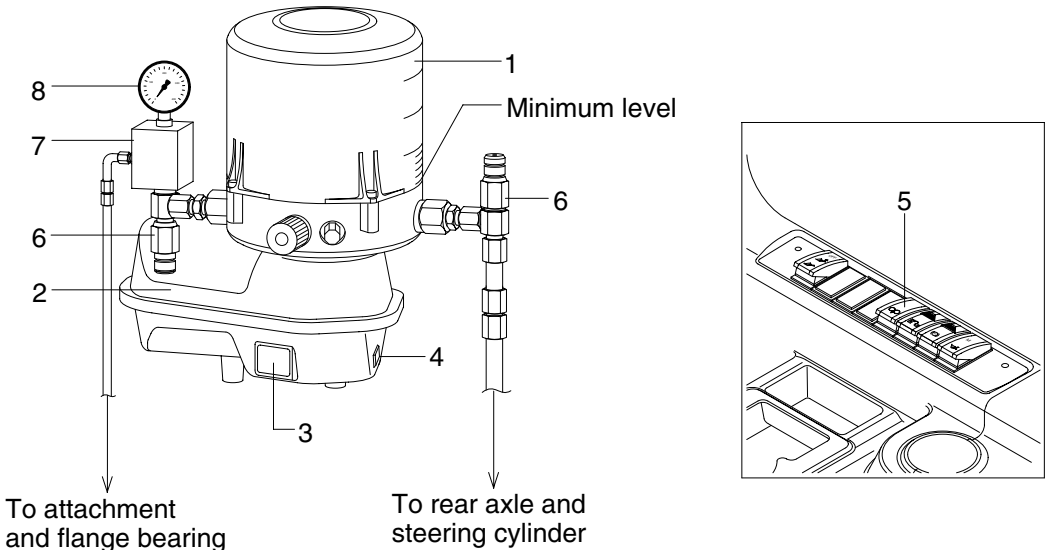
1. CENTRAL GREASE LUBRICATION SYSTEM

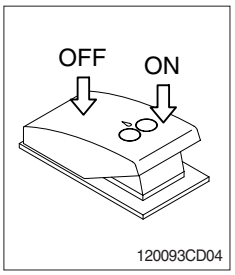
1) MAJOR COMPONENT



74098CG01

1	Grease tank	5	Central grease lubrication switch
2	Grease pump	6	Pump element
3	Control unit	7	Relief valve
4	Push button	8	Pressure indicator

(1) Central grease lubrication switch

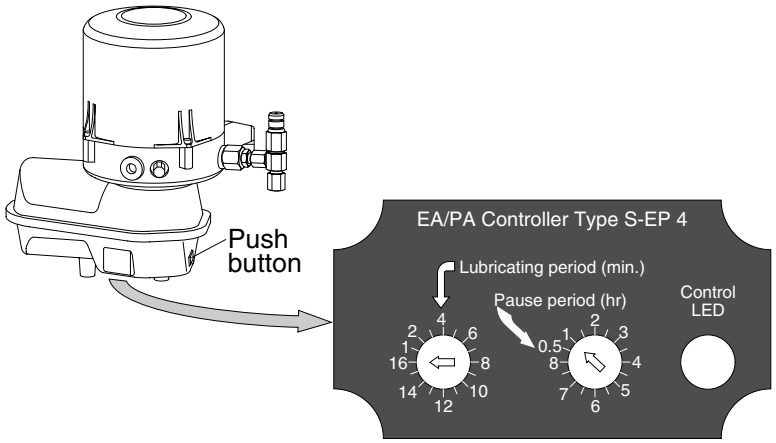


(1) This switch is used to operate the central grease lubrication system.

(2) When this switch turned ON, the central grease lubrication system is operated for 16 minutes once.

(3) Please turn the switch OFF.

