

**USER'S MANUAL**

**AUTOMATIC LUBRICATION  
SYSTEM  
LBI**

**(Head, Rotary hook)**





## Foreword

This user's manual describes about the correct using method and instructions for use of this product. Please use this machine after understanding the contents of the manual.

This manual may contain discrepancies in detailed specification as compared with the actual production. If you have any question about this manual, consult your TAJIMA distributor.

We believe that "BASICS TAJIMA EMBROIDERY MACHINES" and "MACHINE SETUP INSTRUCTIONS" are useful to deepen your knowledge about this product. Please also read those booklets.

Regarding how to handle the products related, refer to the user's manual exclusive for them included in the manual CD.

**TISM Co.,Ltd.**

## SAFETY PRECAUTIONS

To prevent any harm or damage to the person who use this product or other person, we describe items that must be surely followed as below.



Indicates that there is a lot of danger of death or serious injuries [\*1] if handled by mistake.




Indicates that there is a likelihood of death or serious injuries [\*1] if handled by mistake.





Indicates a potentially hazardous situation which may result in minor or moderate injury [\*2] or property damage if handled by mistake.

\*1: A condition caused by electric shock, injury, fracture of a bone, etc., that leads to aftereffects, or an injury that necessitates hospitalization or visits to a hospital over a long period.

\*2: An injury that does not necessitate hospitalization or visit to a hospital over a long period.

 : Prohibited items

 : Items that may cause electric shock if not observed

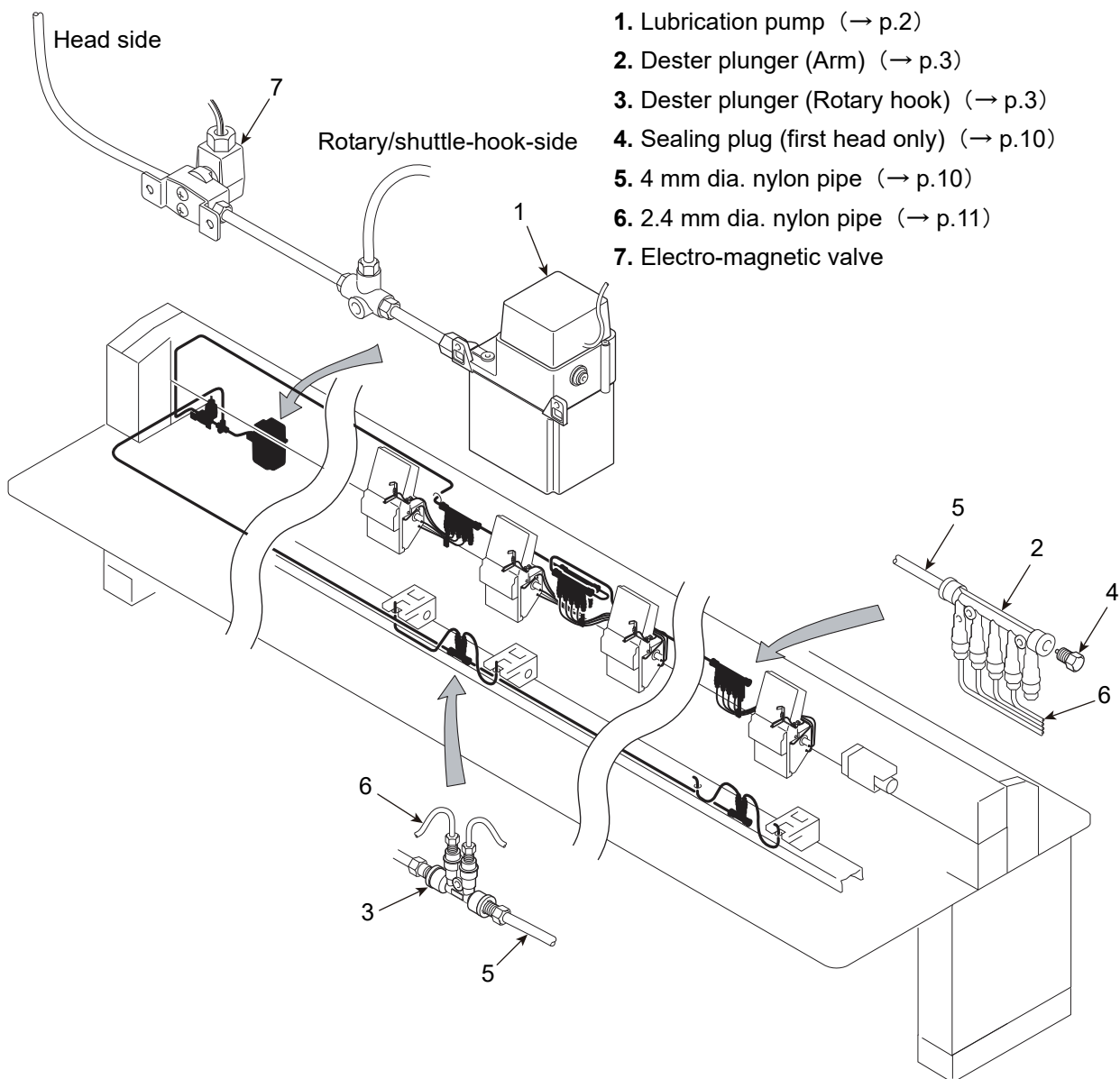
 : Items that must be followed carefully to ensure safe operation

