ZEXEL Ass'y No.	104748-2720
Bosch Ass'y No.	9 460 613 698
Bosch Typecode	
Engine Type	CD17
Manufacturer	NISSAN
Edition date	04.03.04

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		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)		L				
		Left					

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.	27.6	27.1	28.1		
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	2700	2700	2700		
C	Average injection quantity	mm3/st.	14.8	11.3	18.3		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2500	2500	2500		
C	Average injection quantity	mm3/st.	21.3	14.3	28.3		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Average injection quantity	mm3/st.	27.6	26.6	28.6		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
C	Average injection quantity	mm3/st.	26.8	24.8	28.8		

2.2 Governing

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2700	2700	2700		
S	Average injection quantity	mm3/st.	14.8	11.8	17.8		
S	Difference in delivery	mm3/st.	4.5		4.5		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2900	2900	2900		
C	Average injection quantity	mm3/st.	6		6		

2.3 Idle

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	360	360	360		
S	Average injection quantity	mm3/st.	5.2	3.7	6.7		
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	360	360	360		
C	Average injection quantity	mm3/st.	5.2	3.2	7.2		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		

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

C	Average injection quantity	mm3/st.	3		3		

2.4 Partial injection quantity

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	700	700	700		
C	Average injection quantity	mm3/st.	15.3	10.8	19.8		

2.5 Start

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	100	100	100		
S	Average injection quantity	mm3/st.	60.3	50.3	70.3		
P	Basic		*				

2.6 Stop

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	360	360	360		
C	Average injection quantity	mm3/st.	0	0	0		
	Remarks						
		Magnet OFF					

2.7 Overflow

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
C	Overflow quantity	cm3/min	348	216	480		

2.8 Pump chamber pressure

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
S	Pressure	kPa	372.5	343	402		
S	Pressure	kgf/cm2	3.8	3.5	4.1		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
C	Pressure	kPa	372.5	333	412		
C	Pressure	kgf/cm2	3.8	3.4	4.2		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1800	1800	1800		
C	Pressure	kPa	510	471	549		
C	Pressure	kgf/cm2	5.2	4.8	5.6		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2500	2500	2500		
C	Pressure	kPa	667	628	706		
C	Pressure	kgf/cm2	6.8	6.4	7.2		

2.9 Timer

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
S	Timer stroke	mm	2.1	1.8	2.4		
P	Basic		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
C	Timer stroke	mm	2.1	1.7	2.5		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1800	1800	1800		
C	Timer stroke	mm	4.6	4.2	5		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	2500	2500	2500		
C	Timer stroke	mm	7.35	6.9	7.8		

2.10 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		

2.11 Compensator

2.11.1 Load-timer adjustment

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200	1200	1200		
S	Average injection quantity	mm3/st.	16.5	16.5	16.5		
S	Timer stroke variation dT	mm	0.6	0.4	0.8		

P	Basic		*				

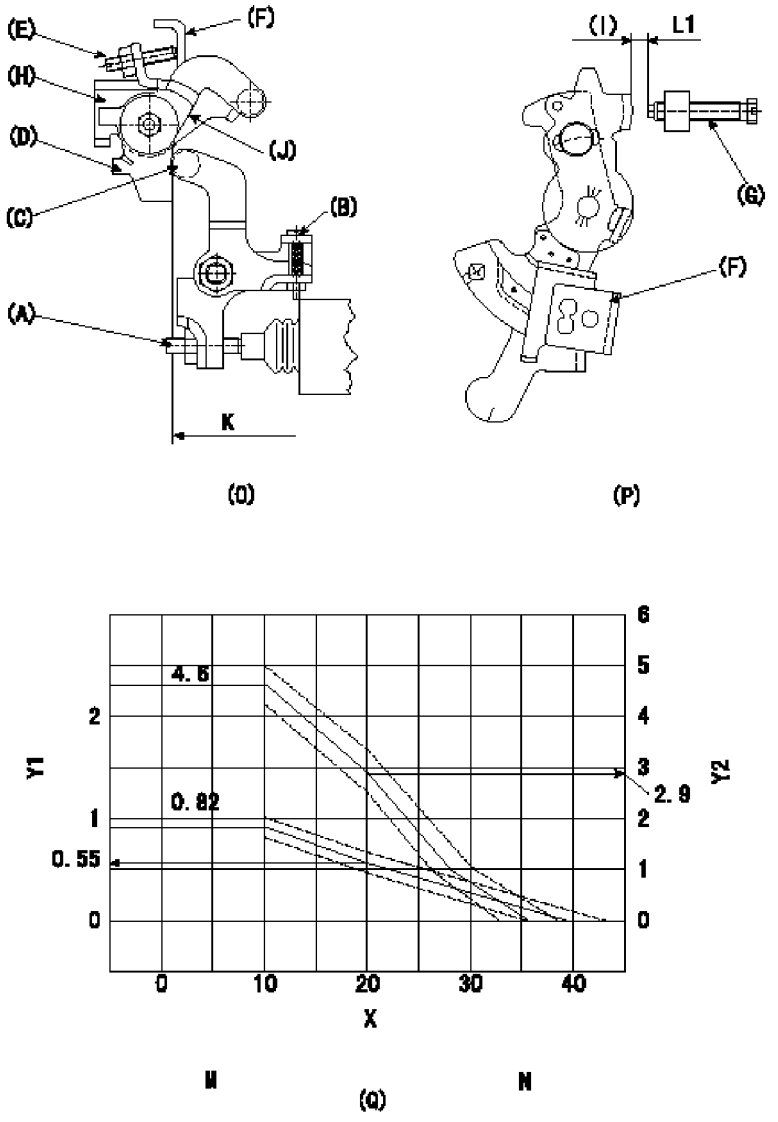
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
C	Average injection quantity	mm3/st.	16.6	15.1	18.1		
C	Timer stroke TA	mm	1.5	1.3	1.7		
C	Timer stroke variation dT	mm	0.6	0.2	1		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1250	1250	1250		
C	Average injection quantity	mm3/st.	14.1	12.6	15.6		
C	Timer stroke TA	mm	0.9	0.5	1.3		
C	Timer stroke variation dT	mm	1.2	0.6	1.8		

