INJECTION PUMP TEST SPECIFICATIONS

Dimension KF (mm) 5.40 ± 0.10 Dimension MS (mm) 0.70 ± 0.10 Dimension K (mm) 3.30 ± 0.10 Dimension PS (mm) — 1. TEST CONDITIONS Nozzle 093400-0540 (DN12SD12A) Feed Pressure 19.6 kPa (0.2 kgf/cm²) Nozzle Opening Pressure 14.7 \pm 0.5 MPa (150 \pm 5 kgf/cm²) High Pressure Pipe Ø2 x Ø6 x 840 mm													
Mail	MANUFACTU	RER KON	R KOMATSU		INJECTION PUMP 096000-249				2491				
RATED VOLTAGE 12V INJECTION ORDER A - B - C - D INJECTION INTERVAL 90° ± 30′	ENGINE TYP	PE 40	4D95S		INGEOTION COM								
Dimension KF (mm)	VEHICLE MODEL FOR		K LIFT	RO					GOVI	GOVERNOR TYPE		All speed	
Dimension K (mm) 3.30 ± 0.10 Dimension PS (mm) —	RATED VOLTAGE 12		2V	2V INJECTION OF		A - B - C - [C - D	INJECT	NJECTION INTERVAL		90° ± 30'	
Nozzie	Dimension KF	(mm)		5.40 ± 0.10			Dimension MS (mm)			0.70 ± 0.10			
Nozzle	Dimension K (r	mm)		3.30	± 0.10		Dimen	sion PS (m	ım)		_		
Nozzle Opening Pressure 14.7 ± 0.5 MPa (150 ± 5 kgf/cm²) High Pressure Pipe Ø2 × Ø6 × 840 mm	1. TEST CONI	DITIONS											
Test Oil SAE J967 (ISO4113) Fuel Temperature 40 · 45 °C (104 · 113°F)	Nozzle		093400-	·0540 (D	N12SD12A)	Feed Pressure			19.6 kPa (0	.2 kgf/cn	n²)		
NOTE : Apply 6 volts DC across the fuel cut solenoid during adjustment.	Nozzle Openin	g Pressure	14.7 ± 0	.5 MPa	$(150 \pm 5 \text{ kgf})$	/cm ²)	High F	Pressure P	ipe	Ø2 × Ø6 × 840	0 mm		
Lever Position (deg)	Test Oil		SAE J96	67 (ISO4	113)		Fuel T	emperatur	е	40 - 45 °C (10	4 - 113°F	-)	
Lever Position (deg)	NOTE : Apply	6 volts DC ac	ross the fu	uel cut so	olenoid during	adjustn	nent.						
Color Colo	2. PRE-ADJUS	STMENT											
Cocy					Boost F	Pressure		Fue	l Delivery	ı	Max. Spread		
High Speed (Full) 1225		(deg)	(rp	om)	(kPa) (m		nmHg) (mm		m³/st)	1 ³ /st) (cc/200s			
High Speed 1225	Full Load		10	000	_	-	_	36.5	5 ± 0.5	7.3 ± 0.1	ı	2.0	0.4
Lever Position Pump Speed (rpm) (kPa) (mmHg) (kPa) (kgt/cm²) (kg	High Speed	(Full)	12	225	_	-	— 36.0 ± 2.0) ± 2.0	7.2 ± 0.4	1	_	_
Full	3. ADJUSTME	NT OF INTE	RNAL PRI	ESSURE	:	I.				1			
Full 400 — — 245.2 ± 29.4 2.5 ± 0.3 By the regulating valve 600 — — 284.4 ± 29.4 2.9 ± 0.3 1350 — — 451.1 ± 29.4 4.6 ± 0.3 4. OVERFLOW QUANTITY CHECK Lever Position Pump Speed (rpm) (kPa) (mmHg) (L/h) (cc/1000st) Full 1350 — — 12 - 27 167 - 364 NOTE : The overflow valve belonging to the pump should be used checking. 5. ADJUSTMENT OF TIMER Lever Position Pump Speed (rpm) (kPa) (mmHg) (mmHg) (mm) Full 600 — — 0.40 ± 0.30 1350 — — 0.90 ± 0.40 1350 — — 1.50 ± 0.40 1225 — — 1.30 ± 0.40 1500 — — 3.10 ± 0.40	Lever Position	n Pump Sp	eed	Boost F	st Pressure					Remarks			
