

| | |
|-----------------|---------------|
| ZEXEL Ass'y No. | 106671-6452 |
| Bosch Ass'y No. | 9 400 613 008 |
| Bosch Typecode | |
| Engine Type | 6HK1 |
| Manufacturer | ISUZU |
| Edition date | 21.02.03 (6) |

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 | 8-3-600 | | | | |
| | | Outer diameter - inner diameter - length (mm) | | | | | |
| | Overflow valve | | 134424-4320 | | | | |
| 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 | 255 | 255 | 255 | | |
| P | Tester oil delivery pressure | kgf/cm2 | 2.6 | 2.6 | 2.6 | | |
| | 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 | 2.9 | 2.87 | 2.93 | | |
| P | Beginning of injection position | | NO.1 | | | | |
| | | Governor side | | | | | |
| S | Difference between angles 1 | deg. | 60 | 59.75 | 60.25 | | |
| | | Cal 1-5 | | | | | |
| S | Difference between angles 2 | deg. | 120 | 119.75 | 120.25 | | |
| | | Cal 1-3 | | | | | |
| S | Difference between angles 3 | deg. | 180 | 179.75 | 180.25 | | |
| | | Cal 1-6 | | | | | |
| S | Difference between angles 4 | deg. | 240 | 239.75 | 240.25 | | |
| | | Cyl.1-2 | | | | | |
| S | Difference between angles 5 | deg. | 300 | 299.75 | 300.25 | | |
| | | Cal 1-4 | | | | | |

