

ZEXEL Ass'y No.	101607-1072
Bosch Ass'y No.	F 01G 09U 04X
Bosch Typecode	
Engine Type	6D16
Manufacturer	MITSUBISHI
Edition date	28.10.03 (3)

### 1 Adjustment conditions

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
	Test oil		ISO4113 or {SAEJ96 7d}				
		1404 Test oil					
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		131424-5520				
P	Overflow valve opening pressure	kPa	255	221	289		
P	Overflow valve opening pressure	kgf/cm2	2.6	2.25	2.95		
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)		L				
		Left					

### 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)		L				
		Left					
P	Injection order		1-5-3-6-2-4				
S	Pre-stroke	mm	3.2	3.15	3.25		
P	Beginning of injection position		NO.1				
		Governor side					
S	Difference between angles 1	deg.	60	59.5	60.5		
		Cal 1-5					
S	Difference between angles 2	deg.	120	119.5	120.5		
		Cal 1-3					
S	Difference between angles 3	deg.	180	179.5	180.5		
		Cal 1-6					
S	Difference between angles 4	deg.	240	239.5	240.5		
		Cyl.1-2					
S	Difference between angles 5	deg.	300	299.5	300.5		
		Cal 1-4					

#### 2.2 Injection quantity adjustment

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Adjusting point		-				
P	Rack position		11.6				
P	Pump speed	r/min	850	850	850		
S	Each cylinder's injection qty	mm3/st.	72.5	70.3	74.7		
P	Basic		*				
P	Fixing the rack		*				
P	Standard for adjustment of the maximum variation between cylinders		*				

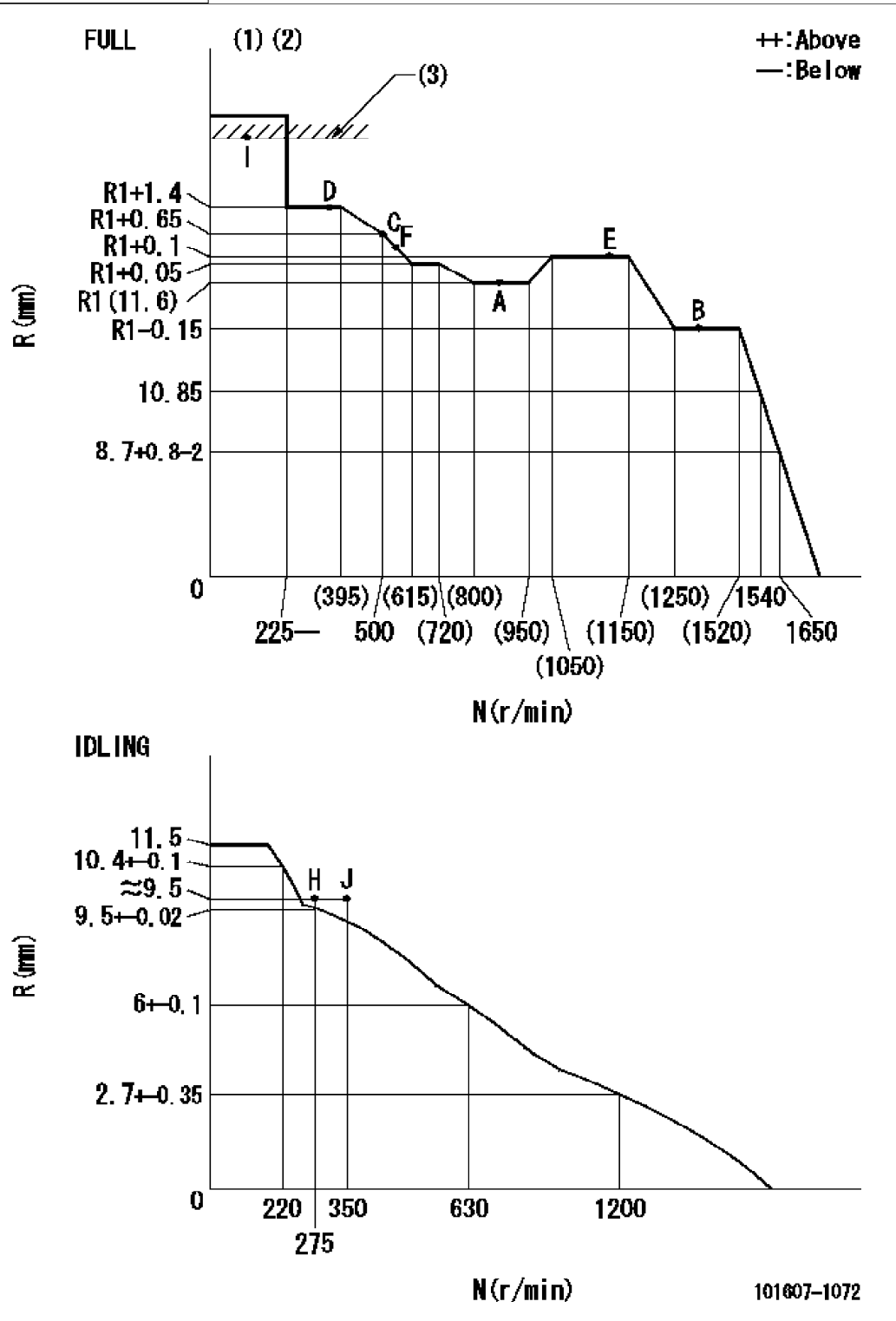
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Adjusting point		H				
P	Rack position		9.5+-0.5				
P	Pump speed	r/min	275	275	275		
S	Each cylinder's injection qty	mm3/st.	8.3	7.1	9.5		
P	Fixing the rack		*				
P	Standard for adjustment of the maximum variation between cylinders		*				

