

CPS AVM2PC-10hp
 CPS21 AVM2PC-20hp



294000-090#

INJECTION PUMP TEST SPECIFICATIONS

Injection Pump	294000-090# (HP3)	Supply Voltage	14 ± 0.2 V
Manufacturer	TOYOTA	Rotation	Clockwise viewed from drive side
Vehicle Model	IMV	SCV Terminal resistance (Rated Voltage)	2.10 ± 0.15 Ω [20 °C] (12 V)
Engine Type	1KD-FTV, 2KD-FTV		

1. TEST CONDITIONS

1) Test Oil	SAE J967 (ISO4113)	5) High Pressure Pipe	Ø3 × Ø6.35 × 500 mm (Pump - Rail) Ø4 × Ø8 × 900 mm (Rail - Nozzle holder)
2) Feed Pressure	19.6 kPa (0.2 kg/cm ²)		
3) Pressure Regulator Volume	40 cc	6) Fuel Temperature	40 ± 5 °C
4) Controller Set Part Number	95191-00250		

2. NOTE (If you do not observe following cautions, accidents leading to injury or damage to the vehicle or product could result)

- (1) Open all pressure regulating valves, then stop the pump.
(2) Refer to the adjustment instruction manual, when testing pumps.

3. RUNNING

Pump Speed (rpm)	Rail Pressure (MPa)	Condition	Remarks
350	30 (305.9 kgf/cm ²)	No fuel leaks, no abnormal noise, and no abnormal temperature rising.	Drive more than 15 seconds.
2000	35 (356.9 kgf/cm ²)		Drive more than 3 minutes.

4. FUEL TEMP SENSOR CHECK

Pump Speed (rpm)	Sensor Resistance (k Ω)	Remarks
—	1.2 ± 0.7	Inlet Fuel Temp. : 40.0 ± 5.0 °C

5. FUEL DELIVERY INSPECTION (CALIBRATION - 3, - 4)

Pump Speed (rpm)	Rail Pressure (MPa)	Target Quantity (cc/200rev)	Remarks
350	30 (305.9 kgf/cm ²)	10.0 ± 5.0	I ₁ = 1100 mA, I ₂ = 1050 mA, I _s = 1000 ± 200 mA
2000	160 (1631.6 kgf/cm ²)	73.0 ± 12.0	I _s + 370 mA

NOTE : I_s means SCV actuation current at 350 rpm pump speed of calibration.

NOTE : The SCV current at calibrations 3 and 4 is calculated automatically using the DST-1.

6. FUEL DELIVERY INSPECTION (FULL, HI-SPD)

Pump Speed (rpm)	Rail Pressure (MPa)	Target Quantity (cc/200rev)	Remarks
2000	160 (1631.6 kgf/cm ²)	144.0 or more	SCV current = 2100 mA

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7. FUEL DELIVERY INSPECTION (NO FUEL DELIVERY)			
Pump Speed (rpm)	Rail Pressure (MPa)	Target Quantity (cc/200rev)	Remarks
2500	0	0.8 or less	SCV current = 500 mA

8. FUEL DELIVERY INSPECTION (FULL, LO-SPD)			
Pump Speed (rpm)	Rail Pressure (MPa)	Target Quantity (cc/200rev)	Remarks
100	35 (356.9 kgf/cm ²)	164.0 or more	SCV current = 2100 mA

9. FUEL DELIVERY INSPECTION (OVER FLOW, LO-SPD)				
Pump Speed (rpm)	Rail Pressure (MPa)	Overflow Quantity		Remarks
		(cc/min)	(L/min)	
100	35 (356.9 kgf/cm ²)	50.0 - 240.0	0.05 - 0.24	SCV current = 2100 mA

10. FUEL DELIVERY INSPECTION (OVER FLOW)				
Pump Speed (rpm)	Rail Pressure (MPa)	Overflow Quantity		Remarks
		(cc/min)	(L/min)	
2000	160 (1631.6 kgf/cm ²)	185.0 - 385.0	0.19 - 0.39	SCV current = Is + 370 mA

NOTE : The over-flow volume SCV current is automatically calculated by DST-1.

11. HYSTERESIS			
Pump Speed (rpm)	Rail Pressure (MPa)	Target Quantity (cc/200rev)	Remarks
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