	r.p.m.	mm Water Col.	cm³/1000 strokes	r.p.m.	mm Water Col.	cm³/1000 strokes	r.p.m.	mm Water Col.	mm
RS 204	1600	430	29–30	1200 900 250	270 175 * Increase water column	29–31 29–31 7–9 *	0	0	9.0–9.2

up to the max. feed quantity differential being : 1.5

After full-load adjustment check again acc to Section B No 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