

# Test Specifications for Injection Pump and Governor

## Injection Pump

PES 4 A 50 B 410 RS 144 z

## with Governor

EP/MZ 60 A 72 d

## DAI Sheet

1,8b

dated: March 10th 1958

### A. Adjustment Data of the Injection Pump

Feed Begin at a Pre-stroke of  $1.7 \pm 0.1$  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 <sup>3</sup> /100 strokes	cm <sup>3</sup> /100 strokes	(between 1000 and 200 r.p.m.) cm <sup>3</sup> /100 strokes	(Adaptation Valve) mm
1000	9	0.9–1.5			
	12	2.3–2.8	0.3		
	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	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	
1.0±0.1	500–480	10	300	11.3	– –	470 * 500 600 1800	11.3 9 – 11 5.7– 7.5 4 – 5.2	50 150 200 300	12.3–12.4 11.5–12 11.3 11.3	

\* Exactly adjust these values by placing washers WMS 22 S 18 ... 19 x 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		
	r.p.m.	Vacuum mm Water Col.	cm <sup>3</sup> /1000 strokes	r.p.m.	Vacuum mm Water Col.	cm <sup>3</sup> /1000 strokes	r.p.m.	Vacuum mm Water Col.	Control Rod Travel from Full-Load to Idling mm
RS 144 z	1000	300	24–25	500 750	50 125	26.5–28.5 24.5–26.5	0	0	7.2–7.7

After full-load adjustment check begin of governing action, governing characteristics and check for leaks

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