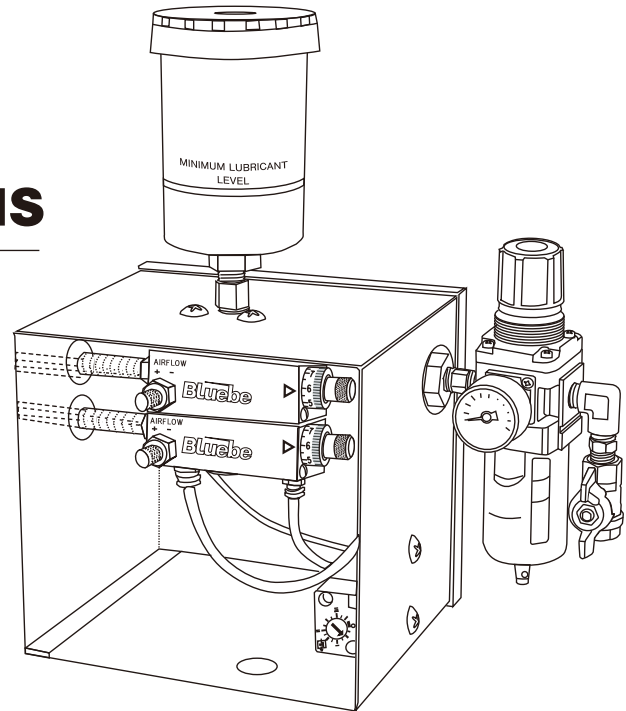


MQL SEMI-DRY PRECISION PUMP
EXTERNAL APPLICATOR

INSTALLATION and OPERATING INSTRUCTIONS

Type **FK/JK**



Thank you for purchasing MQL Semi-Dry system.
Please read the instructions before using this product and have it in store.

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FOR YOUR SAFETY	
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BEFORE USING

FOR YOUR SAFETY



This symbol indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate personal injury and/or damage to the equipment.

- Use genuine lubricants (Bluebe/MQuel). Non-genuine lubricant usage would cause applicator malfunctioning.
- DO NOT use lubricant with low flash point to prevent machining or applicator from exploding and firing.
- Please make sure machine is turned off and turn applicator on manually when confirming lubricant and air provided. Machine and applicator running poses a risk of being injurious to human or a risk of being caught in machine.



Clean air must be supplied through air filter to remove dirt, oil content and moisture.

CAUTIONS



DO NOT disassemble applicator and components to cause precision pump malfunctioning.



Please make sure to prevent contaminations and chips from entering liquid reservoir to fill with lubricant.



Liquid level is above minimum level of reservoir or L Line of tank when liquid level in reservoir falls minimum level. Air inclusions prevent precision pump and applicator from operating.

MAINTENANCE



Drain oil content, air and moisture from air filter regulator to keep air clean.

WARRANTY



All FUJI BC precision pump applicators are backed with 1-YEAR Limited Warranty against defects in workmanship and/or materials. Warranty applies only when used under normal operating conditions. Any part which is returned to FUJI BC that is determined to be defective in workmanship and/or materials will be repaired or replaced with no charge in warranted term from manufacturing date.

All Warranties, expressed and implied, are null and void if the equipment is subject to improper installation, misuse, neglect, and/or accident or if a lubricant other than FUJI BC brand lubricant is used in the warranted equipment.

SPECIFICATIONS

Supplied Air (※)	Pressure	0.4-0.7MPa (Operating)
	Air Flow Rate	Over 60L/min (ANR) per one nozzle
	Inlet port	Rc1/4
Operating Temperature	5~50°C	

(※) Remove dirt, Oil content and moisture

INSTALLING

- ① Attach the applicator to the machine, make sure that it is as level as possible.
- ② It can be opened and closed for front and rear door of BOX regarding as FK model. Please read and follow instructions below for maintenance.

- 1) Keep enough room to open and close front and rear door.
- 2) Ensure wiring and piping tubes shall not cause disruption to open and close box.