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## 1. Name of each part

### 1. Name of each part

[Typical example]





## 2. Lubrication pump

There are following two types of lubrication pump (differs depending on model).

### 2-1. When oil is lacking

#### CAUTION

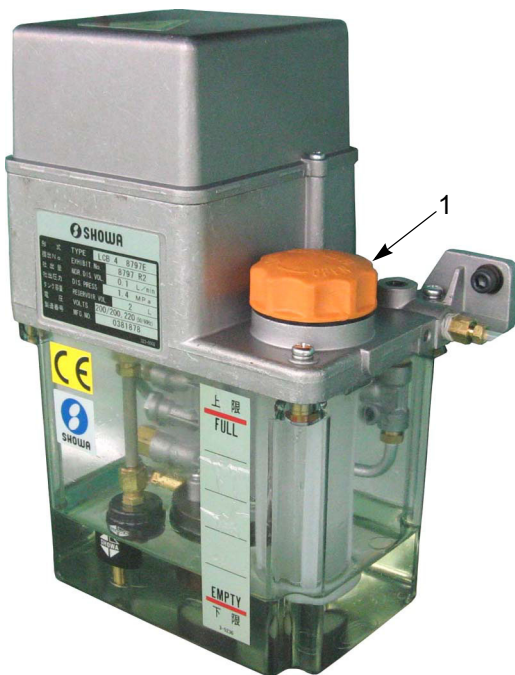
-  This device does not have function that collects supplied oil. Therefore, inspect and clean the bottom section of the machine head once a month.
-  Use the TF oil (packed with the machine), or the equivalent (viscosity grade = equivalent to VG20).

When oil in the tank becomes lacking, code No.251 will be displayed on the operation panel. Remove the cap (1 in the figure below) and refill oil to the full level.



Tank capacity of both tanks is 2 liters.

200 V AC



24 V DC



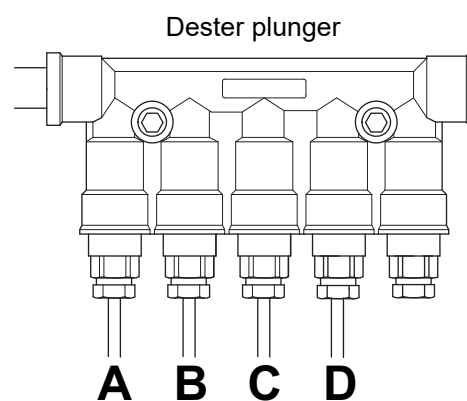
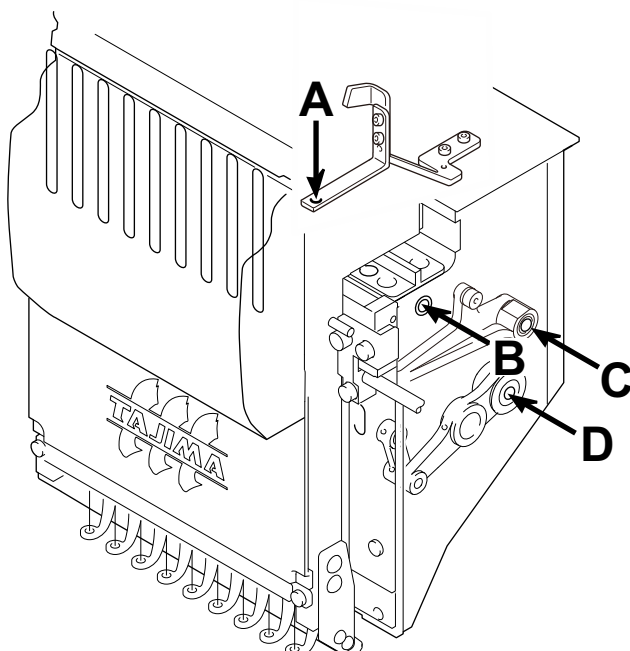
## 2-2. Lubricating spot

### CAUTION

 Regarding parts in the head, it is necessary to lubricate other spots than those indicated below by the oiler (accessory). Refer to the user's manual of the machine, and perform lubrication periodically.