2.12 Additional device adjustment

2.12.1 Additional device 1

Name	W-CSD ADJUSTMENT

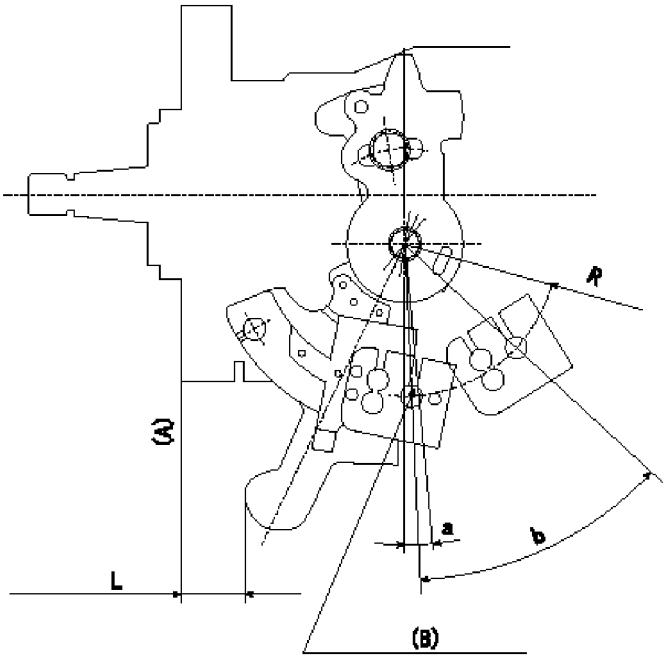


L1=4.1+-0.05mm
L2=L1+-0.05mm
a=30degC

Adjustment of the W-CSD
1. Timer advance adjustment (refer to Fig 1 [O], 3 [Q]).
(1)Determine the timer advance angle from the graph in Fig. 3 (Q).
(2)(1) Adjust with the screw (A) so that the timer advance angle determined in the item (1) is obt ained.
2. Setting the intermediate lever position (refer to fig 1 and fig 2)
(1)Insert a block gauge L1 between the idling set screw (G) and the control lever (F).
(2)Align the intermediate lever (D) with the aligning line (J) and position it perpendicularly.
(3)Position screw (E) against the control lever (F) and fix the nut.
3. W-CSD lever adjustment [refer to fig 1 (O) and fig 2 (P)]
(1)Insert a block gauge (I) L2 determined from the graph (L-t) in figure 3 (Q) between the idling set screw (G) and the control lever (F).
(2)Fix screw (B) so that the W-CSD lever (C)'s roller contacts the intermediate lever (D). Fix usi ng the nut.
Note:
The temperature of the wax at adjustment must not exceed a.
X:Temperature t (deg C)
Y1:Timer stroke TA (mm)
Y2:Control lever L dimension (mm; control lever position)
K:Vertical position
M:Graph TA-t:
10 <= t (deg C) <= 20: TA =-0.027t + 1.09
20 <= t (deg C) <= 40: TA = -0.0275 t + 1.1
N:L-theta graph
t (deg C) <= 10: L = 4.6
10 <= t (deg C) <= 20: L = -0.17t + 6.3
20 <= t (deg C) <= 28.5: L = -0.235t + 7.6
28.5 <= t (deg C) <= 36: L = -0.12t + 4.32

2.12.2 Additional device 2

Name	CONTROL LEVER ANGLE

R=44mm a=1~-1deg b=39~49deg L=15.4~18.1mm	
R=44mm L=15.4~18.1mm	Control lever angle measurement 1. Measure the dimension L from the lever tip to the flange face (A). 2. Measure the lever angle from the pin hole R (plate). (B): lever angle measuring hole Alpha = a beta: b

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	5.8	5.7	5.9		
S	MS dimension	mm	1.8	1.7	1.9		
S	Control lever angle alpha	deg.	0	-1	1		
S	Control lever angle beta	deg.	44	39	49		
S	Control lever angle gamma	deg.	14	13.5	14.5		