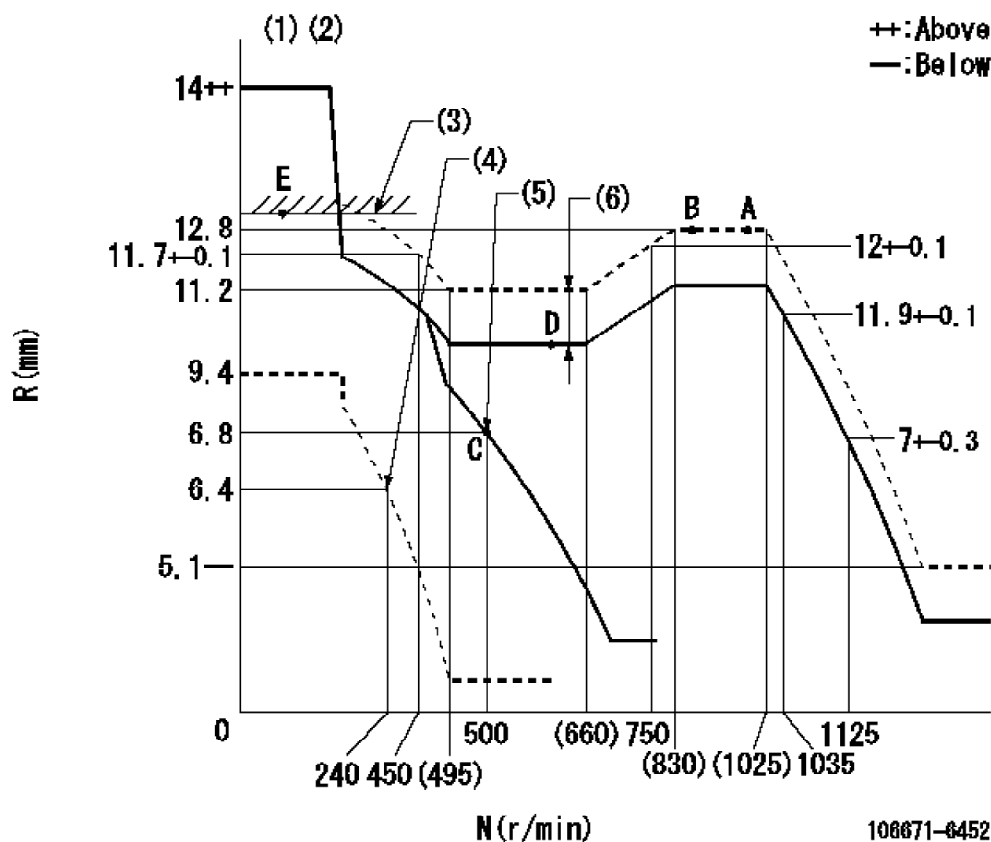
2.2 Injection quantity adjustment

| CAT | Designation | Unit | Set value | min. | max. | Actual values | OT |
|--|----------------------------------|---------|-----------|-------|-------|---------------|----|
| P | Adjusting point | | A | | | | |
| P | Rack position | | 12.8 | | | | |
| P | Pump speed | r/min | 1000 | 1000 | 1000 | | |
| S | Average injection quantity | mm3/st. | 133.5 | 132.5 | 134.5 | | |
| S | Max. variation between cylinders | % | 0 | -3 | 3 | | |
| P | Basic | | * | | | | |
| P | Fixing the lever | | * | | | | |
| P | Boost pressure | kPa | 171 | 171 | | | |
| P | Boost pressure | mmHg | 1280 | 1280 | | | |
| CAT | Designation | Unit | Set value | min. | max. | Actual values | OT |
| P | Adjusting point | | - | | | | |
| P | Rack position | | 7.5+-0.5 | | | | |
| P | Pump speed | r/min | 500 | 500 | 500 | | |
| S | Average injection quantity | mm3/st. | 9.5 | 6.3 | 12.7 | | |
| S | Max. variation between cylinders | % | 0 | -15 | 15 | | |
| P | Fixing the rack | | * | | | | |
| P | Boost pressure | kPa | 0 | 0 | 0 | | |
| P | Boost pressure | mmHg | 0 | 0 | 0 | | |
| | Remarks | | | | | | |
| Adjust only variation between cylinders; adjust governor according to governor specifications. | | | | | | | |
| CAT | Designation | Unit | Set value | min. | max. | Actual values | OT |
| P | Adjusting point | | E | | | | |

| | | | | | | | |
|---|----------------------------|----------------------|------|-----|-----|--|--|
| P | Rack position | | 13++ | | | | |
| P | Pump speed | r/min | 100 | 100 | 100 | | |
| S | Average injection quantity | mm ³ /st. | 155 | 145 | 165 | | |
| P | Fixing the lever | | * | | | | |
| P | Boost pressure | kPa | 0 | 0 | 0 | | |
| P | Boost pressure | mmHg | 0 | 0 | 0 | | |
| P | Rack limit | | * | | | | |

2.3 Governor adjustment

Name _____



K=12
BCL=0.4+-0.1mm

N: Pump speed
R: Rack position (mm)
(1) Target notch: K
(2) Tolerance for racks not indicated: +-0.05mm.
(3) RACK LIMIT
(4) Set idle sub-spring
(5) Main spring setting
(6) Boost compensator stroke: BCL

2.4 Boost compensator adjustment

| CAT | Designation | Unit | Set value | min. | max. | Actual values | OT |
|-----|----------------|-------|-----------|-------|-------|---------------|----|
| P | Pump speed | r/min | 550 | 550 | 550 | | |
| P | Rack position | | 10.8 | | | | |
| S | Boost pressure | kPa | 92 | 88 | 96 | | |
| S | Boost pressure | mmHg | 690 | 660 | 720 | | |
| CAT | Designation | Unit | Set value | min. | max. | Actual values | OT |
| P | Pump speed | r/min | 550 | 550 | 550 | | |
| P | Rack position | | 11.2 | | | | |
| S | Boost pressure | kPa | 157 | 150.3 | 163.7 | | |
| | | About | | | | | |
| S | Boost pressure | mmHg | 1180 | 1130 | 1230 | | |
| | | About | | | | | |

2.5 Timer adjustment

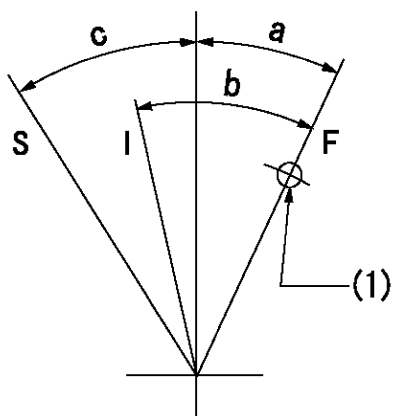
| CAT | Designation | Unit | Set value | min. | max. | Actual values | OT |
|-----|---|-------|-----------|------|------|---------------|----|
| S | Pump speed | r/min | 1200++ | | | | |
| P | Advance angle | deg. | 0 | 0 | 0 | | |
| | Remarks | | | | | | |
| | Do not advance until starting N = 1200. | | | | | | |
| CAT | Designation | Unit | Set value | min. | max. | Actual values | OT |
| P | Pump speed | r/min | - | | | | |
| S | Advance angle | deg. | 0.7 | 0.7 | 0.7 | | |
| | | About | | | | | |
| | Remarks | | | | | | |
| | Measure the actual speed, stop | | | | | | |

2.6 Speed control lever angleName

a=3deg+-5deg

b=18deg+-5deg

c=31deg+-3deg



aa=70mm

F:Full speed

I:Idle

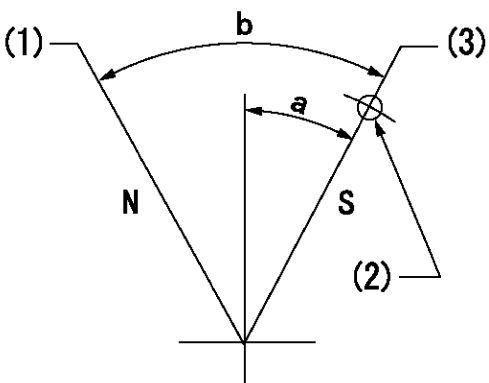
S:Stop

(1)Use the hole at R = aa

2.7 Stop lever angleName

a=15deg+-5deg

b=70deg+-5deg



aa=23mm

bb=1-0.5mm

cc=0r/min

N:Pump normal

S:Stop the pump.