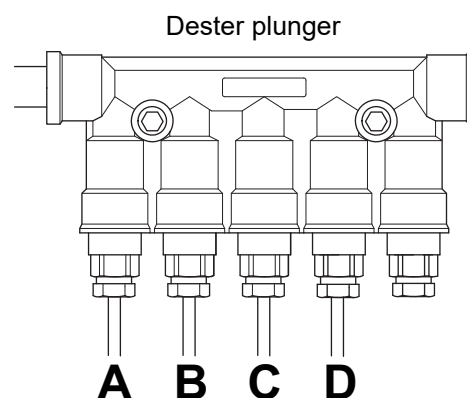
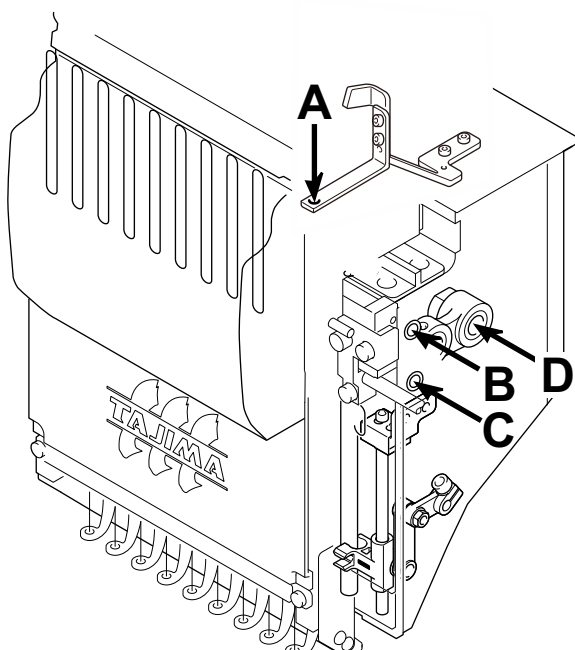
The device lubricates the spots indicated in the figure below (A to D, or A and B).

#### (1) TFMX



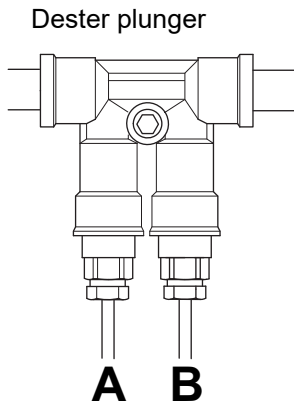
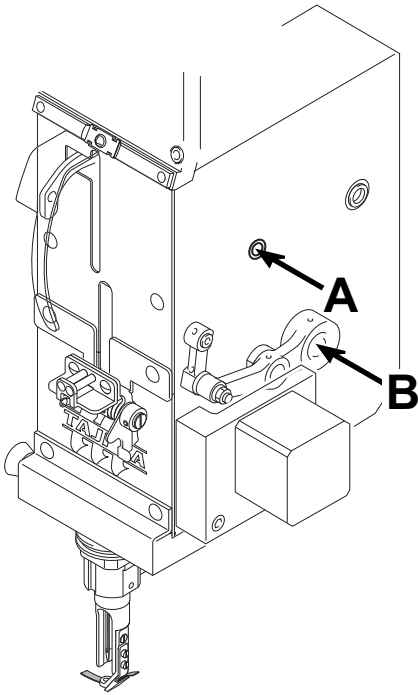
- A: Needle bar
- B: Needle bar drive shaft
- C: Presser foot drive shaft
- D: Needle bar drive shaft

