CKD

SM-190950-A

INSTRUCTION MANUAL

LUBRICATOR

A3019E : ECONOMIST TYPE (FINE OIL MIST)

- Please read this instruction manual carefully before using this product, particularly the section describing safety.
- Retain this instruction manual with the product for further consultation whenever necessary.

Revision2

CKD Corporation

For Safety Use

To use this product safely, basic knowledge of pneumatic equipment, including materials, piping, electrical system and mechanism, is required (to the level pursuant to JIS B 8370 Pneumatic System Rules).

We do not bear any responsibility for accidents caused by any person without such knowledge or arising from improper operation.

Our customers use this product for a very wide range of applications, and we cannot keep track of all of them. Depending on operating conditions, the product may fail to operate to maximum performance, or cause an accident. Thus, before placing an order, examine whether the product meets your application, requirements, and how to use it.

This product incorporates many functions and mechanisms to ensure safety. However, improper operation could result in an accident. To prevent such accidents, read this instruction manual carefully for proper operation.

Observe the cautions on handling described in this manual, as well as the following instructions:

⚠ Precautions

- Since the filter and the lubricator use a plastic bowl, do not use them with an organic solvent or in a heating steam atmosphere. The bowl will be damaged. Use a metal bowl for an organic solvent or in a heating steam atmosphere.
- Before carrying out maintenance on the filter and the lubricator, depressurize the product completely.

INDEX

A3019

LUBRICATOR

Manual No. SM-190950-A

NOTE: Letters & figures enclosed within Gothic style bracket (examples such as [C2-4PP07] · [V2-503-B] etc.) are editorial symbols being unrelated with contents of the book.

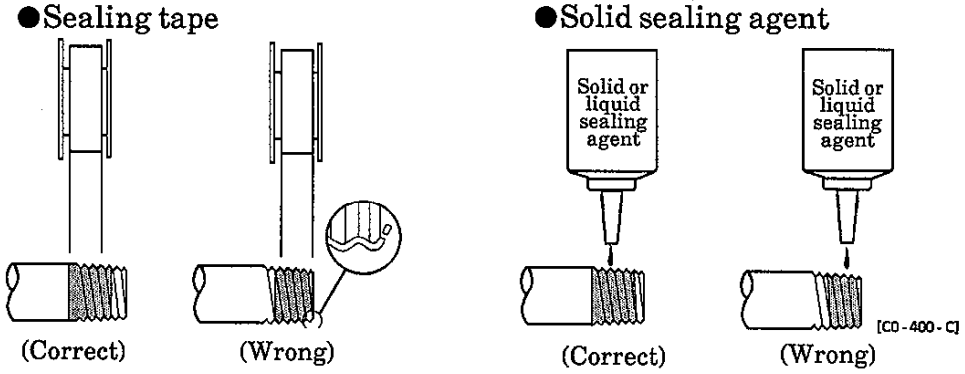
May.8.1995
Revision : Jun.25.2000

1. CAUTIONS

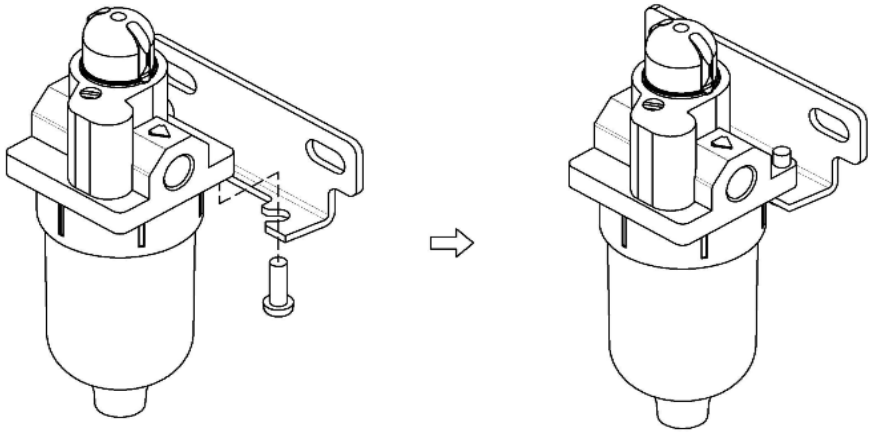
1) Refer to catalogs for specifications and model numbers of products.
2) Do not use this product where direct sunlight comes in.
3) Compressed air in use must not exceed 1.0 MPa.
4) Do not use it where ambient temperature is over 65 °C.
5) As material is polycarbonate resin, NEVER use it in atmosphere containing organic solvent. As chemical agent proof performance vary depending on material of bowl, refer to catalog for details.

2. INSTALLATION

1) Install it as closest to air pressure equipment as possible.
2) Install air filter (5μm) in front of lubricator to prevent dust or water from coming in.
3) Install it so that air flow may direct as instructed by an arrow shown on the product.
4) Install it with bowl of lubricator facing downward.
5) When using seal tape or seal material for piping, do not apply it on first two threads at top end of screw so that any remaining of seal tape or material may not stay inside of piping or equipment.