2) ELECTRONIC CONTROL UNIT



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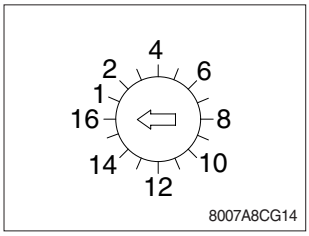
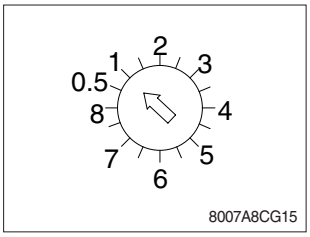
(1) Lubricating period setting dial



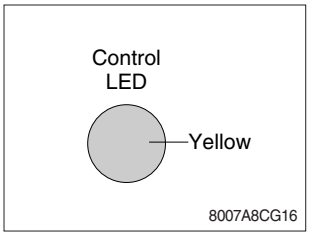
① This dial use to set the greasing period from 1 to 16 minutes.
② Default period is 16 minutes.
※ **Use a minus(-) screw driver to change settings.**

(2) Pause period setting dial



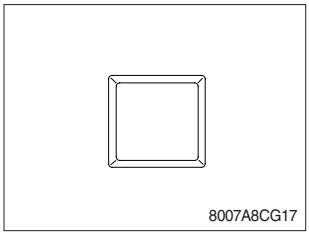
① This dial is use to set the pause period from 0.5 to 8 hours.
② Default period is one hour.

(3) Control LED



① This LED indicates operating status of the central grease lubrication system.
② Turn the starting switch ON, the LED will light up for 1.5 seconds.
③ During the central grease lubrication system is operated, it will blink at 0.5 second intervals.
④ When the lubrication system is failed, the LED is light up continuously.

3) PUSH BUTTON



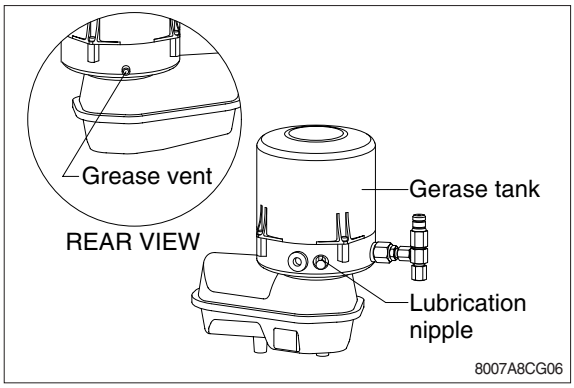
① This button use to operate the central grease lubrication system.
② Pushing the button, the central grease lubrication system is operated for 16 minutes once.

4) FILLING THE GREASE TANK

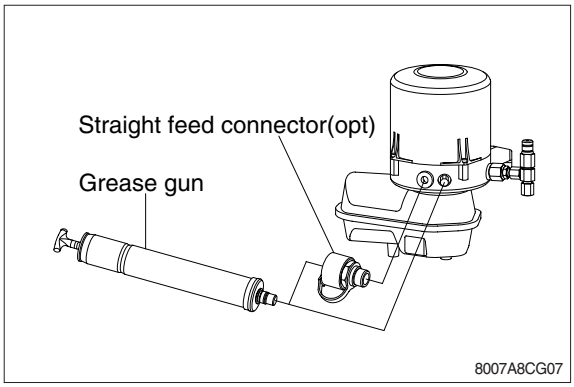
(1) Standard filling via lubrication nipple with manual or pneumatic grease gun.

※ **Lubricate the grease until it flows out to the grease vent.**

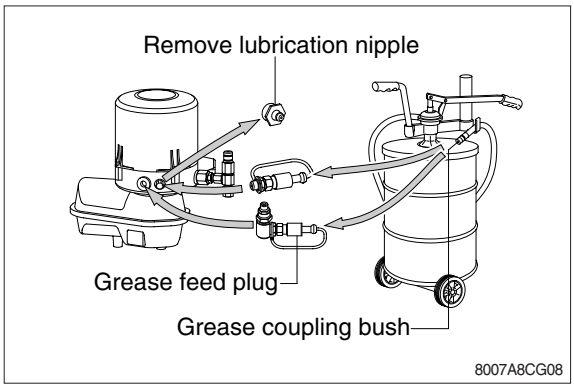
· Capacity : 4 kg (8.8 lb)



(2) Manual hand grease gun.