#### (2) TMAR TYPE-2, TMAR-VC, TMCR, TMCP



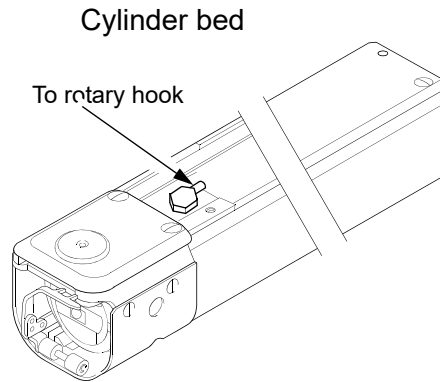
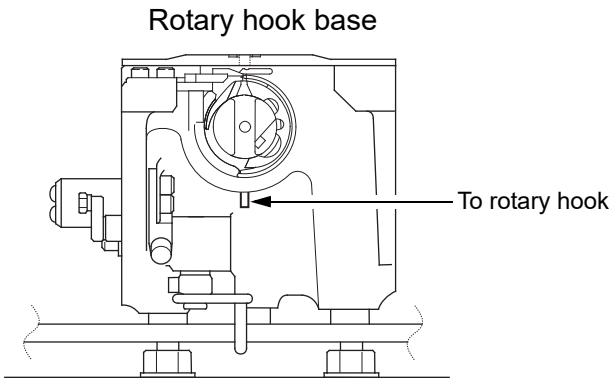
- A: Needle bar
- B: Needle bar drive shaft
- C: Presser foot drive shaft
- D: Needle bar drive shaft

(3) TLMX



A: Needle bar drive shaft  
B: Needle bar drive shaft

(4) Rotary hook, cylinder bed (TFMX, TLMX, TMCR, TMCP, TMAR TYPE-2, TMAR-VC)

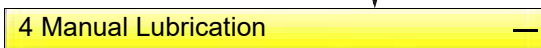
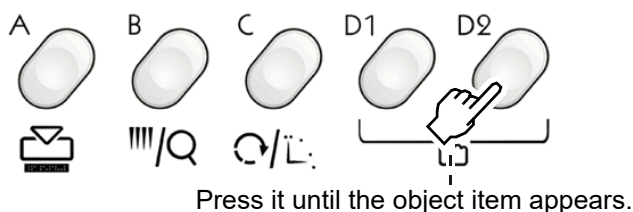


### 3. Manual Lubrication

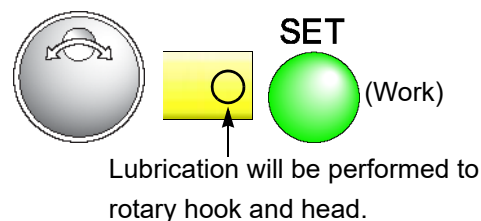
Activate the device manually during stop of the machine to perform lubrication.

#### 3-1. TLMX, TFMX

(1) To switch screen

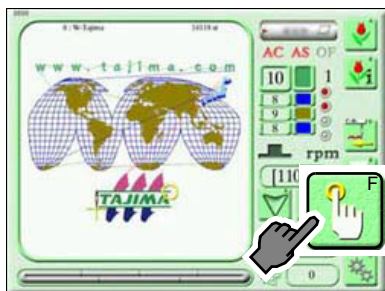


(2) Select "O" to [SET].

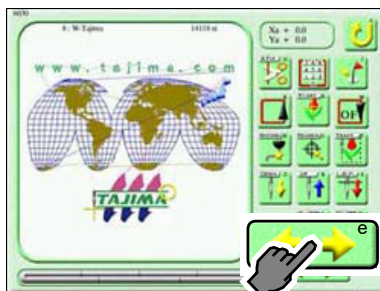


#### 3-2. TMAR TYPE-2, TMAR-VC, TMCR, TMCP

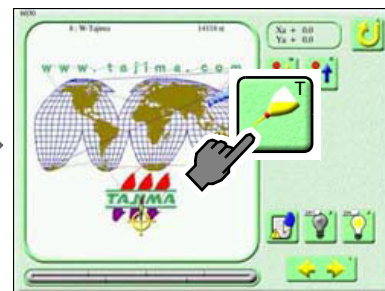
(1) Icon F



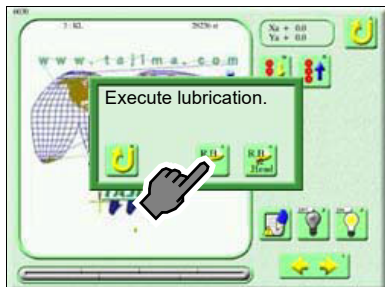
(2) Icon e



(3) Icon T



(4) Icon d (Completed)