CONFIGURATIONS IN FACTORY

LUBRICANT USAGE

Lubricant Control : Zero Point

Frequency Generator : 1 cycle per second

AIR FLOW RATE

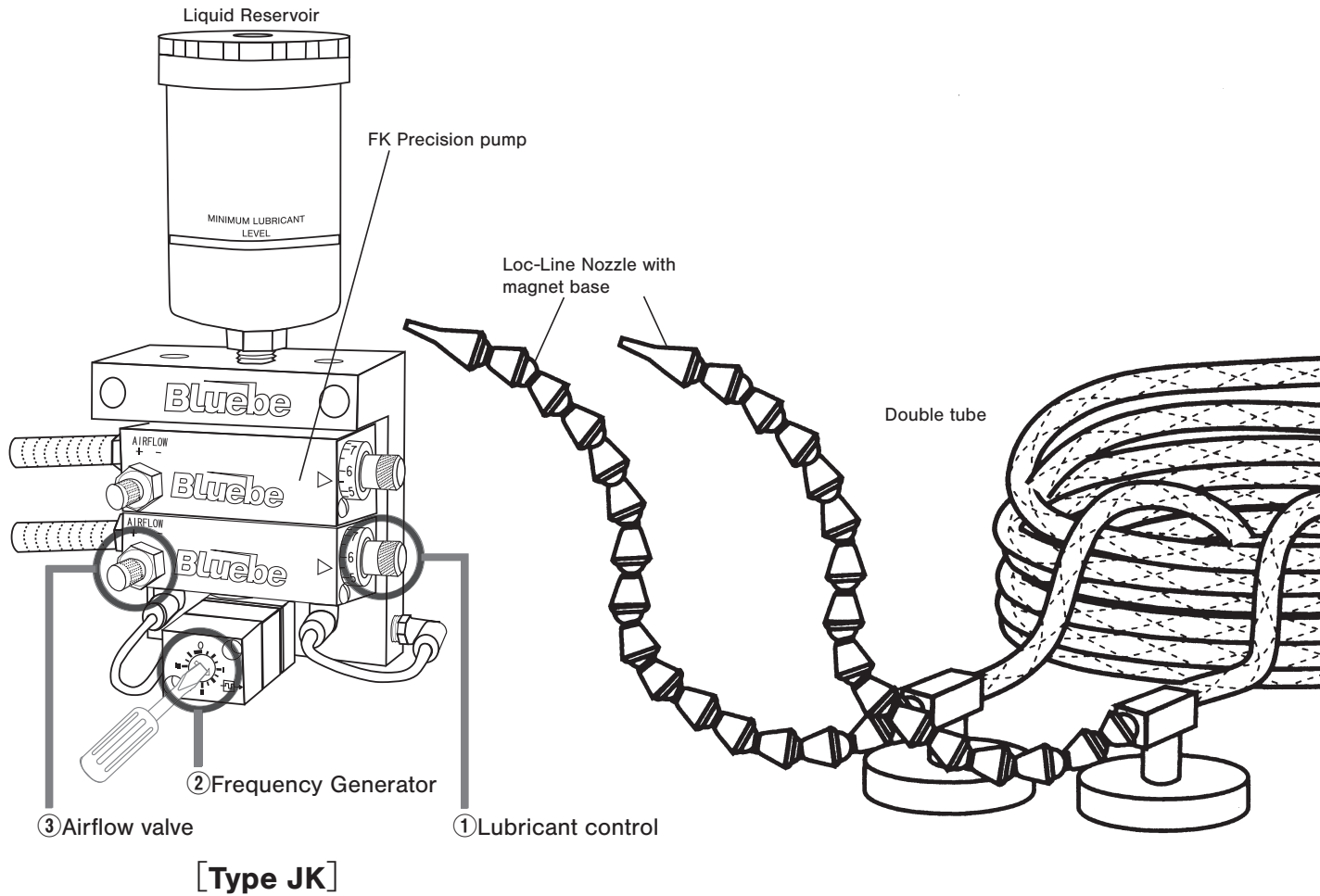
Airflow valve: Closed

PREPARING -APPLICATOR-

- ① Install liquid reservoir onto box and fill the reservoir with lubricant.
- ② Make sure the air supply is connected (0.4MPa-0.7MPa)
- ③ Adjust the air flow and fluid usage to see instructions respectively.