6) When installing the optional bracket, use the screws (self-tapping screws) that come with the bracket.



7) For operation and maintenance purpose, keep open space below bowl and above body, of 50mm or more, and 250mm or more respectively.

3. OPERATION

1) Adjustment of oil drop quantity

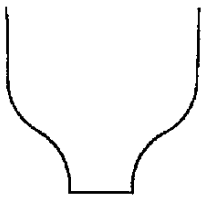
Oil drop quantity increases by turning adjusting screw left (counter-clockwise), and decreases turning right (clockwise). Once drop quantity is set, proportion between oil and air is kept unchanged even if air flow rate changes.

Economist type : All the oil dropped in sight dome will be sent to the OUT side in mist. (Fine oil mist).

2) Purging drain

Drain from bottom of bowl periodically.

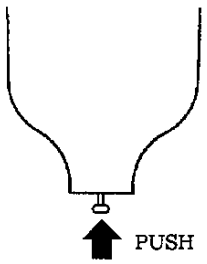
Standard plastic bowl



Drainage can be done by releasing pressure inside bowl and removing bowl.

※ Refer to article 6 for removing and installing bowl.

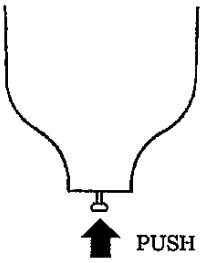
Standard metal bowl



Drainage can be done by pushing tire valve toward PUSH ⬆ , and stopped by releasing it.

※ Refer to article 6 for removing and installing bowl.

Plastic bowl with manual cock



Drainage can be done by pushing tire valve toward PUSH ⬆ , and stopped by releasing it.

※ Refer to article 6 for removing and installing bowl.

4. MAINTENANCE

Before carrying out maintenance, stop supplying compressed air, release primary pressure, and make sure that there is no pressure left in it.

4.1 Periodical inspection

1) Drain from bottom of bowl periodically. Refer to previous article for drainage.
2) Fill oil periodically according to quantity to be used. Use clean turbine oil (Class 1, ISOVG32).
   Fill oil as following procedure:
   a. Stop primary pressure.
   b. Release pressure in lubricator by residual pressure drain valve etc., and remove bowl.
      ※ Refer to article 6 for removing and installing bowl.
   c. Fill oil just below max. level, and install bowl.
   d. After ensuring that bowl is fixed tightly, apply pressure.
3) When oil drop quantity decreases, disassemble and clean it in following steps:
   a. Stop primary pressure.
   b. Release pressure in lubricator by residual pressure drain valve etc.
      Make sure that all remaining pressure has gone out.
   c-1. If filter mounted in siphon tube assy is dirty, remove bowl and siphon tube assy, and clean it with neutral detergent.
      Assembling is to be done by reverse procedure.
   c-2. Remove adjusting screw and clean its needle and body's sheet face, if dirty.
      Clean passage from needle sheet face through adapter.
   c-3. Remove sight dome and clean port through air passage, if dirty.
   d. Assemble all the parts in reverse procedure.