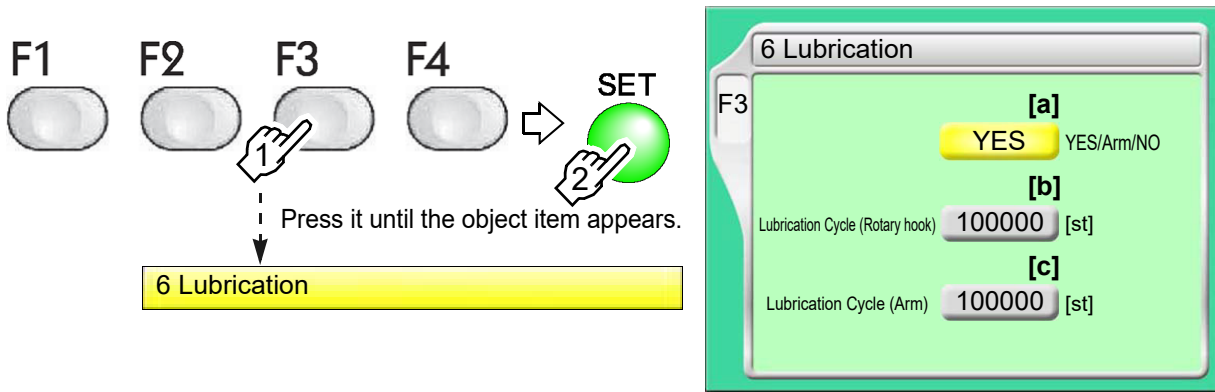
- Lubricate the rotary hook.
- Lubricate the rotary hook and the inside of head.

## 4. Setting for lubrication cycle

When counting reaches the number of setting stitches (lubrication cycle) during operation of the machine, it will make the device perform lubrication automatically. Set the lubricating cycle for rotary hook and head individually.

### 4-1. TLMX, TFMX

(1) To call the screen



<Screen>

#### [a] Type of device

YES: Type lubricating the inside of head and rotary hook

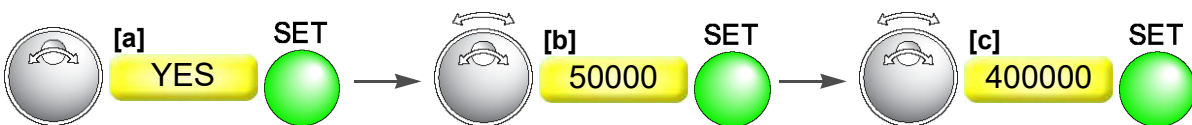
ARM: Type lubricating the inside of head

NO: Without device

#### [b] Lubrication cycle to rotary hook (Recommended value: 50000)

#### [c] Lubricate cycle to head (Recommended value: 400000)

(2) Select a value and [SET].



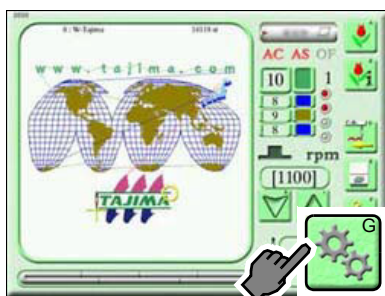
## Setting for lubrication cycle

### 4-2. TMAR TYPE-2, TMAR-VC

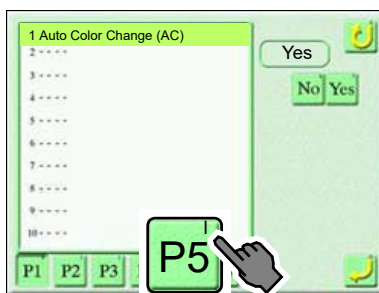
When counting reaches the number of setting stitches (lubrication cycle) during operation of the machine, it will make the device perform lubrication automatically. Set the lubricating cycle for rotary hook and head individually.

#### (1) Setting for lubrication cycle (Rotary hook)

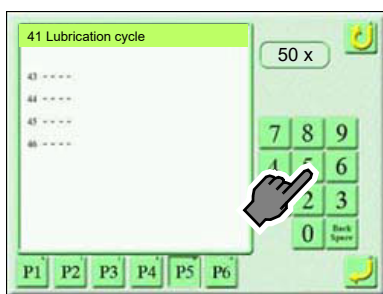
##### 1. Icon G



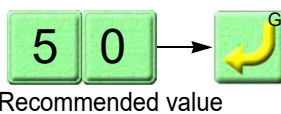
##### 2. P5



##### 3. To input lubrication cycle

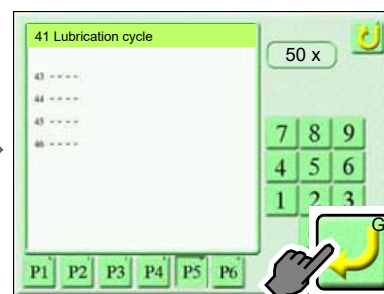


Example: Lubricate one time at 50,000 stitches.



