

ZEXEL Ass'y No.	104742-7470
Bosch Ass'y No.	9 460 614 953
Bosch Typecode	
Engine Type	4TNE92
Manufacturer	YANMAR
Edition date	20.06.05 (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	900	900	900		
S	Average injection quantity	mm3/st.	41.3	40.8	41.8		
S	Difference in delivery	mm3/st.	4		4		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	500	500	500		
C	Average injection quantity	mm3/st.	40.6	35.1	46.1		
		About					
P	Oil temperature	degC	48	46	50		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	900	900	900		
C	Average injection quantity	mm3/st.	41.3	40.3	42.3		
C	Difference in delivery	mm3/st.	4.5		4.5		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

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

P	Pump speed	r/min	1025	1025	1025		
C	Average injection quantity	mm3/st.	41.8	41.8	41.8		
		About					
P	Oil temperature	degC	50	48	52		

2.2 Governing

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1225	1225	1225		
S	Average injection quantity	mm3/st.	13.7	9.2	18.2		
S	Difference in delivery	mm3/st.	5		5		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1350	1350	1350		
C	Average injection quantity	mm3/st.	5		5		
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1225	1225	1225		
C	Average injection quantity	mm3/st.	13.7	8.7	18.7		
C	Difference in delivery	mm3/st.	5.5		5.5		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

2.3 Idle

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	405	405	405		
S	Average injection quantity	mm3/st.	7.4	5.4	9.4		
S	Difference in delivery	mm3/st.	2		2		
P	Basic		*				
P	Oil temperature	degC	48	46	50		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	405	405	405		
C	Average injection quantity	mm3/st.	7.4	4.9	9.9		
C	Difference in delivery	mm3/st.	2		2		
P	Basic		*				
P	Oil temperature	degC	48	46	50		

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	mm3/st.	52	47	57		
P	Basic		*				
P	Oil temperature	degC	48	46	50		
	Remarks						
		Full					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	100	100	100		
C	Average injection quantity	mm3/st.	52	47	57		
P	Oil temperature	degC	48	46	50		
	Remarks						
		Full					

2.5 Stop

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	405	405	405		
C	Average injection quantity	mm ³ /st.	0	0	0		
P	Oil temperature	degC	48	46	50		
	Remarks						
	Magnet OFF at idling position						

2.6 Overflow

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Overflow quantity	cm ³ /min	400	270	530		
	Remarks						
	About						
P	Oil temperature	degC	50	48	52		

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	490	461	519		
S	Pressure	kgf/cm ²	5	4.7	5.3		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Pressure	kPa	490	451	529		
C	Pressure	kgf/cm ²	5	4.6	5.4		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

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	0.8	0.6	1		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1000	1000	1000		
C	Timer stroke	mm	0.8	0.4	1.2		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		
C	Timer stroke	mm	1.4	0.8	2		
	Remarks						
	About						
P	Oil temperature	degC	50	48	52		

2.9 Magnet

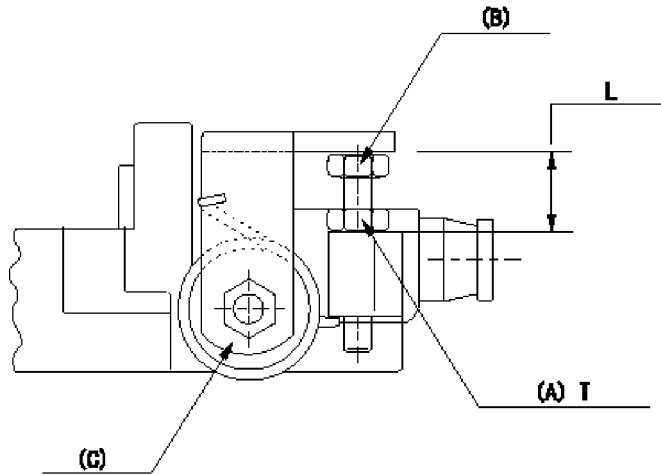
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
C	Max. applied voltage	V	8	8	8		
P	Test voltage	V	13	12	14		

2.10 Additional device adjustment

2.10.1 Additional device 1

Name STOP LEVER ADJUSTMENT

L=15.0~18.5mm
T=6~9Nm(0.6~0.9kgfm)



Adjustment of the stop lever
Adjust adjusting bolt (B) so that the starting injection quantity is within the standard.
Fix using nut.
(A) = adjusting nut
(C) = starting injection quantity adjusting lever

3 Assembly dimension

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
S	K dimension	mm	3.1	3	3.2		
S	KF dimension	mm	5.3	5.2	5.4		
S	MS dimension	mm	1.8	1.7	1.9		
S	Control lever angle alpha	deg.	10	6	14		
S	Control lever angle beta	deg.	21	16	26		
		About					