INSTRUCTION MANUAL

FOR

AIR FILTER

MODEL NO. AI338
AI338-Y

Please read this operation manual carefully before using this product, particularly the section describing safety.

Retain this operation manual with the product for further consultation whenever necessary.

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 operation manual carefully for proper operation.

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

⚠ Precautions

- The filter and the lubricator use a plastic bowl. Do not use them with an organic solvent. The bowl will be damaged. With an organic solvent, use a filter and a lubricator containing a metal bowl.

1. Installation

1-1 Install as close as possible to the equipment which requires filtered air.

1-2 Install the unit with the air flowing through the body in the direction indicated by the arrow.

1-3 Install a unit with same pipe size as the line in use.

1-4 Mount unit in vertical position.

1-5 Never use at pressure above 1.0 MPa and temperature above 65 °C

1-6 Never install on air line where phosphate ester lubricants are used, or where any moterial or fumes in the compressed air or ambient air will harm the polycarbonate bowl.

1-7 Drain line may be attached to outlet port (PT 1/4) if desired. Drain line should be as large as practical, and as short as possible. Too much restriction can hinder the proper draining of the unit.

2. Maintenance

2-1 Disassembling of filter

Shut off air supply and relieve pressure within the filter vessel. Taking off the body and transparent bowl assembly and remove this, taking care not to damage the automatic drain assembly.

2-2 Cleaning of filter element

Clean periodically by removing filter, tapping on hard surface and blowing off with air blow gun.

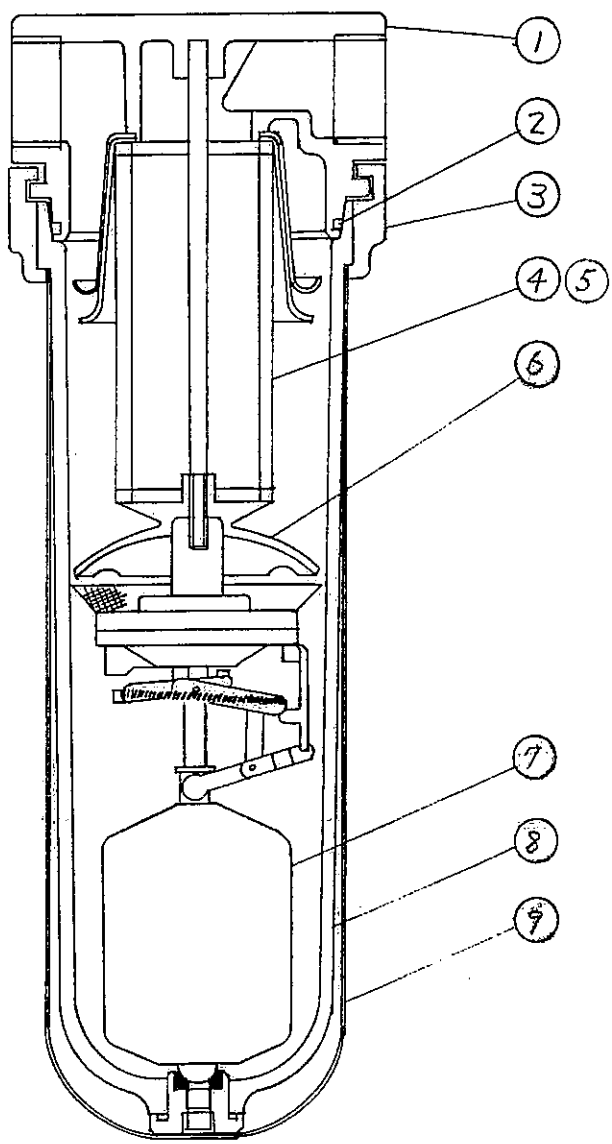
2-3 Cleaning of filter vessel and transparent bowl

When cleaning the body assembly or polycarbonate bowl with automatic drain. Use only soapy water. Do not use solvent as they will destroy the bowl. The following materials will harm a polycarbonate bowl.

