

# Test Specifications for Injection Pump and Governor

## Injection Pump

PES 4 A 50 B 410 RS 17  
or RS 50

## with Governor

EP/MZ 60 A 39 d  
or A 48 d  
or A 51 d  
or A 52 d

## DAI Sheet

1,7 d

dated: Oct. 1st 1952

### 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	1.3–1.7	0.3	0.8	
	12	2.5–2.8			
	18	4.8–5.3			
200	9	1.0–1.5			

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	
1.0 ± 0.1	500–480	10	300	12.0	— —	* 410 470 600 1800 2800 ↓	12.0 8.9–12.0 4.7– 6.2 3.9– 5.8 2.0– 4.3	* 180 150 100 50 ↓	12.0 12.0–12.1 12.3–12.6 13.0–13.1	

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

\* point of adjustment → observe correct sequence

### 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 <sup>3</sup> /1000 strokes	r.p.m.	mm Water Col.	cm <sup>3</sup> /1000 strokes	r.p.m.	mm Water Col.	mm
RS 17 or RS 50	1000 1000	300 180	27.5–28.5 27.5–28.5	500 750	50 125	29.5–32.5 27.5–30.5	0	0	7.8–8.0

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