(3) Pneumatic grease pump (option).



5) REPAIR INSTRUCTIONS

(1) Case of system blockage

① A creased or clogged lubricant pipe
② Grease points overfilled or clogged by lubricant
③ Lubricant not suitable for central lubrication system
④ Distributor outlet closed
⑤ Blocked distributor

(2) Message signalling a blockage

The system pressure is exceeded (265 kgf/cm^2), a blockage may exist in the system and will be signalled by one of the followings.

① The pressure indicator at grease pump.
② The pressure indicator at secondary distributor.

(3) Repair of a distributor when blocked :

① Remove the main distributor from the system, nothing the sequence of removal.
② Remove the plugscrews from the piston holes and move the pistons to and fro (don't expel them); re-insert the plug-screws.
③ If the main distributor is not blocked, do the secondary distributor as above mentioned.
④ Push the piston of the blocked distributor outside and check the drilling and the piston surface for scratches and deficiencies.
⑤ Renew the distributor affected by serious deficiencies.

※ **Pistons are not interchangeables for main and secondary distributor.**

※ **Deposits of hardened grease detected at pistons and drillings of distributor must be eliminated by washing and blowing. The drillings in distributor must be free of residues of grease. This should be checked by use of some thin wire.**

※ **Hardening of grease indicates that the lubricant being used is not suitable for the central grease lubrication system. Ask for advice by the supplier of the lubricant. After having checked both distributor, re-assemble the distributor complying with the sequence noted down previously. In order to preclude jamming of pistons, tighten the plug-screws to the specified tightening torque.**

· Tightening torque : 1.2 kgf·m (8.7 lbf·ft)

① Check the distributor for correct operation, using oil or grease.
② Install the distributor in the system.
③ Start the machine and check it for correct operating pressure (150kgf/cm^2).

※ **The repair work has to be done under maximum cleanliness.**

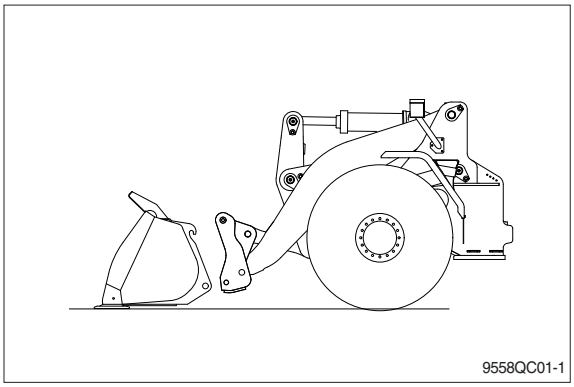
6) TROUBLESHOOTING

Category	Applications	Service
Pump does not work	Defective electronic control unit Electric cable is broken Pump is defective	Replace the control unit Renew the electric cable Replace the pump
Pump is working, but does not supply of lubrication	Air in the feed piston filling Grease level dropped below minimum level Defective pump element	Bleed the pump Refill the grease tank Replace the pump element
No grease at all points of lubrication	Pump does not work. Inoperative time is too long or period of lubrication is too short. System is blocked.	Refer to "Pump does not work". Reduce the inoperative time or increase the period of lubrication. Refer to "Excessive pressure (above 265 kgf/cm^2) of the pressure indicator".
No grease at some points of lubrication	Some pipes are burst or leakage Leakage at screwed unions	Renew the pipes Retighten or renew the screwed union
No grease at one point of lubrication	The lubrication pipe is burst or leakage Leakage at screwed unions	Renew the pipe Retighten or renew the screwed union
Reduced pump speed	High pressure in the system Low ambient temperature	Check the system / bearing points Not a defective (1 or 2 intermediate lubrication cycles may be useful)
Excessive pressure (above 265 kgf/cm^2) of the pressure indicator	Excessive pressure in the system Progressive distributor is blocked System is blocked Defective valve spring	Check the system Replace the distributor Repair clogged / seized greasing points Replace the pressure relief valve
Signal of the LED	The LED of control unit is light up continuously	Check electrical system and control unit