Acetaldehyde
Acetic acid (conc.)
Acetone
Acrylonitrile
Ammonium fluoride
Ammonium sulfide
Benzene
Benzoic acid
Benzyl alcohol
Bromobenzene
Butyric acid
Carbolic acid
Carbon disulfide
Carbon tetrachloride
Caustic potash solution (5%)
Caustic soda solution (5%)
Chlorobenzene
Chloroform
Cresol
Cyclohexanol
Cyclohexanone
Cyclohexene
Dimethyl formamide
Dioxane
Ethane tetrachloride
Ethyl ether
Ethylamine
Ethylene chlorohydrin
Ethylene dichloride
Formic acid (conc.)
Freon (refrigerant & propellant)
Gasoline (high aromatic)
Hilgard Co.'s hil-phene
Hydrochloric acid (conc.)
Methyl alcohol
Methylene chloride
Milk of lime (CaOH)
Nitric acid (conc.)
Nitrobenzene
Nitrocellulose lacquer
Phenol
Phosphorous hydroxy chloride
Phosphorous trichloride
Propionic acid
Pyridine
Sodium sulfide
Styrene
Sulfuric acid (conc.)
Sulphural chloride
Tannergas
Tetrahydronaphthalene
Thiophene
Toluene
Xylene
Perchlorethylene and others

2-4 If unit leaks around drain valve seat
Tighten seat assembly. If unit leaks from the bottom drain valve seat assembly, it is probably due to comtaminants on drain valve or drain valve seat. Remove drain valve seat, clean thoroughly. If leak continues, see repair instructions for 15-5316 drain unit assembly on other side.

2-5 Repair of drain unit assembly
A visual check will determine if unit is operating properly. If water level is above the top of the plastic bowl, the unit is not operating properly then 15-5316
Drain unit assembly should be repaired or replaced in accordance with instructions on other side of this page. To disassemble unit, remove screws and dismantle body and bowl. Drain unit assembly can be detached by removing screw in top of cover.



No	PARTS	PARTS No.	REQ'D	REMARK
1	COVER ASS'Y	15-5326	1	
2	"O" RING	78-061	1	
3	CLAMPRING ASS'Y	15-404	1	
4	FELT ELEMENT	85-144	1	5μ
5	TEXTAIL ELEMENT	85-145	1	3μ
6	BAFFLE	16-5043	1	
7	DRAIN UNIT ASS'Y	15-5315	1	
8	BOWL ASS'Y	15-5316	1	
9	BOWL GUARD	6171	1	

SM-A1338-Y

1. Installation for A1338-Y type

1-1 Install as close as possible to the equipment which requires filtered air.

1-2 Install the unit with the air flowing through the body in the direction indicated by the arrow.

1-3 Install a unit with same pipe size as the line in use.

1-4 Mount unit in vertical position.

1-5 Never use at pressure above 1.0 MPa and temperature above 65 °C

1-6 Never install on air line where phosphate ester lubricants are used, or where any m terial or fumes in the compressed air or ambient air will harm the polycarbonate bowl.

1-7 Drain line may be attached to outlet port (PT 1/4) if desired. Drain line should be as large as practical, and as short as possible. Too much restriction can hinder the proper draining of the unit.

2. Maintenance

2-1 TO REPLACE "Y" ELEMENT

Shut off air supply and relieve pressure within the filter vessel. Taking the body and transparent bowl assembly off, and remove element.

1) Maximum permissible differential pressure: 0.07 MPa .

2) Install the differential gauge (Model No. GA400-8A) to determine the permissible differential pressure of 0.07 MPa

2-2 Cleaning of filter vessel and transparent bowl

When cleaning the body assembly or polycarbonate bowl with automatic drain. Use only soapy water. Do not use solvent as they will destroy the bowl. The following materials will harm a polycarbonate bowl.

