

ZEXEL Ass'y No.	104740-7143
Bosch Ass'y No.	9 460 612 880
Bosch Typecode	
Engine Type	TD27
Manufacturer	NISSAN DIESEL
Edition date	23.02.04 (1)

1 Adjustment conditions

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	Test oil		ISO4113orSAEJ967 d				
		1404 Test oil					
P	Test oil temperature	degC	45	45	50		
	Nozzle		105780-0060				
	Bosch type code		NP-DN0SD1510				
	Nozzle holder		105780-2150				
P	Opening pressure	MPa	13	13	13.3		
P	Opening pressure	kgf/cm2	133	133	136		
	Injection pipe		157805-7320				
P	Injection pipe	mm	2-6-450				
		Inside diameter - outside diameter - length (mm)					
	Joint assembly		157641-4720				
	Tube assembly		157641-4020				
P	Transfer pump pressure	kPa	20	20	20		
P	Transfer pump pressure	kgf/cm2	0.2	0.2	0.2		
	Direction of rotation (viewed from drive side)		R				
		Right					

2 Adjustment specification**2.1 Full load delivery**

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		
S	Average injection quantity	mm3/st.	52	51.5	52.5		
S	Difference in delivery	mm3/st.	3		3		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2550	2550	2550		
C	Average injection quantity	mm3/st.	12.6	8.1	17.1		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2400	2400	2400		
C	Average injection quantity	mm3/st.	35.2	32.7	37.7		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2150	2150	2150		
C	Average injection quantity	mm3/st.	46.3	43.8	48.8		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2000	2000	2000		
C	Average injection quantity	mm3/st.	49.1	46.1	52.1		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT

P	Pump speed	r/min	1100	1100	1100		
C	Average injection quantity	mm ³ /st.	52.3	51.3	53.3		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Average injection quantity	mm ³ /st.	53.2	50.7	55.7		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
C	Average injection quantity	mm ³ /st.	51.2	48.7	53.7		

2.2 Governing

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2400	2400	2400		
S	Average injection quantity	mm ³ /st.	35	33	37		
P	Basic		*				
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2700	2700	2700		
C	Average injection quantity	mm ³ /st.	5		5		

2.3 Idle

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	350	350	350		
S	Average injection quantity	mm ³ /st.	9.3	7.3	11.3		
S	Difference in delivery	mm ³ /st.	2		2		
P	Basic		*				
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	350	350	350		
C	Average injection quantity	mm ³ /st.	9.3	7.3	11.3		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	750	750	750		
C	Average injection quantity	mm ³ /st.	3		3		

2.4 Start

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	100	100	100		
S	Average injection quantity	mm ³ /st.	77.5	60	95		
P	Basic		*				

2.5 Stop

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	350	350	350		
C	Average injection quantity	mm ³ /st.	0	0	0		
	Remarks						
			Magnet OFF				

2.6 Overflow

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		
C	Overflow quantity	cm ³ /min	390	258	522		

2.7 Pump chamber pressure

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		

S	Pressure	kPa	490.5	461	520		
S	Pressure	kgf/cm2	5	4.7	5.3		
P	Basic		*				
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		
C	Pressure	kPa	490.5	461	520		
C	Pressure	kgf/cm2	5	4.7	5.3		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1700	1700	1700		
C	Pressure	kPa	666.5	637	696		
C	Pressure	kgf/cm2	6.8	6.5	7.1		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2150	2150	2150		
C	Pressure	kPa	764.5	735	794		
C	Pressure	kgf/cm2	7.8	7.5	8.1		

2.8 Timer

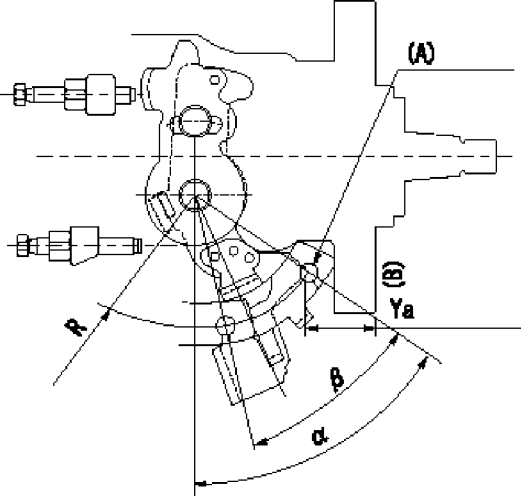
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		
S	Timer stroke	mm	3.8	3.6	4		
P	Basic		*				
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		
C	Timer stroke	mm	3.8	3.6	4		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1700	1700	1700		
C	Timer stroke	mm	6.5	6.1	6.9		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2250	2250	2250		
C	Timer stroke	mm	8.55	8.1	9		

2.9 Magnet

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
C	Max. applied voltage	V	8	8	8		
P	Test voltage	V	13	12	14		

2.10 Additional device adjustment

2.10.1 Additional device 1

Name	CONTROL LEVER ANGLE
Ya=24.3~28.7mm R=53mm Alpha=51.5~59.5deg Beta=31~41deg	
Ya=24.3~28.7mm R=53mm	Control lever angle measurement 1. Measure dimension Ya between the end of the lever and the flange face. 2. Measure the lever angle from the pin hole R (plate). (A) = lever angle and lever reaction force measuring position

3 Assembly dimension

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
S	K dimension	mm	3.3	3.2	3.4		
S	KF dimension	mm	5.82	5.72	5.92		
S	MS dimension	mm	0.9	0.8	1		
S	Control lever angle alpha	deg.	55.5	51.5	59.5		
S	Control lever angle beta	deg.	36	31	41		