

物理農業機械股份有限公司

WULI AGRICULTURE MACHINE CO., LTD.

動力噴霧機、高壓洗淨機、微霧系統專業設計製造

MISTING SYSTEM OPERATION MANUAL

微霧機操作手冊

MODEL

WM-1001B-5M • WM-1001B-6M

WN-1002-5M • WN-1002-6M

WN-1003-5M • WN-1003-6M

WN-1004-5M • WN-1005-6M

感謝您購買物理產品，使用前請詳閱本說明。

Thank You For Buying Our Product.

Please Read The Operation Manual Before Use.

操作注意事項



注意

- 請仔細閱讀本說明書，並正確地操作微霧機。
- 機器內請保持乾燥，避免放置潮溼處，否則可能引起短路及漏電危險。
- 使用完畢，請關閉電源並拔除插座上之電源線。
- 低溫的操作環境下恐使本機器發生故障，故在結凍的場合使用完畢時，請務必將本機器及管路內的水排空。



警告

- 卸下外殼前，請將機器停止運轉，避免造成危險。



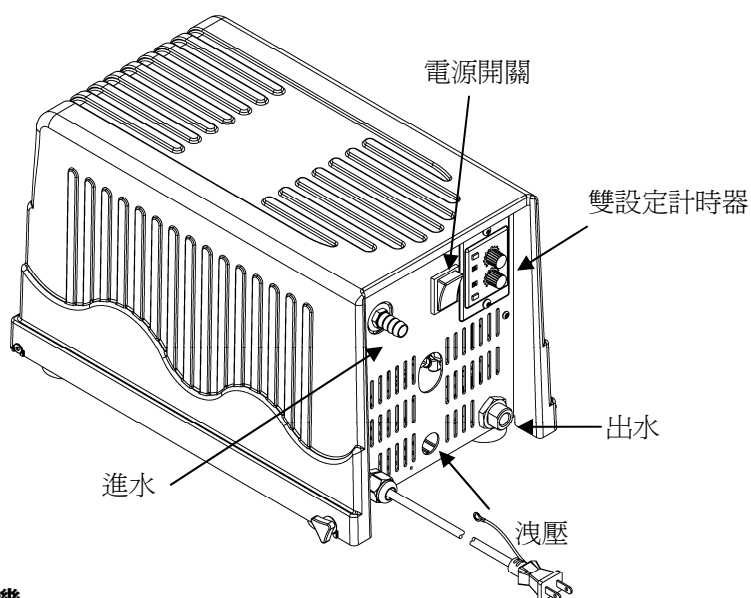
危險

- 潮濕的手請勿觸碰本機器，避免發生觸電危險。
- 請妥善裝置接地線，避免事故發生。
- 機器運轉時，請勿觸碰機械迴轉部份，否則可能會受傷。

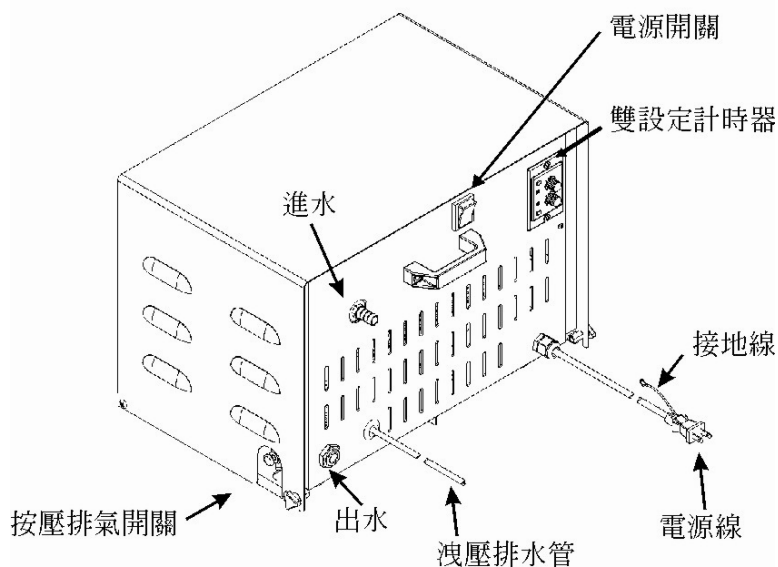
使用前置作業

1. 將進水管兩端分別連接主機與水龍頭，使用白鐵束確實鎖緊，避免漏水。
2. 水龍頭進水壓力須在 $0.3 \sim 5 \text{ kgf/cm}^2$ 之間，避免損害機器。進水壓力太小，機器將無法啟動。
3. 將電源插頭置入適用於本機器之電源插座。
4. 設定計時器的噴霧運轉及停止時間。
5. 確認噴霧管路已配置完畢。
6. 打開水源，開啓電源開關，按壓排氣開關(適用於 WN 系列)，將管路與幫浦內之空氣排空。
7. 初次運轉、無水自動停止、長期末使用時，請按壓排氣開關將幫浦內之空氣與水排空，直到正常出水後，即可正常運作使用。