- How to adjust air flow: air flow valve on page 5
- How to set lubricant: fluid usage on page 6

COMPONENTS / HOW TO USE



Turning applicator on

Applicator is powered by compressed air. M type offers Manual valve and S type offers electric solenoid valve to turn on applicator. Standard JK model offers N “no valve”. Manual valve and solenoid valve are optional specifications.

Airflow valve

Adjusting air flow rate (Page 5-③)

Precision Pump

Uses air pressure to power the pump cycle; provides consistent and accurate lubrication instantly. Precision Pump has airflow valve and lubricant control valve (Page5-①). See instructions how to set up on page5 and fluid usage on page6 respectively.

Liquid Reservoir

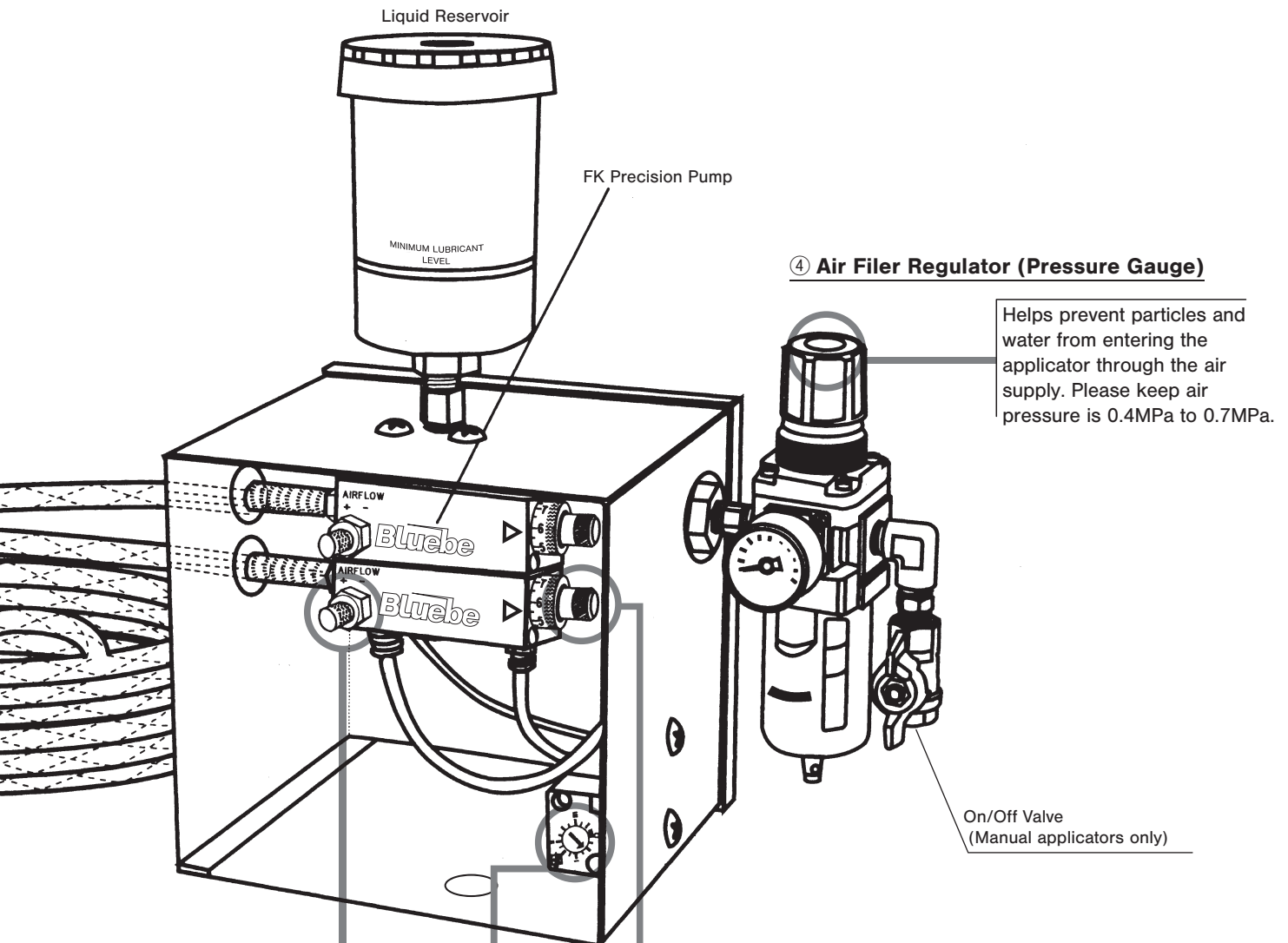
Make sure liquid level is above minimum level.