(1)Normal

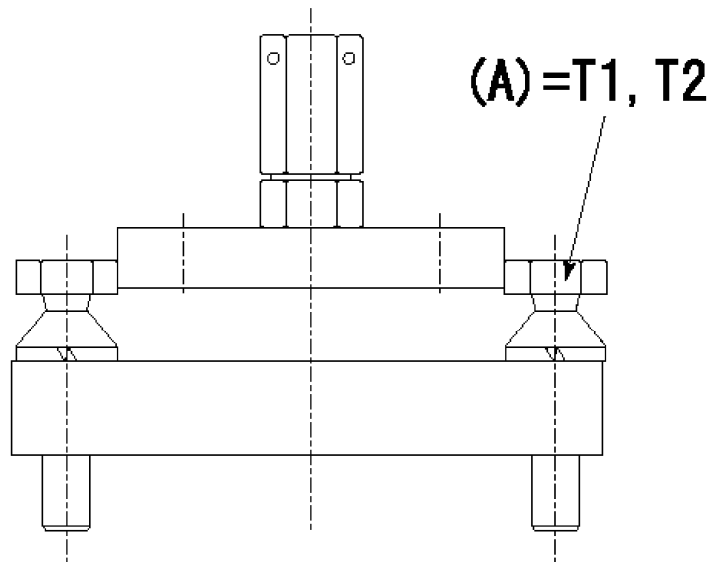
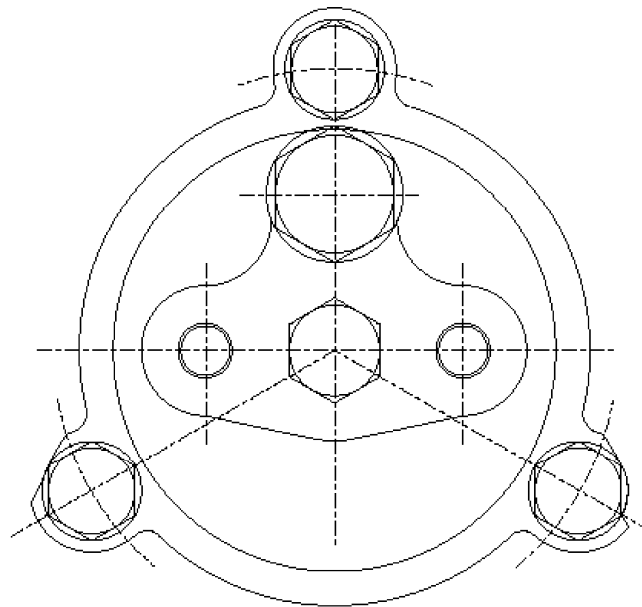
(2)Use the hole at R = aa

(3)Rack position bb, pump speed cc (seal at delivery)

2.8 Additional device adjustment

2.8.1 Additional device 1

| | |
|------|--------------|
| Name | TAMPER PROOF |
|------|--------------|

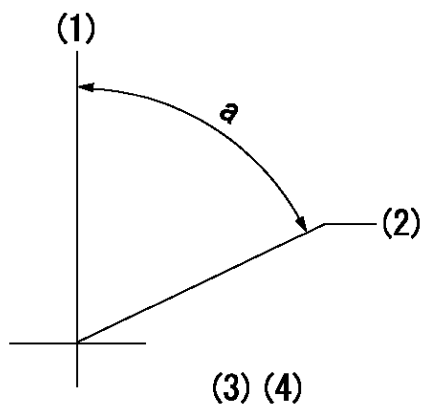


T1=2.5N-m(0.25kgf-m)
T2=2.9~4.4N-m(0.3~0.45kgf-m)

Tamperproofing-equipped boost compensator cover installation procedure
(A) After adjusting the boost compensator, tighten the bolts to remove the heads.
(1) Before adjusting the governor and the boost compensator, tighten the screw to the specified torque.
(Tightening torque $T = T1$ maximum)
(2) After adjusting the governor and the boost compensator, tighten to the specified torque to break off the bolt heads.
(Tightening torque $T = T2$)

2.9 Timing settingName

aa=(50deg)



aa=9deg

- (1) Pump vertical direction
(2) Position of timer's threaded installation hole at No 1 cylinder's beginning of injection
(3) B.T.D.C.: aa
(4) -