

# System control

## ■ Adjustment and maintenance

1. Each discharging port of distributing valve can control discharge volume independently and without restriction. Therefore, control the amount as appropriate depending on the condition of bearing. Too much lubricant on roller bearing may cause heating. Be cautious enough.
2. In adjusting lubricating interval, set the indicator needle of system timer (2G) on a desired time. This lubricating system allows adjustment of lubrication amount either by adjusting distributing valve or by filling lubricating interval. Adjust the amount as appropriate in sufficient consideration of property of lubricant.
3. In adjusting the signal timer (timer for checking 62G lubricating), set about double of the pump operation time.
4. Always fill the pump tank with clean lubricant by use of filling pump, preventing mixture of air and foreign substance.
5. Charge the housing of U-series pump (crank chamber) with clean lubricant (gear oil industrial class 2 equivalent to ISOVG220 JISK2219) up to the specified position, and change lubricant in 200H for the first time, and every 2000H thereafter.
6. Check the operation of distributing valve periodically, and make sure that switching pressure is normal. (Normal switching pressure refers to a pressure required for actuating distributing valve + 2MPa approx. for a margin)
7. Check for damage or loosening of piping on a regular basis.
8. Check the strainer on a regular basis.

9. Safety valve is set at 23MPa.

## ■ Detection of failure and countermeasures

1. If you operate the handle of manually operated pump, and do not feel ordinary resistance, and pressure does not rise, it causes that air is sucked in. In this case, open the air vent, operate the handle, and force air out sufficiently. If the trouble is not corrected yet, the function of check valve must be poor. Clean it sufficiently.
2. In the case of automatic system of motor driven grease pump alarm is issued in the situation below. Take a measure depending on circumstances.
  - a. When air mixes into pump, Pump pressure does not rise in this case. When air is intaken in the process of pressure rising, the pressure gauge indicates some fixed point, and hardly swings. Since this is a piston pump, the pressure gauge vibrates normally, but the swing becomes extremely small when air is taken in great amount. In this case, loosen the pump air purging valve, and operate the pump until lubricant with air mixing is exhausted. Also, extract air in the piping by loosening some appropriate position.
  - b. On leakage from supply line As long as leakage from supply line is in small amount, pressure rises slowly and operation time is extended, which causes an alarm. When leakage is significant, pressure hardly rises, therefore check the line very carefully and repair the damage.
  - c. Blocking at supply line and no work of reversing valve piston In this case, the pressure gauge

always indicates a high pressure and safety valve is opened. First check whether the operation of reversing valve piston is blocked by contaminant. If bigger size of piped is used for piping, supply line is seldom blocked.

- d. When the function of safety valve is poor  
It is possible that the safety valve function is disturbed by contaminant and lubricant escapes into the tank at an extremely low pressure. In this case, disassemble and clean the safety valve.
  - e. The pump and distributing valve are both highly resistant against wear. However, when the pump body is significantly worn through very long service, or when distributing valve is worn so seriously as to release lubricant, replace the pump body with new one, and replace the distributing valve with new one as appropriate.
3. Possible troubles are as described above. When the system in regular operation emits an alarm, it is more convenient to follow the step below in order to find corresponding trouble position.
    - a Check whether the thermal relay of electric control panel is normal.
    - b Check the pump system.  
It is convenient to follow the step below although it depends on the situation of pump pressure rising.
      1. Check if the tank is empty.
      2. Check for leakage from piping.
      3. Check for presence of air pocket in the tank and piping.
      4. Check the function of safety valve.