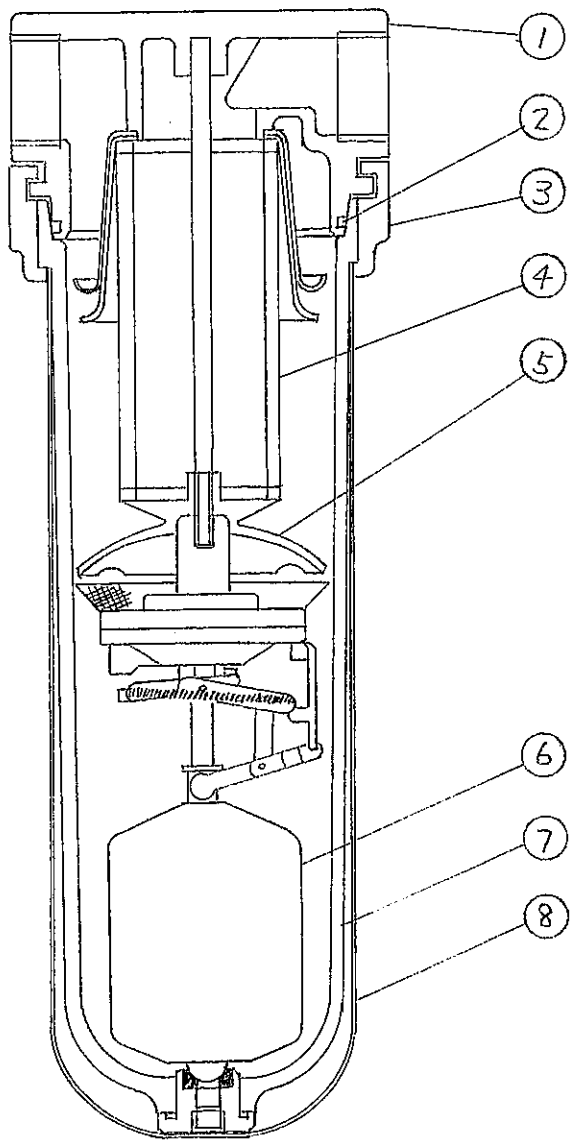
Acetaldehyde
Acetic acid (conc.)
Acetone
Acrylonitrile
Ammonium fluoride
Ammonium sulfide
Benzene
Benzoic acid
Benzyl alcohol
Bromobenzene
Butyric acid
Carbolic acid
Carbon disulfide
Carbon tetrachloride
Caustic potash solution (5%)
Caustic soda solution (5%)
Chlorobenzene
Chloroform
Cresol
Cyclohexanol
Cyclohexanone
Cyclohexene
Dimethyl formamide
Dioxane
Ethane tetrachloride
Ethyl ether
Ethylamine
Ethylene chlorohydrin
Ethylene dichloride
Formic acid (conc.)
Freon (refrigerant & propellant)
Gasoline (high aromatic)
Hilgard Co.'s hil-phene
Hydrochloric acid (conc.)
Methyl alcohol
Methylene chloride
Milk of lime (CaOH)
Nitric acid (conc.)
Nitrobenzene
Nitrocellulose lacquer
Phenol
Phosphorous hydroxy chloride
Phosphorous trichloride
Propionic acid
Pyridine
Sodium sulfide
Styrene
Sulfuric acid (conc.)
Sulphural chloride
Tannergas
Tetrahydronaphthalene
Thiophene
Toluene
Xylene
Perchlorethylene and others

2-3 If unit leaks around drain valve seat

Tighten seat assembly. If unit leaks from the bottom drain valve seat assembly, it is probably due to contamination on drain valve or drain valve seat. Remove drain valve seat, clean thoroughly. If leak continues, see repair instructions for 15-5316 drain unit assembly on other side.