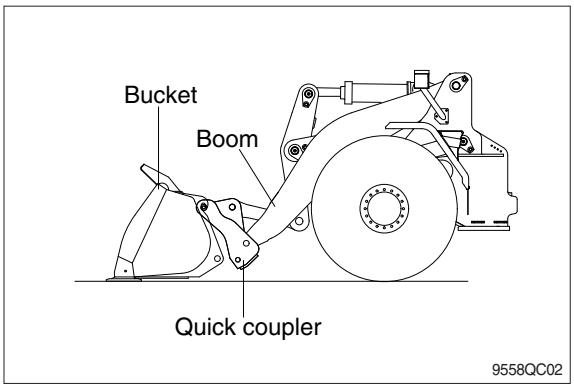
2. QUICK COUPLER

1) FIXING BUCKET WITH QUICK COUPLER

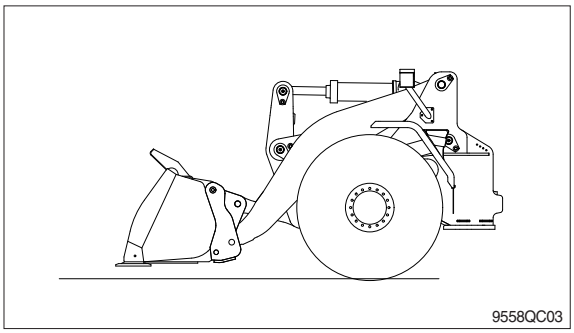
(1) Release the lock pins by pressing the attachment unlock switch.



(2) Tilt quick coupler forward and align the upper attaching points of the quick coupler with upper attaching points on the bucket. Raise the boom until the bucket rests in the quick coupler and tilt the quick coupler rearward until the bucket is level.



(3) Lock the bucket with the attachment lock switch. The quick coupler pins move in the engaged position and buzzer sounds.

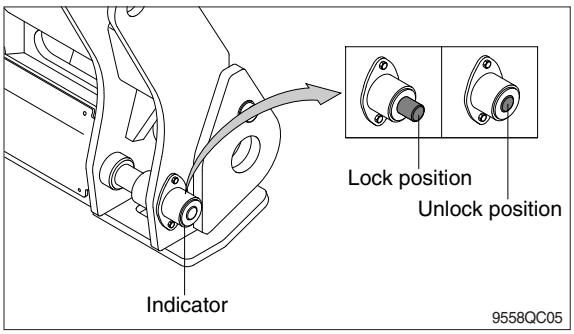


※ **Check for engagement as followings.**

a. Put down pressure on the attachment.

b. Back up the machine and make sure that there is no movement between the quick coupler and attachment.

※ **Check that the indicator is lock position.**



⚠ **Always check that the attachment is properly secured to the quick coupler by pressing the front part of the attachment against the ground.**

⚠ **Never use an attachment before you have checked its mounting.**

※ **If you are uncertain if the attachment is securely locked, you must visually check that the lock pins of the quick coupler are in the lock position.**

2) REMOVE BUCKET FROM QUICK COUPLER

(1) The attachment should be in a level position on the ground.
(2) Release the lock pins by pressing the switch.
(3) Lower the boom so that it disengage from the attachment.
(4) Reverse away from the attachment.

3) PRECAUTION OF USING QUICK COUPLER

⚠ **When operating the machine with quick coupler, confirm that the attachment lock switch is lock position.**
Operating the machine with attachment lock switch unlock position can cause the bucket to drop off and bring about the accident.

⚠ **Serious injury or death can result from this accident.**