Double Tube

FK/JK type has double tube to carry compressed air and accurate lubricant. Capillary tube(#9360) that runs inside the braided air hose (#9363).

Nozzle

Several nozzles are available. This instruction shows Loc-Line nozzle with magnet base(#LLMB).



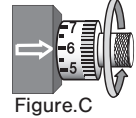
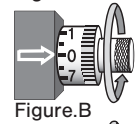
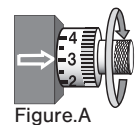
[Type FK]

③ Airflow rate valve

- **Feature**
Controls the amount of continuous air supplied to the nozzle.
- **How to use**
Turn counterclockwise to increase air flow and clockwise to decrease the flow. The airflow should be just high enough to move the lubricant to the cutting edge.
- **Reference**
Helps chip removing and enhance cooling of cutting edge by turning counterclockwise to increase air flow.

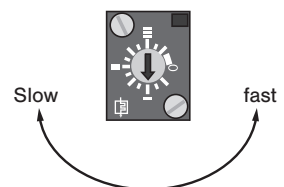
① Lubricant Control

- **Feature**
Secondary lubrication control. It is used to fine-tune the amount of lubricant in each pump cycle.
- **How to use**
 - 1. Stop Point**
Turn the lubricant control clockwise as far as it will go, the dial will most likely stop around 3 or 6. (Fig. A)
 - 2. Zero Point**
Turn the lubricant control counterclockwise back to 0. (Fig. B)
 - 3. Setting the lubricant control**
Start at the Zero Point and turn the control counterclockwise to desired operation.(Fig. C)

