Test Specifications for Injection Pump and Governor

Injection Pump PES 4 A 50 B 410 RS 144	with Governor EP/MZ 60 A 94 d or A 99 d	DAI Sheet **1,8 n** dated: Dec. 10th 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 r.p.m.	Control Rod Travel mm	Feed Quantity cm³/100 strokes	Feed Quantity Differental cm³/100 strokes	Feed Quantity Drop (between 1000 and 200 r.p.m.) cm³/100 strokes	Pre-tension of Spring (Adaptation Valve) mm
1000	9	0.9–1.5			
	12	2.3–2.8	0.2		
	18	4.6–5.3			
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 mm	Leak-proof Test Vacuum Drop mm Water Col.	Time Min. sec.	Point of Adjustment Control Rod Travel Limit Vacuum mm Water Col.	Control Rod Travel mm	Control Rod Travel Test with Governor Design		Vacuum mm Water Col.	Control Rod Travel mm	Adaptation Vacuum mm Water Col.	Control Rod Travel mm
0.6±0.1	500–480	10	575	12.8	—	—	* 600 630 720 2000	12.8 10.9–12.4 6.5– 8.5 3.8– 4.7	300 350 450	13.3–13.5 13.2–13.5 12.9–13.2

* Exactly adjust these values by placing washers WMS 22 S 18 ... 19 × 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 r.p.m.	Vacuum mm Water Col.	cm³/1000 strokes	Testing of Feed Quantity Characteristics r.p.m.	Vacuum mm Water Col.	cm³/1000 strokes	Adjustment of Idling Stop r.p.m.	Vacuum mm Water Col.	Control Rod Travel from Full-Load to Idling mm
RS 144	1600	580	29–30	1200 900 250	360 180 *Increase water column up to the max. feed quantity differential being: 1.5	29–31 29–31 7–9*	0	0	6.3–6.6

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