4.2 Troubleshooting

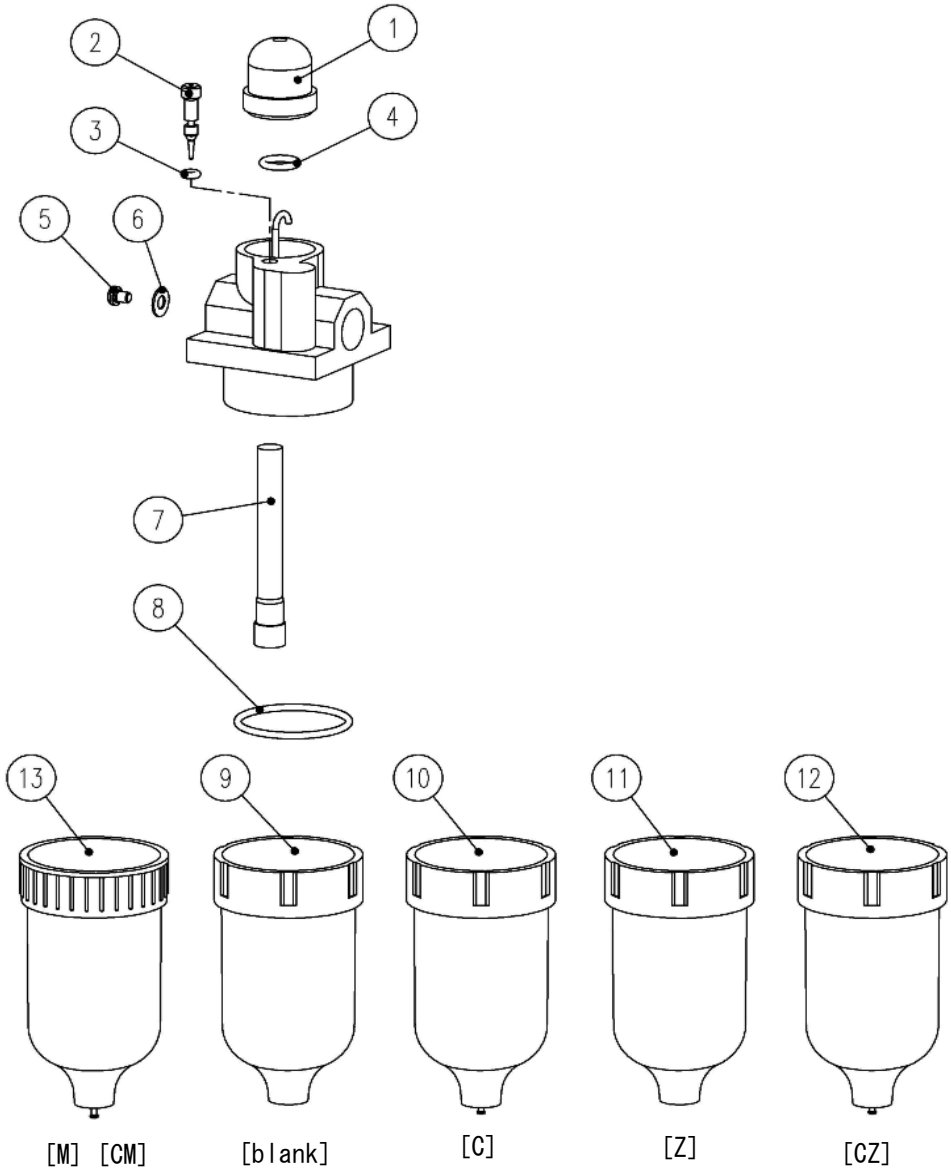
Troubles	Major cause	Countermeasure
Oil does not drop	Insufficient air flow rate, Wrong selection of lubricator model	Check working conditions and min. drop flow rate to review model selection.
	Installation direction is opposite.	Install in right direction as arrow shows.
	Insufficient oil in bowl	Fill up oil before oil becomes lower than min. level shown on bowl.
	Adjusting screw of oil drop quantity is tighten too much.	Adjust to open adequately.
	Viscosity of oil is too thick.	Change oil to designated one.
Air leaks from bowl installed part.	Packing has scratch, or foreign article is attached.	Stop compressed air, remove bowl, and clean or renew packing.
	Bowl is broken.	Stop compressed air, remove bowl, and renew it.

⚠ WARNING When a flaw, such as a crack or a scratch, is found on the bowl, replace it with a new one. Failure to follow this instruction may result in breakage of the bowl and an accident.

⚠ WARNING Check the transparent resin bowl regularly for any smears. If there are any smears or it is otherwise unclear, replace it with a new one. Failure to follow this instruction may result in breakage of the bowl and an accident.

⚠ WARNING When cleaning a transparent resin bowl, use a neutral detergent for home use and rinse it well with water. Any other cleaning method may result in breakage of the bowl and an accident.

5. CONSUMABLES AND REPLACEMENT PARTS



Part name		Part model No.	No.	Quantity
Consumable parts kit	For "1C"	A3019-KIT-1C	②、③、⑤ ⑥、⑦、⑧	1 each
	For "2C"	A3019-KIT-2C		
Observation dome kit	For "blank"	A3019-SIGHT-DOME	①、④	1 each
	For "Z、M"	A3019-SIGHT-DOME-Z		
Flow guide kit	For "1C"	A3019-FLOW-GUIDE-1C	⑤、⑥	1 each
	For "2C"	A3019-FLOW-GUIDE-2C		
Bowl assembly (blank)		A3019-BOWL	⑧、⑨	1 each
Bowl assembly (C)		A1019-BOWL	⑧、⑩	1 each
Bowl assembly (Z)		A3019-BOWL-Z	⑧、⑪	1 each
Bowl assembly (CZ)		A1019-BOWL-Z	⑧、⑫	1 each
Bowl assembly (M) (CM)		A1019-BOWL-M	⑧、⑬	1 each
O-ring※5 pieces are included in one set.		A1019-ORING	⑧	5

6. BOWL EXCHANGING

Before removing bowl, stop compressed air, let remaining pressure go out by loosing residual pressure drain valve etc., and make sure that there is no pressure left in lubricator.

1) Turn bowl left (counter-clockwise) until thread is removed totally.
2) Pull bowl down to remove.
3) Assembling them can be done by reverse procedure.
4) Before applying compressed air, make sure that bowl is completely tightened (no space should be between body and bowl).

7. FLOW GUIDE REPLACING

Before replacing, stop compressed air, and make sure that there is no pressure left inside body or in compressed air circuit.

1) Remove piping at "IN" side on body.
2) Remove old flow guide assembled at inner part of piping port on "IN" side, together with flow guide screw and spacer tube.
3) Install new flow guide and flow guide screw.
4) Connect piping on "IN" side according to article 2.
5) Ensure that piping is done correctly before applying compressed air.

8. SIPHON TUBE REPLACING

Before replacing, stop compressed air, and make sure that there is no pressure left inside body or in IN-OUT piping.

1) Remove bowl according to article 6.
2) Remove and take out old siphon tube assy.
3) Install new siphon tube assy.
4) Assemble bowl according to article 6.
5) Carry out article 6.4 before applying compressed air.