A. OVERFLOW QUANTITY CHECK Lever Position Pump Speed Boost Pressure Overflow Quantity Remarks		(rpm)	(kPa)	(mmHg)	(k	(Pa)	(kgf/c	cm²)				
A. OVERFLOW QUANTITY CHECK Lever Position Pump Speed (rpm) Boost Pressure Overflow Quantity (rpm) (kPa) (mmHg) (L/h) (cc/1000st)	Full	400		_	_	245.2	2 ± 29.4	2.5 ±	0.3 E	By the regulating value			
A. OVERFLOW QUANTITY CHECK Lever Position Pump Speed (rpm) (kPa) (mmHg) (L/h) (cc/1000st) Remarks		600		_	_	284.4	± 29.4	29.4 2.9 ± 0.3					
Lever Position Pump Speed (rpm) Boost Pressure (kPa) Overflow Quantity (L/h) Remarks Full 1350 — — 12 - 27 167 - 364 NOTE : The overflow valve belonging to the pump should be used checking. 5. ADJUSTMENT OF TIMER Lever Position Pump Speed (rpm) Boost Pressure (kPa) Piston Travel (mm) Remarks Full 600 — — 0.40 ± 0.30 1000 — — 0.90 ± 0.40 1350 — — 1.50 ± 0.40 1225 — — 1.30 ± 0.40 1500 — — 3.10 ± 0.40		1350		_	_	451.1	51.1 ± 29.4 4.6 ± 0		0.3				
(rpm) (kPa) (mmHg) (L/h) (cc/1000st) Full 1350	4. OVERFLOV	V QUANTITY	CHECK										
Full 1350 — — 12 - 27 167 - 364 NOTE : The overflow valve belonging to the pump should be used checking. 5. ADJUSTMENT OF TIMER Lever Position Pump Speed (rpm) Boost Pressure (mmHg) Piston Travel (mm) Remarks Full 600 — — 0.40 ± 0.30 1000 — — 0.90 ± 0.40 1350 — — 1.50 ± 0.40 1225 — — 1.30 ± 0.40 1500 — — 3.10 ± 0.40	Lever Position	n Pump Sp	· ·		Pressure			w Quantity	/	Re	marks		
NOTE : The overflow valve belonging to the pump should be used checking. Sample			(kPa)	(mmHg)								
5. ADJUSTMENT OF TIMER Lever Position Pump Speed (rpm) Boost Pressure (kPa) Piston Travel (mm) Remarks Full 600 — — 0.40 ± 0.30 1000 — — 0.90 ± 0.40 1350 — — 1.50 ± 0.40 1225 — — 1.30 ± 0.40 1500 — — 3.10 ± 0.40							- 27	167 -	364				
Lever Position Pump Speed (rpm) Boost Pressure (kPa) Piston Travel (mm) Remarks Full 600 — — 0.40 ± 0.30 1000 — — 0.90 ± 0.40 1350 — — 1.50 ± 0.40 1225 — — 1.30 ± 0.40 1500 — — 3.10 ± 0.40				e pump sl	nould be used ch	necking.							
Full (kPa) (mmHg) (mm) 1000 — — 0.40 ± 0.30 1350 — — 0.90 ± 0.40 1225 — — 1.50 ± 0.40 1500 — — 3.10 ± 0.40				D			D:-/	Table					
1000 — — 0.90 ± 0.40 1350 — — 1.50 ± 0.40 1225 — — 1.30 ± 0.40 1500 — — 3.10 ± 0.40	Lever Position									Rem	arks		
1350 — — 1.50 ± 0.40 1225 — — 1.30 ± 0.40 1500 — — 3.10 ± 0.40	Full	600		_	_		0.40 ± 0.30						
1225 — — 1.30 \pm 0.40 1500 — — 3.10 \pm 0.40		1000		_	_		0.90 ± 0.40						
1500 — — 3.10 ± 0.40		1350		_	_		1.50 ±	0.40					
		1225		_	_		1.30 ± 0.40						
NOTE : Hysteresis at each pump speed is less than 0.3 mm.		1500		_	_		3.10 ±	- 0.40					
	NOTE : Hyster	esis at each p	oump spee	ed is less	than 0.3 mm.								

