

ZEXEL Ass'y No.	101491-9965
Bosch Ass'y No.	9 400 614 361
Bosch Typecode	
Engine Type	FD42
Manufacturer	NISSAN DIESEL
Edition date	10/02/03 (7)

**1 Adjustment conditions**

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	Test oil		ISO4113 or (SAEJ96 7d)				
		N=Measure the actual speed.					
P	Test oil temperature	degC	40	40	45		
	Nozzle and nozzle holder		105780-8140				
	Bosch type code		EF8511/9A				
	Nozzle		105780-0000				
	Bosch type code		DN12SD12T				
	Nozzle holder		105780-2080				
	Bosch type code		EF8511/9				
P	Opening pressure	MPa	17.2				
P	Opening pressure	kgf/cm2	175				
	Injection pipe	mm	6-2-600				
		Outer diameter - inner diameter - length (mm)					
	Overflow valve		131424-1520				
P	Overflow valve opening pressure	kPa	157	123	191		
P	Overflow valve opening pressure	kgf/cm2	1.6	1.25	1.95		
P	Tester oil delivery pressure	kPa	157	157	157		
P	Tester oil delivery pressure	kgf/cm2	1.6	1.6	1.6		
	Direction of rotation (viewed from drive side)		R				
		Right					

**2 Adjustment specification****2.1 Injection timing adjustment**

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Direction of rotation (viewed from drive side)		R				
		Right					
P	Injection order		1-3-4-2				
S	Pre-stroke	mm	3.2	3.15	3.25		
S	Rack position		R=A				
		Q=80.3(mm3/st)/N=700(r/min)					
P	Beginning of injection position		NO.1				
		Drive side					
S	Difference between angles 1	deg.	90	89.5	90.5		
		Rack position at N = 900 is the same as in the reference point A for row L 103662-3125					
S	Difference between angles 2	deg.	180	179.5	180.5		
		Rack position at N = 900 is the same as in the reference point A for row L 103662-3344					
S	Difference between angles 3	deg.	270	269.5	270.5		
		Rack position at N = 900 is the same as in the reference point A for row L 103662-3123					

