ZEXEL Ass'y No.	104761-3001
Bosch Ass'y No.	9 460 614 824
Bosch Typecode	
Engine Type	S6S
Manufacturer	MITSUBISHI HEAV
Edition date	11.02.04 (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		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	800	800	800		
S	Average injection quantity	mm3/st.	48.2	47.7	48.7		
S	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	300	300	300		
C	Average injection quantity	mm3/st.	48.9	43.4	54.4		
		About					
P	Oil temperature	degC	48	46	50		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	800	800	800		
C	Average injection quantity	mm3/st.	48.2	47.2	49.2		
C	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	900	900	900		
C	Average injection quantity	mm3/st.	48.9	44.9	52.9		
		About					
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1150	1150	1150		
C	Average injection quantity	mm3/st.	45.1	40.6	49.6		
		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	1285	1285	1285		
S	Average injection quantity	mm3/st.	8.6	6.6	10.6		
S	Difference in delivery	mm3/st.	2		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	1400	1400	1400		
C	Average injection quantity	mm3/st.	3		3		
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1285	1285	1285		
C	Average injection quantity	mm3/st.	8.6	6.1	11.1		
C	Difference in delivery	mm3/st.	2.5		2.5		

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	410	410	410		
S	Average injection quantity	mm3/st.	9.7	7.7	11.7		
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	410	410	410		
C	Average injection quantity	mm3/st.	9.7	7.2	12.2		
C	Difference in delivery	mm3/st.	2.5		2.5		
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.	50	45	55		
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.	50	45	55		
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	410	410	410		
C	Average injection quantity	mm3/st.	0	0	0		
P	Oil temperature	degC	48	46	50		
	Remarks						
		Magnet OFF at idling position					

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	250	250	250		
C	Average injection quantity	mm3/st.	5		5		
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	800	800	800		
C	Overflow quantity	cm3/min	420	290	550		
		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	800	800	800		
S	Pressure	kPa	549	529	569		
S	Pressure	kgf/cm2	5.6	5.4	5.8		
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	800	800	800		
S	Timer stroke	mm	2.4	2.2	2.6		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	600	600	600		
C	Timer stroke	mm	0.9	0.3	1.5		
		About					
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	800	800	800		
C	Timer stroke	mm	2.4	2	2.8		
P	Basic		*				
P	Oil temperature	degC	50	48	52		

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	900	900	900		
C	Timer stroke	mm	3	2.4	3.6		
		About					
P	Oil temperature	degC	50	48	52		

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1150	1150	1150		
C	Timer stroke	mm	3.3	2.8	3.7		
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	16	16	16		
P	Test voltage	V	25	24	26		

2.10 Compensator

2.10.1 Load-timer adjustment

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	900	900	900		
S	Average injection quantity	mm3/st.	12.8	11.8	13.8		
S	Timer stroke TA	mm	1.2	0.7	1.7		
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	Average injection quantity	mm3/st.	18	16	20		
C	Timer stroke TA	mm	3.3	2.8	3.7		
C	Timer stroke variation dT	mm	0	0	0		
P	Oil temperature	degC	50	48	52		

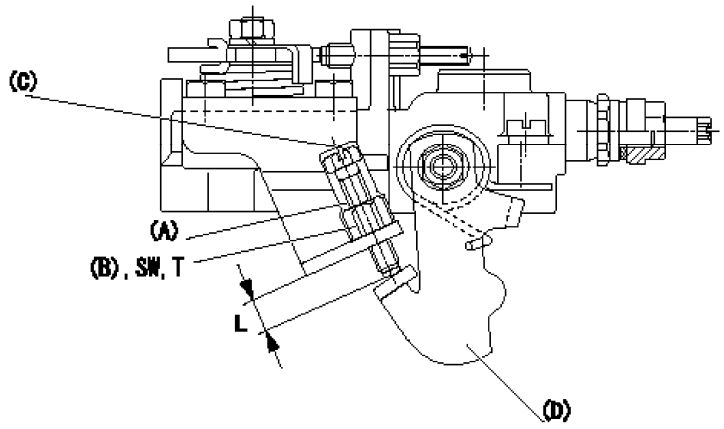
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1100	1100	1100		
C	Average injection quantity	mm3/st.	12.7	10.7	14.7		
C	Timer stroke TA	mm	1.6	0.4	2.8		
C	Timer stroke variation dT	mm	1.7	1.7	1.7		
		About					
P	Oil temperature	degC	50	48	52		

2.11 Additional device adjustment

2.11.1 Additional device 1

Name	STARTING I/Q ADJUSTMENT

L=7.4~11.1mm
T=6~9N-m(0.6~0.9kgf-m)
SW=SW10



L=7.4~11.1mm
T=6~9N-m(0.6~0.9kgf-m)

Starting Q decrease lever adjustment
Adjust using the screw (A) so that the standards are satisfied, then fix using the nut (B) (Torque to T after adjustment)
Screw protrusion: L
(C) = Cap
(D) = Stop lever

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	6.94	6.84	7.04		
S	MS dimension	mm	2.5	2.4	2.6		
S	Pre-stroke	mm	0.1	0.08	0.12		
S	Control lever angle alpha	deg.	25	21	29		
S	Control lever angle beta	deg.	30	25	35		
		About					