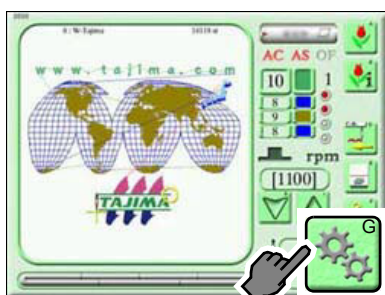
Recommended value

##### 4. To set

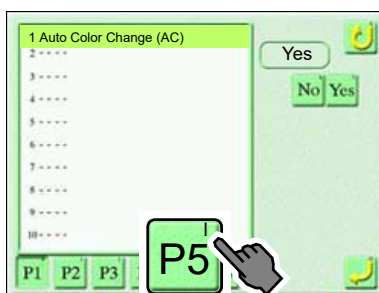


#### (2) Setting for lubrication cycle (Head)

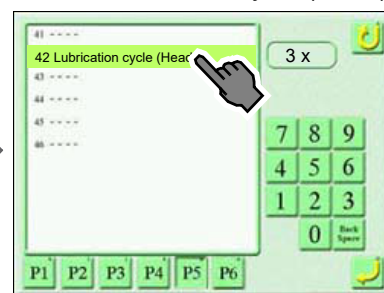
##### 1. Icon G



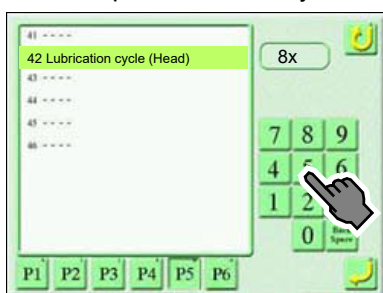
##### 2. P5



##### 3. 42 Lubrication cycle (Head)



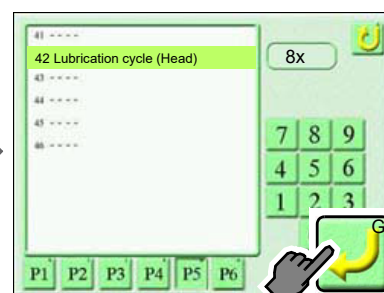
##### 4. To input lubrication cycle



The lubrication cycle (Head) is the integrated value of "41 Lubrication cycle (Rotary hook)".

Example: When setting "42 Lubrication cycle (Head)" to one time per 400,000 stitches, select "8".

##### 5. To set

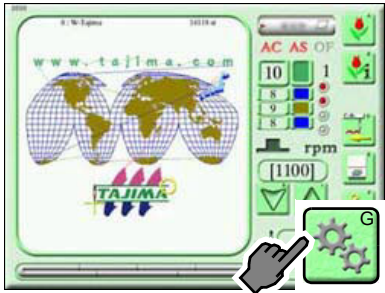


### 4-3. TMCR, TMCP

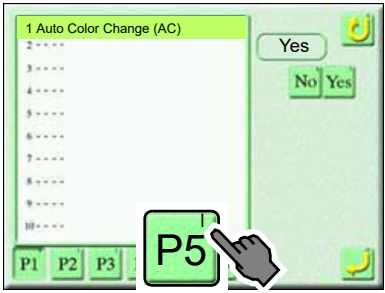
When counting reaches the number of setting stitches (lubrication cycle) during operation of the machine, it will make the device perform lubrication automatically. Set the lubricating cycle for rotary hook and head individually.

#### (1) Setting for lubrication cycle (Rotary hook)

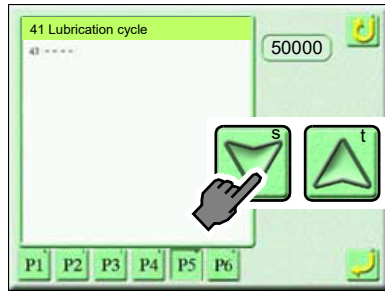
**1. Icon G**



**2. P5**

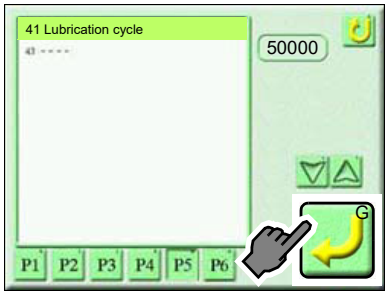


**3. To input lubrication cycle**



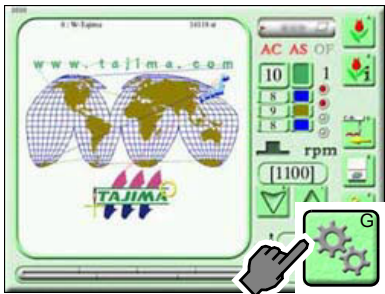
Example: lubricate every 50,000 stitches (the recommended value)  
Do not select "1,000" because it is for maintenance only.