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Adjusting point		A				
P	Rack position		R1(11.6)				
P	Pump speed	r/min	850	850	850		
S	Average injection quantity	mm3/st.	72.5	71.5	73.5		
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		R1-0.15				
P	Pump speed	r/min	1400	1400	1400		
S	Average injection quantity	mm <sup>3</sup> /st.	79.5	75.5	83.5		
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		C				
P	Rack position		R1+0.65				
P	Pump speed	r/min	500	500	500		
S	Average injection quantity	mm <sup>3</sup> /st.	71.5	67.5	75.5		
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		14.8+-0.2				
P	Pump speed	r/min	100	100	100		
S	Average injection quantity	mm <sup>3</sup> /st.	120	100	140		
P	Fixing the lever		*				
P	Rack limit		*				

2.3 Governor adjustment

Name \_\_\_\_\_



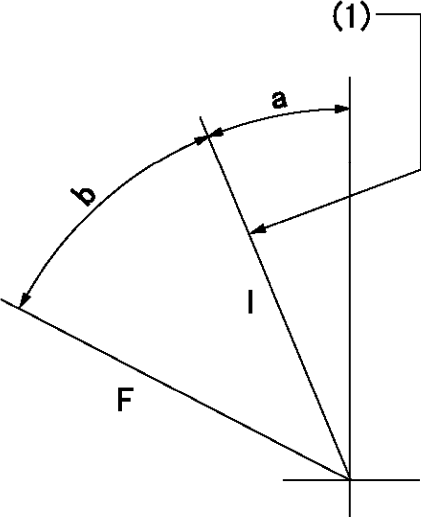
T1=F14  
RAL=14.8+0.2mm

N: Pump speed  
R: Rack position (mm)  
(1) Torque cam stamping: T1  
(2) Tolerance for racks not indicated: +-0.05mm.  
(3) RACK LIMIT: RAL

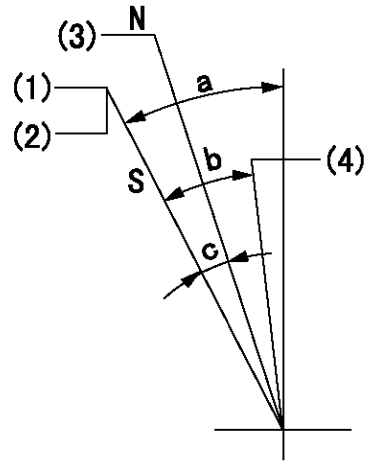
2.4 Timer adjustment

CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1150				
S	Advance angle	deg.	0.5		0.5		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1200				
S	Advance angle	deg.	0.9	0.4	1.4		
CAT	Designation	Unit	Set value	min.	max.	Actual values	OT
P	Pump speed	r/min	1380				
S	Advance angle	deg.	5	4.5	5.5		
	Remarks						
	Finish						

**2.5 Speed control lever angle**

Name	
<p>a=20deg+5deg b=(40deg)+3deg</p>	
<p>F: Full speed I: Idle (1) Stopper bolt set position 'H'</p>	

**2.6 Stop lever angle**

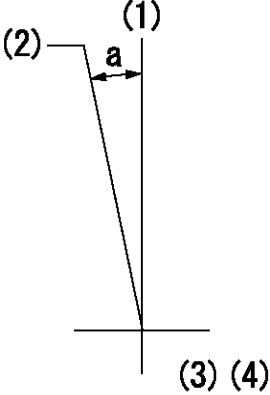
Name	
<p>a=36.5deg+5deg b=(25deg) c=13.5deg+5deg</p>	
<p>aa=1400r/min bb=6.9-0.5mm cc=15mm</p> <p>N: Engine manufacturer's normal use S: Stop the pump. (1) Pump speed = aa and rack position = bb (non-injection rack position) (2) Set the stopper bolt (confirm non-injection). (3) Corresponding to rack position = cc. (4) Free (at shipping)</p>	

**2.7 Additional device adjustment**

**2.7.1 Additional device 1**

Name	MICRO SWITCH
<p>N1=400r/min Ra=9.2+0.1mm</p>	<p>Adjustment of the micro-switch Adjust the bolt to obtain the following lever position when the micro-switch is ON. (1) Speed N1 (2) Rack position Ra</p>

**2.8 Timing setting**

Name	
aa=(1deg)	
aa=11deg	(1) Pump vertical direction (2) Position of timer's tooth at No 1 cylinder's beginning of injection (3) B.T.D.C.: aa (4) -