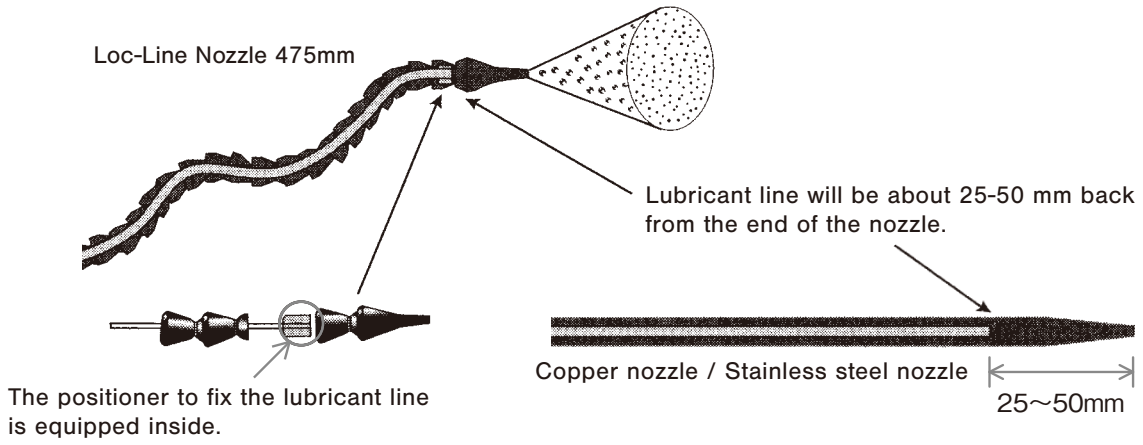


② Frequency Generator

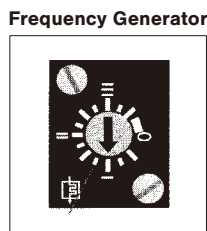
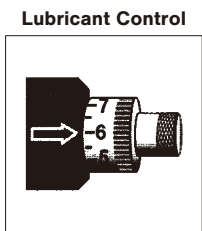
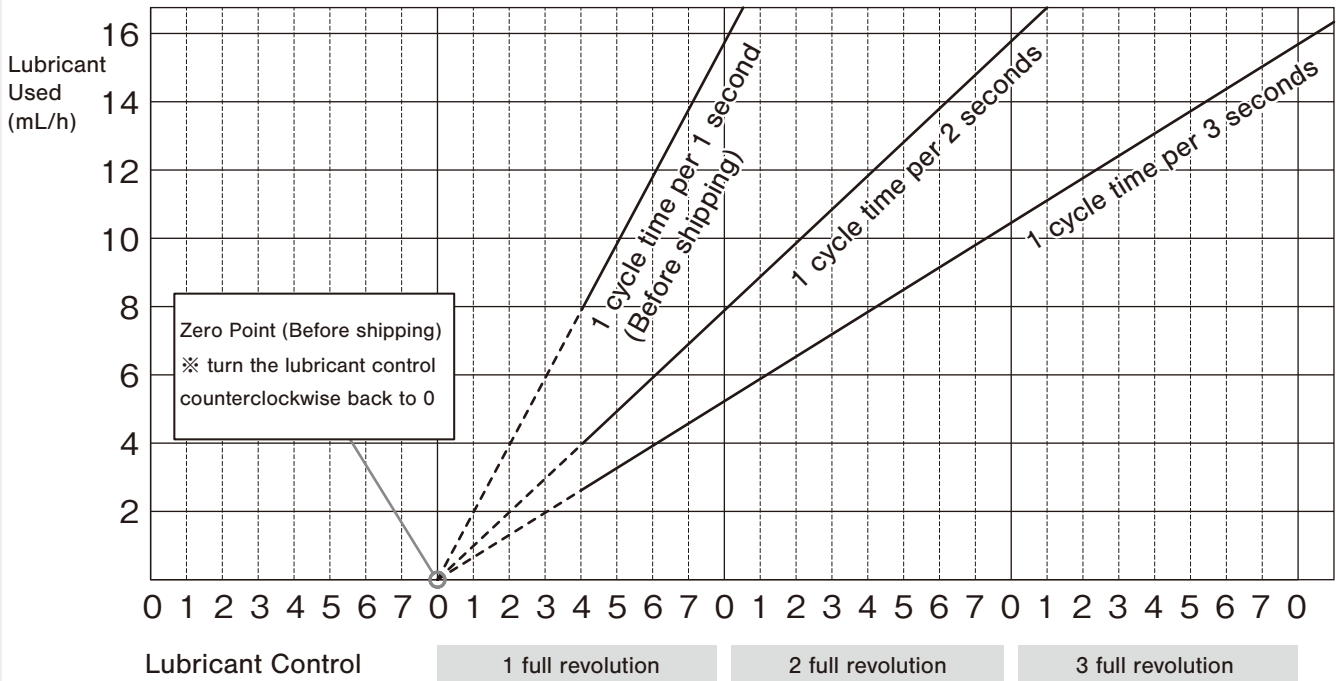
- **Feature**
Primary lubrication control; regulates the pump cycle.
- **How to use**
Adjust the stroke of the pump with the generator by using a small screwdriver to turn the dial (clockwise to decrease and counterclockwise to increase) within 3 strokes per 1 second.



