ZEXEL Ass'y No.	104740-4630
Bosch Ass'y No.	9 460 610 224
Bosch Typecode	
Engine Type	SD23
Manufacturer	NISSAN DIESEL
Edition date	12.03.04 (1)

1 Adjustment conditions

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	Test oil		ISO4113orSAEJ967d				
		1404 Test oil					
P	Test oil temperature	degC	45	45	50		
	Nozzle		105000-2010				
	Bosch type code		NP-DN12SD12TT				
	Nozzle holder		105780-2080				
P	Opening pressure	MPa	14.7	14.7	15.19		
P	Opening pressure	kgf/cm2	150	150	155		
P	Injection pipe	mm	2-6-840				
		Inside diameter - outside diameter - length (mm)					
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	1000	1000	1000		
S	Average injection quantity	mm3/st.	36.1	35.6	36.6		
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	2450	2450	2450		
C	Average injection quantity	mm3/st.	12.1	8.1	16.1		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2150	2150	2150		
C	Average injection quantity	mm3/st.	33.9	31.9	35.9		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Average injection quantity	mm3/st.	36.1	35.1	37.1		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
C	Average injection quantity	mm3/st.	32.3	30.3	34.3		

2.2 Governing

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2450	2450	2450		
S	Average injection quantity	mm3/st.	12.1	8.6	15.6		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2600	2600	2600		
C	Average injection quantity	mm3/st.	5		5		

2.3 Idle

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	300	300	300		
S	Average injection quantity	mm3/st.	6.3	4.3	8.3		
S	Difference in delivery	mm3/st.	2		2		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	300	300	300		
C	Average injection quantity	mm3/st.	6.3	4.3	8.3		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	350	350	350		
C	Average injection quantity	mm3/st.	3		3		

2.4 Start

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

S = Setting value, C = Check value)
OT = Outside Tolerance (X is set)

P	Pump speed	r/min	100	100	100		
S	Average injection quantity	mm3/st.	62.5	45	80		
P	Basic		*				

2.5 Stop

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	300	300	300		
C	Average injection quantity	mm3/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	1000	1000	1000		
C	Overflow quantity	cm3/min	180	48	312		

2.7 Pump chamber pressure

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
S	Pressure	kPa	421.5	392	451		
S	Pressure	kgf/cm2	4.3	4	4.6		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Pressure	kPa	421.5	392	451		
C	Pressure	kgf/cm2	4.3	4	4.6		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1400	1400	1400		
C	Pressure	kPa	519.5	490	549		
C	Pressure	kgf/cm2	5.3	5	5.6		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2150	2150	2150		
C	Pressure	kPa	696.5	667	726		
C	Pressure	kgf/cm2	7.1	6.8	7.4		

2.8 Timer

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
S	Timer stroke	mm	1.7	1.5	1.9		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Timer stroke	mm	1.7	1.4	2		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1400	1400	1400		
C	Timer stroke	mm	3.2	2.6	3.8		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2150	2150	2150		
C	Timer stroke	mm	6.2	5.6	6.8		

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		

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	5.75	5.65	5.85		
S	MS dimension	mm	1.2	1.1	1.3		
S	Pre-stroke	mm	0.2	0.18	0.22		
S	Control lever angle alpha	deg.	25	21	29		
S	Control lever angle beta	deg.	46	41	51		