WM 系列微霧機



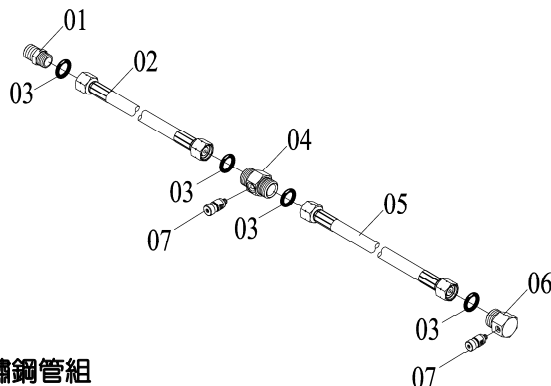
WN 系列微霧機



管 路 安 裝 方 式

1. 高壓軟管組

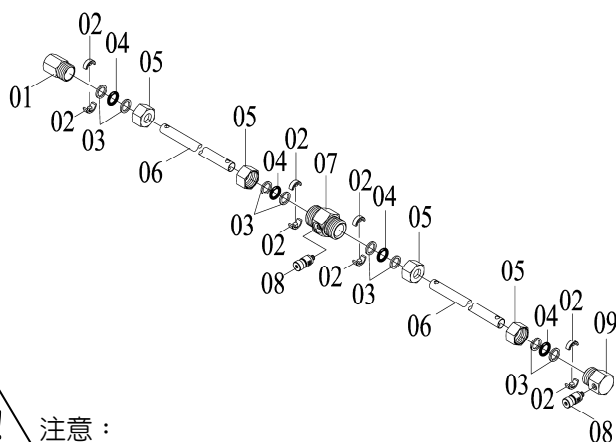
連結高壓軟管與微霧機出水口，鎖緊噴嘴。使用接頭固定片或結束帶確實將高壓軟管安裝在欲設置的場所。



圖號	零件品名
01	高壓軟管出水接頭
02	高壓軟管
03	O 形環
04	單孔噴嘴接頭
05	高壓軟管
06	高壓軟管尾端接頭
07	噴嘴

2. 不鏽鋼管組

依圖示組立順序為「No.5→No.3→No.4→No.3→No.2」；No.2 定位片須拆開固定於 No.6 不鏽鋼管孔位。鎖緊固定螺帽與接頭；尾端接頭鎖緊於不鏽鋼管末端；噴嘴鎖緊於 No.4 單孔噴嘴接頭，避免漏水。使用接頭固定片或結束帶，確實將不鏽鋼管安裝於欲設置的場所。若要彎曲不鏽鋼管，請使用彎管器。