**4. To set**

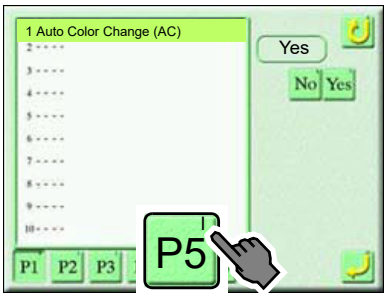


#### (2) Setting for lubrication cycle (Head)

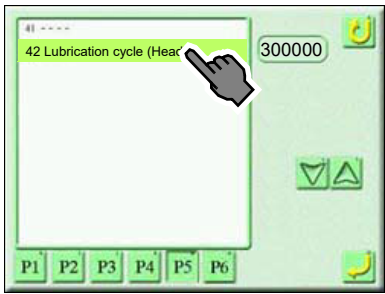
**1. Icon G**



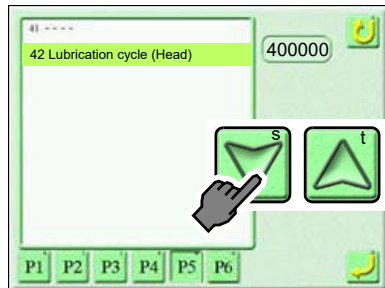
**2. P5**



**3. 42 Lubrication cycle (Head)**

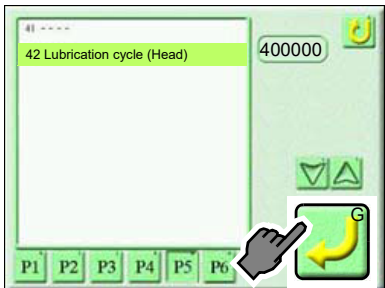


**4. To input lubrication cycle**



Example: lubricate every 400,000 stitches (the recommended value)  
Do not select "0" or "1,000" because it is for maintenance only.

**5. To set**



## 5. Setting after installation of software

After software installation, confirm that the parameters are the setting contents in the table below.

	Parameter	Setting contents
TMAR TYPE-2, TMAR-VC, TMCR, TMCP	P7 77 Optional Device (Hardware) 9 Auto lubrication system	YES With valve
TLMX、TFMX	F3 6 Lubrication	YES

