

INJECTION PUMP TEST SPECIFICATIONS

093000-1040

MANUFACTURER	TOYOTA	INJECTION PUMP	093000-104#
ENGINE TYPE	2H		ND-PES6A70B312RND104
VEHICLE TYPE	LAND CRUISER	GOVERNOR	090700-0362 (COMBIND)
		TIMER	091800-1540 (SCZ)

1. INJECTION TIMING

Rotation : Clockwise viewed from drive side	Pre - stroke : 1.95 ± 0.05 mm (Rw = 11 or less)
Injection Order : 1 - 4 - 2 - 6 - 3 - 5	Tappet Clearance : More than 0.2 mm
Injection Interval : $60^\circ \pm 30'$	Locked Timing Location : —

2. TEST CONDITIONS

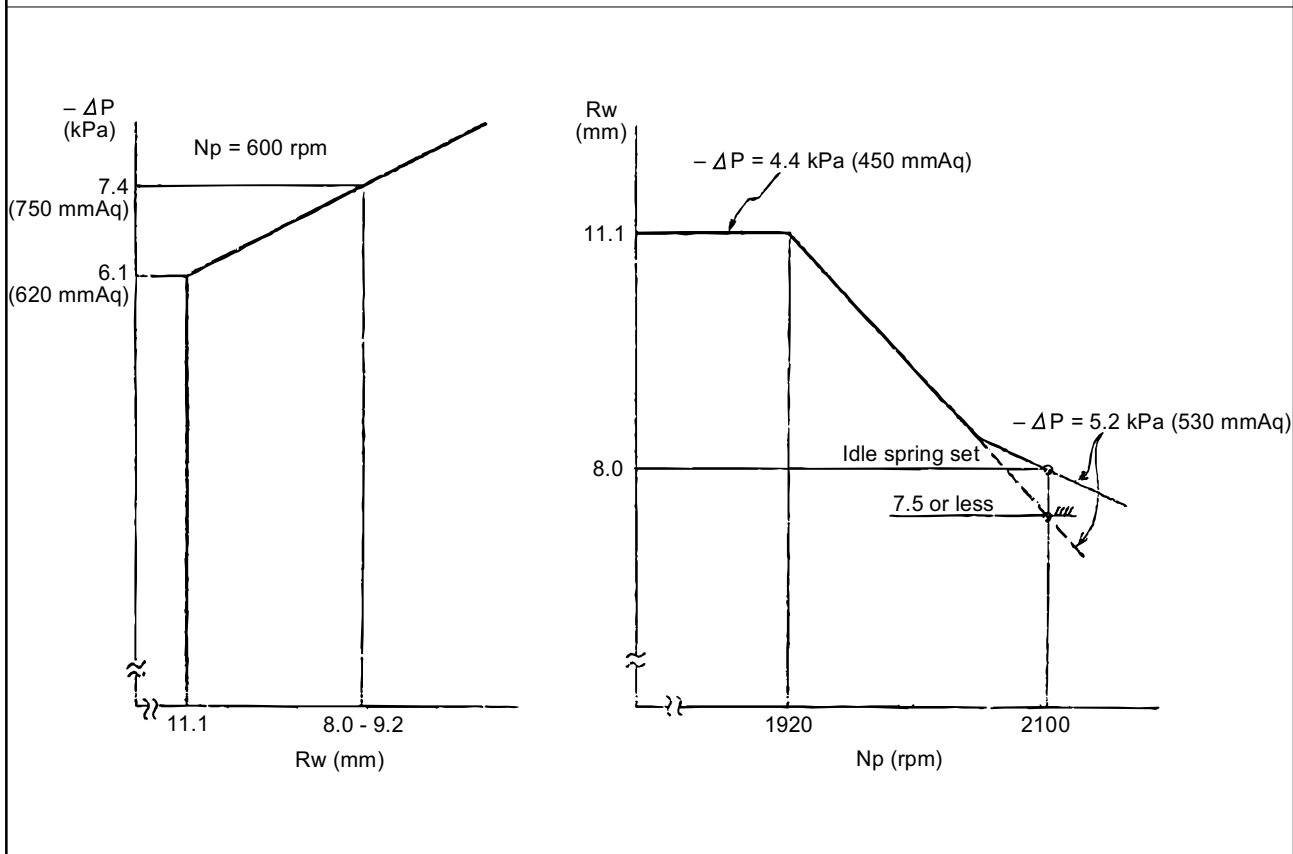
Nozzle : 093400-0050 (DN4SD24A)	Test Oil : SAE J967 (ISO4113)
Nozzle Opening Pressure : 11.8 MPa (120.0 kgf/cm ²)	High Pressure Pipe : $\varnothing 2 \times \varnothing 6 \times 600$ mm
Feed Pressure : 49.0 kPa (0.5 kgf/cm ²)	Fuel Temperature : 40 - 45°C (104 - 113°F)
Overflow valve opening : — kPa (— kgf/cm ²)	

3. ADJUSTMENT OF DELIVERY QUANTITY

Pump Speed (rpm)	Rack Travel (mm)	Delivery Quantity (mm ³ /st)	Max. Spread in Delivery (mm ³)	Number of Strokes	Delivery Quantity (cc)	Max. Spread in Delivery (cc)	Remarks
1100	11.10	47.0 ± 1.5	2.0	200	9.4 ± 0.3	0.4	
1700	11.10	50.0 ± 2.5	3.0	200	10.0 ± 0.5	0.6	
100	16.00	69.5 ± 3.5	6.0	200	13.9 ± 0.7	1.2	
1000	8.00	23.5 ± 2.0	2.0	200	4.7 ± 0.4	0.4	
325	6.50	7.0 ± 2.0	2.0	500	3.5 ± 1.0	1.0	

4. ADJUSTMENT OF GOVERNOR

Control Speed Range : 300 - 2100 rpm X = —



5. ADJUSTMENT OF BOOST COMPENSATOR							— : Not applicable
Lever Position	Pump Speed (rpm)	Absolute Pressure (kPa)	Rack Travel (mm)	Delivery Quantity		Remarks	
				(mm ³ /st)	(cc/200st)		
—	—	—	—	—	—	—	

6. ADJUSTMENT OF PUMP WITH GOVERNOR OPERATION						
Lever Position	Pump Speed (rpm)	Absolute Pressure		Delivery Quantity		Remarks
		(kPa)	(mmAq)	(mm ³ /st)	(cc/1000st)	
—	700	0.6	60	44.0 ± 2.0	44.0 ± 2.0	
	1100	1.5	150	47.0 ± 1.0	47.0 ± 1.0	
	1700	3.9	400	50.0 ± 2.0	50.0 ± 2.0	

7. ADJUSTMENT OF TIMER							— : Not applicable
Pump Speed (rpm)	—						
Advance Angle (deg)	—						

8. RACK SENSOR OUTPUT VOLTAGE CHECK					— : Not applicable
Lever Position	Pump Speed (rpm)	Rack Travel (mm)	Output Voltage (V)	Remarks	
—	—	—	—	—	

Adjust the thickness of shims within the range of 0 - 1.0 mm so that the output voltage of the rack sensor becomes as specified in the table below.

NOTE :

- 1 . The 1st cylinder is on the drive side.
- 2 . Check
Advanced angle should be $4^{\circ} \pm 30'$ at specified rack position ($R_w = 16$ mm or more) after setting pre-stroke.
- 3 . Vacuum pressure must drop from 4.9 kPa (500 mmAq) to 4.7 kPa (480 mmAq) in more than 10 seconds.