. AD3001		BOOST COMI				1.4		— : Not Applica	
Lever Position	Pump Speed (rpm)	Boost Pre	essure	Fuel D	elivery	Max. S	Spread livery	Remarks	
Position	(rpm)	(kPa)	(mmHg)	(mm³/st)	(cc/200st)	(mm³)			
-		_	_	_	_	_		_	
. ADJUST		FUEL DELIVE	RY						
Lever	Pump Speed	Boost Pre	essure	Fuel D	elivery	Max. S	Spread livery	Remarks	
Position	(rpm)	(kPa)	(mmHg)	(mm³/st)	(cc/200st)	(mm³)			
Full	1000	_	_	36.5 ± 0.5	7.3 ± 0.1	2.0	0.4	By full load setting screw	
	1225	_	_	36.0 ± 2.0	7.2 ± 0.4	_	_	By max. speed setting screw	
	1350	_	_	13.5 ± 2.5	2.7 ± 0.5	_	_		
	1425	_	_	Less than 1.0	Less than 0.2	_	_		
	100	_	_	65.0 ± 10.0	13.0 ± 2.0	4.0	0.8	By governor sleeve plug	
	400	_	_	32.5 ± 2.5	6.5 ± 0.5	2.0	0.4		
	1150	-	_	37.5 ± 2.5	7.5 ± 0.5	2.0	0.4		
								With reverse adaptation	
		D SENSING TI							
Lever Position		Pump Spee (rpm)	ed Boo (kPa)	st Pressure (mmHg)	Fuel (mm³/st)	Delivery	rc/200s	Remarks	
Start of Lo	ad Sensin			— (····································	— (<i>191</i>)			By governor shaft	
End of Pre	essure Dro	р —	_	_	_	_		Check	
Checl	k Points	1. 2. Dimens	ion of Govern	or Shaft :	: — r L = 1.50 ± 0.50 r	-	mp spe	ed rpm)	

9. SETTI	ING AD	JUS	TING LEV	ER AT	LOW S	PEED							
Lever Position	n Spe	eed	1							Max. Spread in Delivery		Remarks	
(deg)	(rp	,,,,			(mm³/st)		(cc	/500st)	(m	ım³)	(cc)		
- 17.5 ±	5° 35	50			9.0 ± 2.0 Less than 1.0		4.5	5 ± 1.0	2	2.0	1.0	Lever setting	
(Idle)	50	00					Less than 0.5		_	_	_		
		FAD				ARTIAL RAN						— : Not Applicable	
•	Speed m)		Boost (kPa)	_	ure nmHg)	(mm³/		Fuel Delivery st) (cc/50		١		Remarks	
	_		— (Ki u)		—		31)	(00	<u>—</u>			_	
11. CHA	RACTE	RIST	TIC OF A.C	.S.D.									
Lever	Pump S	peed	d Boo	st Pre	essure Measuring Value							Remarks	
Position	rpm)		(kPa)		(mmHg)								
-	_		_		_	_			_			_	
												Fuel temperature : 39 - 41°C (102 - 106°F	
12. ADJI	USTME	NT C	OF T.C.V.									— : Not Applicable	
Lever F	Position	F	Pump Speed		Boost Pressure			Piston Travel				Remarks	
			(rpm)		(kPa)	(mmHg)		(mm)					
	_		_		_				-			_	
13. SET	TING OF	F DI	APHRAGN	FOR	HEATE	R & POWER	STEERIN	1G			·	— : Not Applicable	
	Pump Speed		Vacuum Pressure				-				Remarks		
(rpn	n)	(1	(kPa) (mmH ₀		g) (mm³/st) —		(cc/50 —	(cc/500st) —		_			
14. ADJI	USTME	NT C	OF POWER	CON	ITROL							— : Not Applicable	
Lever Position	Pump S (rpr				ssure mmHg)	Fue (mm³/st)	Delivery	200st)				Remarks	
_		-	(NFa)	(1	—	— —	-	_				_	

							096000-2491
15. ADJUSTMI	ENT OF THROT	TLE POSITION	ON SENSOR				— : Not Applicable
Lever Position	Pump Speed	Boost F	Pressure	essure Fuel Delivery			Remarks
	(rpm)	(kPa)	(mmHg)	(mm³/st)	(cc/500st)	Sensor Output Voltage VA (V)	
		,	· 0/	,	,		
_	_	_	_	_	_	_	_
16. FINAL CHEC	K AFTER ADJUS	STMENT			I		
1. Range of I	ever angle betw	een idle and	full lever position	on is 35 ± 5°.			
					/		
 After adjust 	stment has beer	n completed, o	delivery quantity	y must be 0 mm³/	st (0 cc/200st) wh rpm)	nen	
voltage at	fuel cut solenoi	d is reduced to	o zero. (Pump :	Speed Np = 100	rpm)		