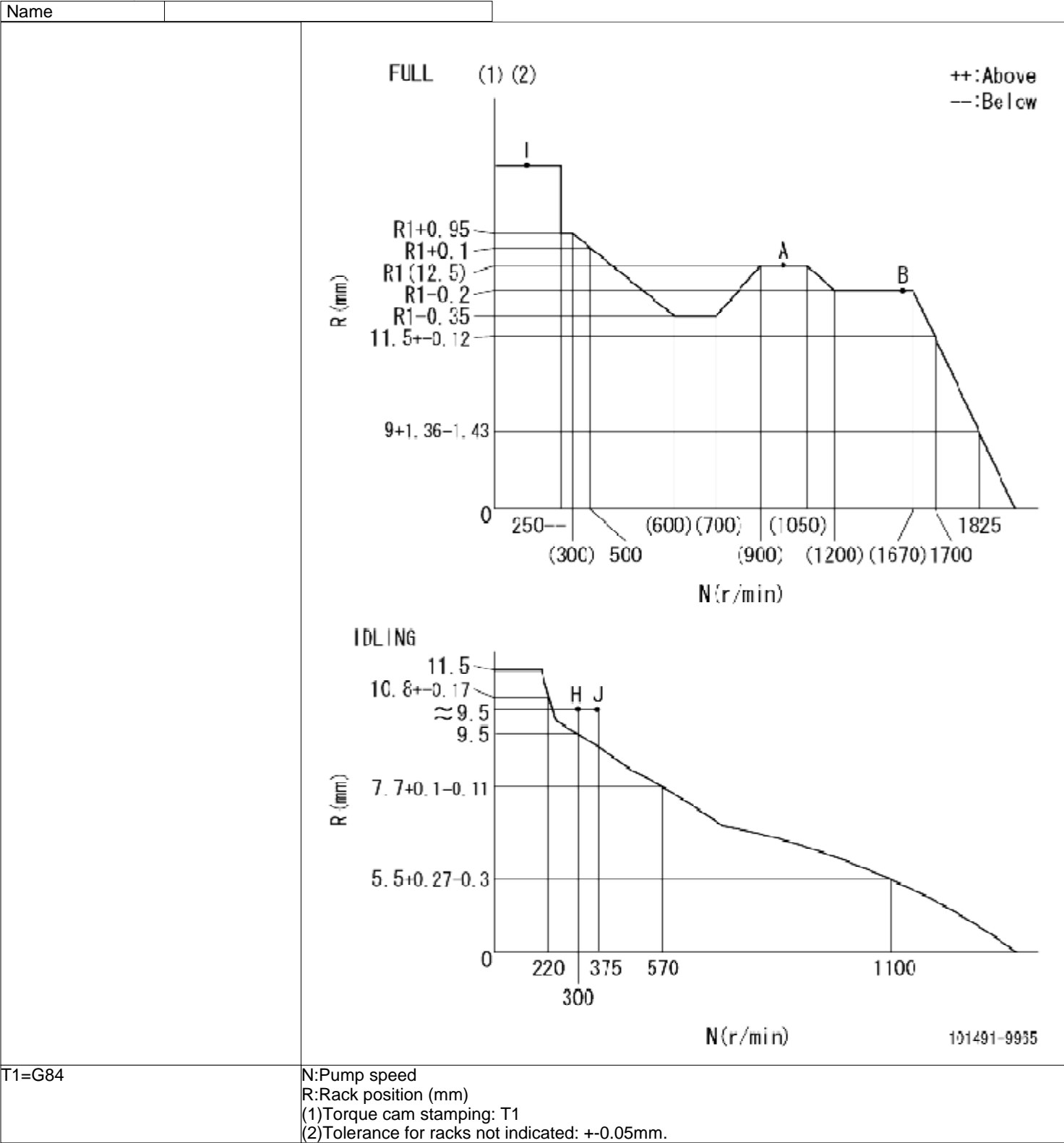
**2.2 Injection quantity adjustment**

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Adjusting point		-				
P	Rack position		12.5				
P	Pump speed	r/min	1000	1000	1000		
S	Average injection quantity	mm3/st.	71	69.4	72.6		
S	Max. variation between cylinders	%	0	-3.5	3.5		
P	Basic		*				
P	Fixing the rack		*				
P	Standard for adjustment of the maximum variation between cylinders		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Adjusting point		H				
P	Rack position		9.5+-0.5				
P	Pump speed	r/min	300	300	300		
S	Average injection quantity	mm3/st.	9.6	7.8	11.4		
S	Max. variation between cylinders	%	0	-10	10		
P	Fixing the rack		*				

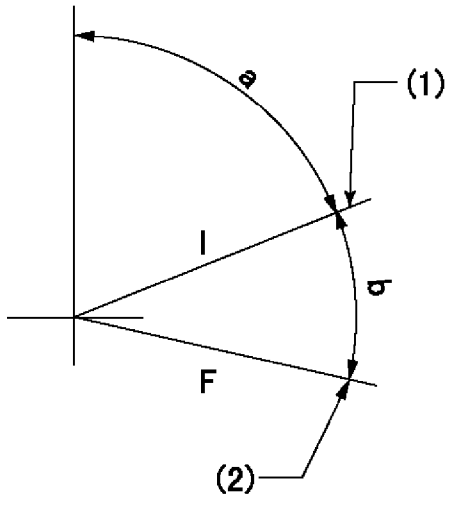
P	Standard for adjustment of the maximum variation between cylinders		*				
<b>CAT</b>	<b>Designation</b>	<b>Unit</b>	<b>Set value</b>	<b>min.</b>	<b>max.</b>	<b>Actual values</b>	<b>OT</b>
P	Adjusting point		A				
P	Rack position		R1(12.5)				
P	Pump speed	r/min	1000	1000	1000		
S	Average injection quantity	mm <sup>3</sup> /st.	71	70	72		
P	Basic		*				
P	Fixing the lever		*				
<b>CAT</b>	<b>Designation</b>	<b>Unit</b>	<b>Set value</b>	<b>min.</b>	<b>max.</b>	<b>Actual values</b>	<b>OT</b>
P	Adjusting point		B				
P	Rack position		R1-0.2				
P	Pump speed	r/min	1600	1600	1600		
S	Average injection quantity	mm <sup>3</sup> /st.	79	75	83		
P	Fixing the lever		*				
<b>CAT</b>	<b>Designation</b>	<b>Unit</b>	<b>Set value</b>	<b>min.</b>	<b>max.</b>	<b>Actual values</b>	<b>OT</b>
P	Adjusting point		I				
P	Rack position		-				
P	Pump speed	r/min	100	100	100		
S	Average injection quantity	mm <sup>3</sup> /st.	100	84	116		
P	Fixing the lever		*				

2.3 Governor adjustment

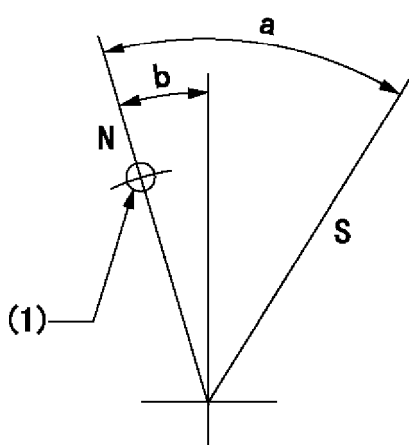


CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	(1000)				
S	Advance angle	deg.	0.8	0.5	1.1		
	Remarks						
Measure the actual speed.							
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1330+30-20				
S	Advance angle	deg.	0.8	0.5	1.1		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1500				
S	Advance angle	deg.	3.45	3.45	3.45		
	About						
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1600				
S	Advance angle	deg.	5	4.5	5.5		
	Remarks						
Finish							

## 2.5 Speed control lever angle

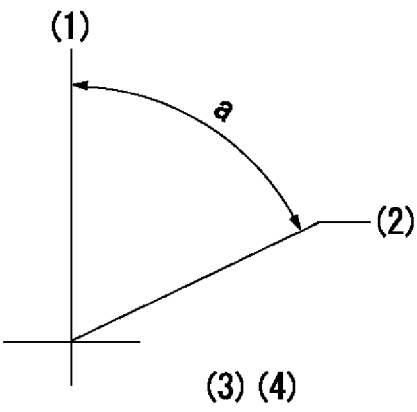
Name	
a=70deg+/-5deg b=37deg+/-3deg	
aa=32mm	F: Full speed I: Idle (1) Stopper bolt setting (2) Use the hole at R = aa

## 2.6 Stop lever angle

Name	
a=29deg+/-5deg b=10deg+/-5deg	
aa=12mm	N: Pump normal S: Stop the pump. (1) Use the pin at R = aa

2.7 Timing setting

Name	
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a=(60deg)	
aa=12deg	(1) Pump vertical direction (2) Position of gear's standard threaded hole (position of gear mark 'S') at No 1 cylinder's beginning of injection (3) B.T.D.C.: aa (4) -