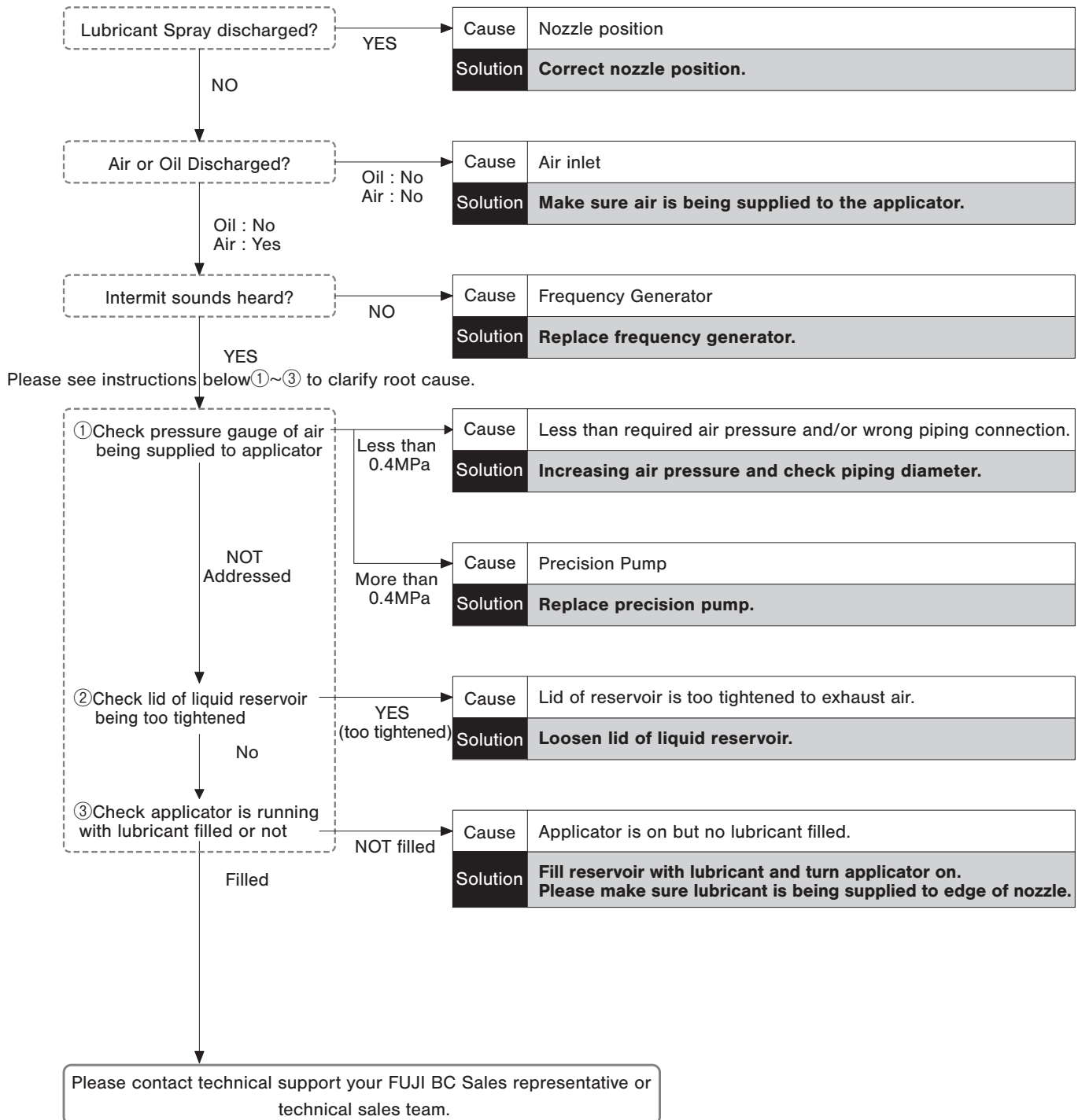
PREPARING -NOZZLE-



LUBRICANT USAGE



TROUBLESHOOTING



フジBC技研 株式会社

本社 / 〒467-0851 愛知県名古屋市瑞穂区塩入町3-1
TEL (052) 824-7784 FAX (052) 819-5474

最新の製品情報はホームページをご覧ください。 www.fuji-bc.com

FUJI BC ENGINEERING CO., LTD.
3-1, SHIOIRI-CHO, MIZUHO-KU, NAGOYA, 467-0851 JAPAN
PHONE: +81-52-824-7784 FAX: +81-52-819-5474

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