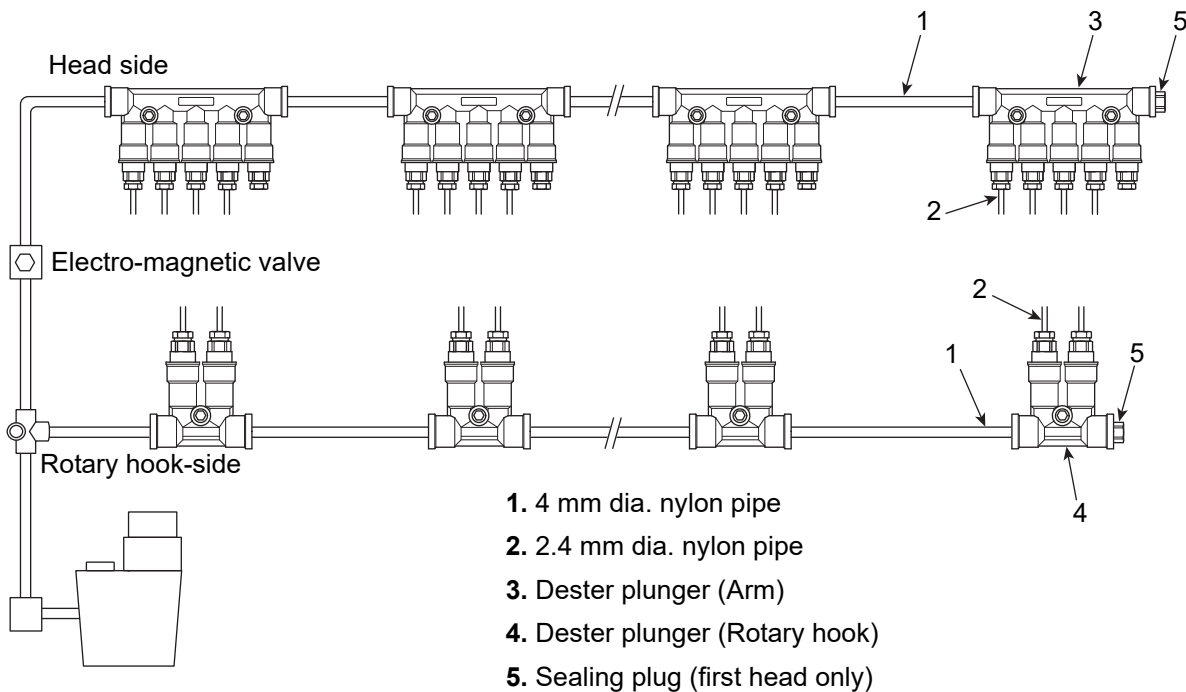
## 6. Maintenance

### 6-1. Bleeding air in the nylon pipe

#### ! CAUTION

! When you bleed air, plenty of oil come out with air, and it will cause smearing to the machine. To loosen the sealing plug (5 in the figure below), use a tray, etc. to receive oil.

When air comes in nylon pipes 1 and 2 to be mixed by changing nylon pipes (1 and 2 in the figure below), the dester plunger 3 etc., quantity of lubrication will become imprecise. When air comes in to be mixed, bleed air by the following procedure.



#### (1) In case of 4 mm dia. nylon pipe

- [a] Check the position where air comes in to be mixed by visual observation.
- [b] Loosen the sealing plug (5 in the figure above) at the side where air comes to be mixed (head or rotary hook).
- [c] Perform "Manual lubrication" on the operation panel. This operation feeds oil into 4 mm dia. nylon pipe (1 in the figure above), and air will be discharged outside with oil from the position where the sealing plug 5 is loosened. If it is not possible to make air come off by one operation, repeat the operation.
- [d] When all air in the nylon pipe comes out, tighten the sealing plug 5.

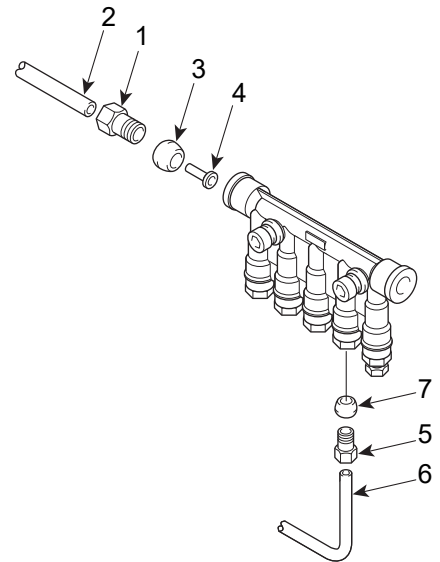
**(2)** In case of 2.4 mm dia. nylon pipe

- [a]** Check the position where air comes in to be mixed by visual observation.
- [b]** Perform "Manual lubrication" on the operation panel. This operation feeds oil into the 2.4 mm dia. nylon pipe (2 in the figure above), and the inside of head and rotary will be lubricated. Repeat operation until air comes off.
- [c]** Wipe off oil discharged from each head or rotary hook.
- [d]** Perform idling of the machine adequately, and disperse oil accumulating in rotary/shuttle hook.

## 6-2. Change of nylon pipe

**(1)** In case of 4 mm dia. nylon pipe

- [a]** Loosen the tightening plug (1 in the right figure) to detach the 4 mm dia. nylon pipe 2, sleeve 3 and tube insert 4.
  - [b]** Replace the 4 mm dia. nylon pipe 2, sleeve 3 and tube insert 4 with new ones.
- [NOTE]  
Tighten the tightening plug 1 by hand and additionally tighten it 1/2 rotation with a wrench.



**(2)** In case of 2.4 mm dia. nylon pipe

- [a]** Loosen the tightening plug (5 in the right figure) to detach the 2.4 mm dia. nylon pipe 6 and sleeve 7.
  - [b]** Replace the 2.4 mm dia. nylon pipe 6 and the sleeve 7 with new ones.
- [NOTE]  
Tighten the tightening plug 5 by hand and additionally tighten it 1/4 rotation with a wrench.



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