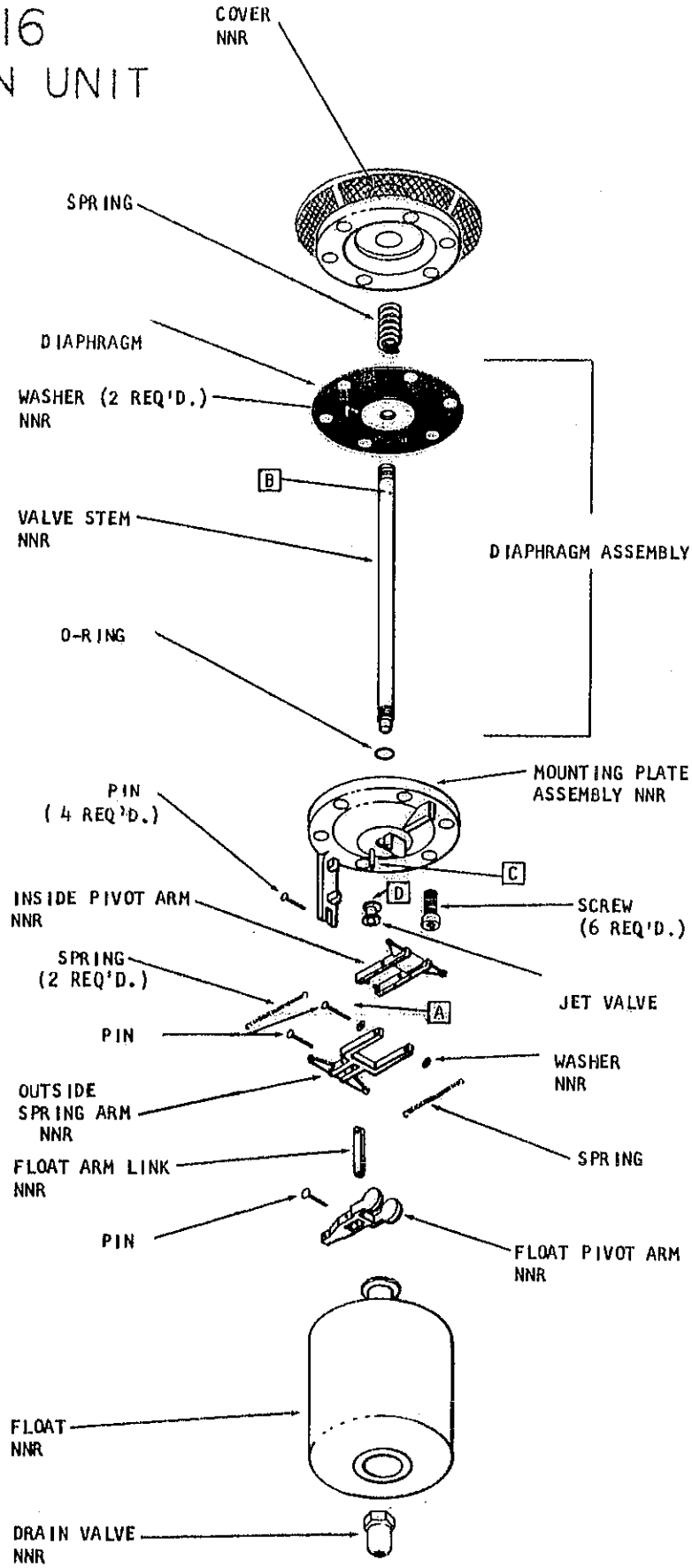
2-4 Repair of drain unit assembly

A visual check will determine if unit is operating properly. If water level is above the top of the plastic bowl, the unit is not operating properly and 15-5316 Drain unit assembly should be repaired or replaced in accordance with instructions on other side of this page. To disassemble unit, remove screws and dismount bowl. Drain unit assembly can be detached by removing screw in top of cover.



No	PARTS	PARTS No.	REQ'D	REMARK
1	COVER ASS'Y	15-5326	1	
2	"O" RING	78-061	1	
3	CLAMPRING ASS'Y	15-404	1	
4	"Y" ELEMENT	85-5010	1	0.3μ
5	BAFFLE	16-5043	1	
6	DRAIN UNIT ASS'Y	15-5315	1	
7	BOWL ASS'Y	15-5316	1	
8	BOWL GUARD	6171	1	

15-5316 DRAIN UNIT



NNR = NOT NORMALLY REPLACED

MAINTENANCE

If assembly fails it is recommended that it be replaced by an entire new assembly, Model 15-5316 . If it is necessary to repair this assembly in the field, study the parts list drawing carefully and observe the arrangement of parts so that reassembly can be properly made. Follow these instructions:

1. To replace diaphragm, remove screws and take off cover. Hold valve stem and upper washer with pliers and remove washer. Diaphragm can now be removed from stem. CAUTION: Be sure not to mar valve stem just below diaphragm where it moves through o-ring.
2. To replace jet valve assembly , cut off end of pin A which releases inside pivot arm, thus enabling you to replace jet valve. Reverse procedure for reassembly of mechanism.
3. To replace o-ring*, follow same procedure as above plug removing valve stem from mounting plate assembly. O-ring can now be replaced. CAUTION: In replacing valve stem, carefully screw the threaded end through o-ring to avoid damaging the o-ring.

IF FLOAT DOES NOT RISE FREELY, rotate float clockwise and counterclockwise to see if it binds on float pivot arm. If it does not rotate freely, it is usually because the top flange of the guide tube in the float is bent. Straighten with pliers. If float still does not rotate freely, replace float pivot arm.

IF FLOAT RISES OR FALLS AND JET VALVE DOES NOT SNAP OPEN OR CLOSED ACCORDINGLY, replace spring pivot arm, inside pivot arm, and jet valve assembly. (Order by description.)

IF AIR LEAKS THROUGH HOLE IN DRAIN VALVE, replace o-ring and jet valve and, if necessary, apply pipe thread cement on threads of valve stem and tighten drain valve.

Whenever unit is disassembled, BE SURE TO OPEN SMALL HOLES AT B , C , and D if they are plugged.