圖號	零件品名
01	排氣接頭
02	定位墊片
03	止水墊片
04	O 形環
05	固定螺帽
06	不鏽鋼管
07	單孔噴嘴接頭
08	噴嘴
09	尾端接頭

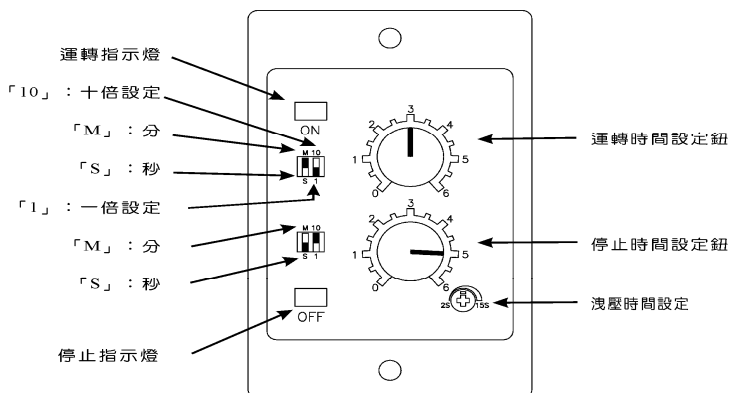


注意：

- 初次使用管路時，請打開尾端接頭或球閥，以清潔管路，避免噴嘴阻塞。
- 安裝管路時，請注意安裝方向。

雙設定計時器操作方式

一、部件名稱



二、噴霧、停止時間設定

【例】：「欲噴霧時間運轉 3 分鐘，停止 50 秒」其設定方式如下：

◎噴霧運轉時間設定：

1. 將「運轉時間設定鈕」轉至刻度 3
2. 該鈕左方之時間單位撥至「M」分鐘
3. 時間倍數撥至「1」為一倍設定
即完成噴霧運轉三分鐘之設定。

◎間歇停止時間設定：

1. 將「停止時間設定鈕」轉至刻度 5
2. 該鈕左方之時間單位撥至「S」秒鐘
3. 時間倍數撥至「10」為十倍設定
即完成間歇停止 50 秒之設定。

※注意：為確保機械使用壽命，停止時間至少需設定在 15 秒以上。

三、洩壓時間設定

1. 洩壓時間最長設定為 15 秒；為確保噴霧停止與洩壓時間配合無誤，**噴霧停止時間設定需大於洩壓時間。**
2. 噴霧管路愈長，洩壓時間可適當延長。

四、機器停止及運轉

藉由開啓、關閉電源開關以控制機器運轉與停止。

五、無水停機

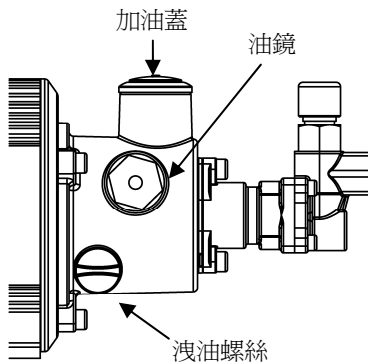
若電源開關啓動，運轉及停止指示燈均未亮時，表示微霧機缺水將自動停機，切勿強制啓動。請檢查水源並確保供水充足，屆時再重新啓動運轉。

一、機器、配件保養時間表

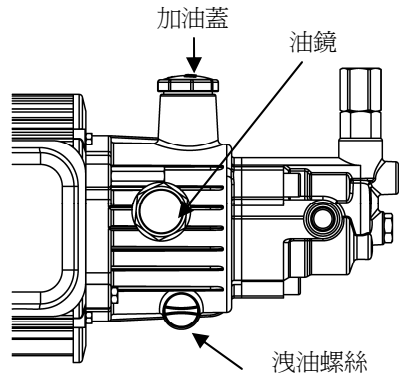
敬請遵守時間表實行保養步驟。

零件名稱	維護內容	維護時機
幫浦	確認油量	使用前確認機油是否足夠
進水過濾器	清潔	使用 15 天後
噴嘴 / 管路	清潔	必要時或每 15 天

二、幫浦機油更換



WM 系列幫浦側面圖



WN 系列幫浦側面圖

	WM 系列	WN 系列
機油使用	SAE 30~40	
更換油量	80 CC	270 CC
更換時機	1. 首次使用 30~50 小時 2. 使用每隔 100~200 小時	

1. 打開加油蓋。
2. 卸下排油螺絲，請準備容器盛裝排流出的舊機油。
3. 舊機油排流完畢後，請確實將排油螺絲鎖緊。
4. 從注油口加入指定油量之新油。
5. 確認新油添加是否達到油鏡的中心點。若油量低於油鏡時，請再注油至油鏡的中心點為止。
6. 確實關緊加油蓋。

⚠ 注意：

1. 機器剛運轉完時，內部機油過熱，請勿進行換油作業。

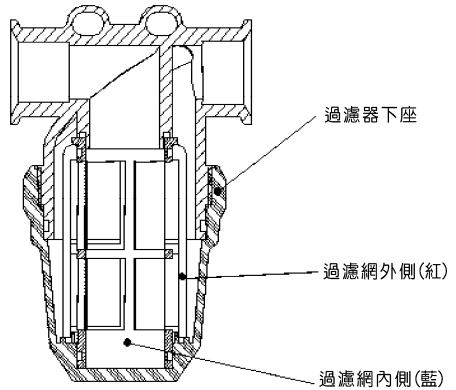
2. 當油量超過油鏡的中心點時，幫浦運轉時恐會造成機油濺出，而導致機器故障。

三、噴嘴、微霧軟管、不銹鋼管之清潔

1. 微霧噴嘴堵塞：轉鬆噴嘴蓋，將噴嘴取出，清除堵塞物。
2. 微霧軟管及不銹鋼管之清潔：打開尾端接頭或球形閥，運轉微霧機，使水流出 2~3 分鐘。

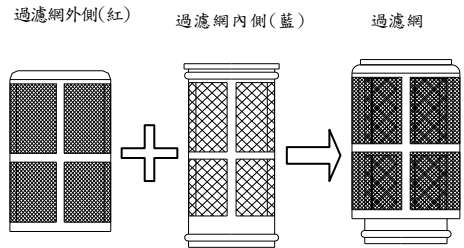
四、進水過濾器之清潔

1. 將進水過濾網向左轉開。
2. 內部有 2 個鋼網。將紅的拉開後，同時亦會取下藍的白鐵網。
3. 請將藍的向上拉除，紅與藍的部份將會分開。
4. 使用軟毛刷清理鋼鐵網部，並用自來水沖洗乾淨即可。
5. 依序組裝回去，即可再次使用。



注意：

請留意拆卸時，過濾網片的上、下位置順序；若與拆下的順序顛倒裝置，請即刻修正復原。若未確實安裝組立，將可能因進水的壓力而發生漏水。



機器長期保管方式

一、如需長時間停止使用微霧機，請按照下列步驟保管本機器

1. 拔除電源線。
2. 關閉水源、卸下進水管。
3. 打開外箱、排空進水過濾器內的水，並將進水過濾網清洗乾淨；裝回已清潔之過濾器，並將外箱蓋回。

二、長期保管場所

請保存在以下地方

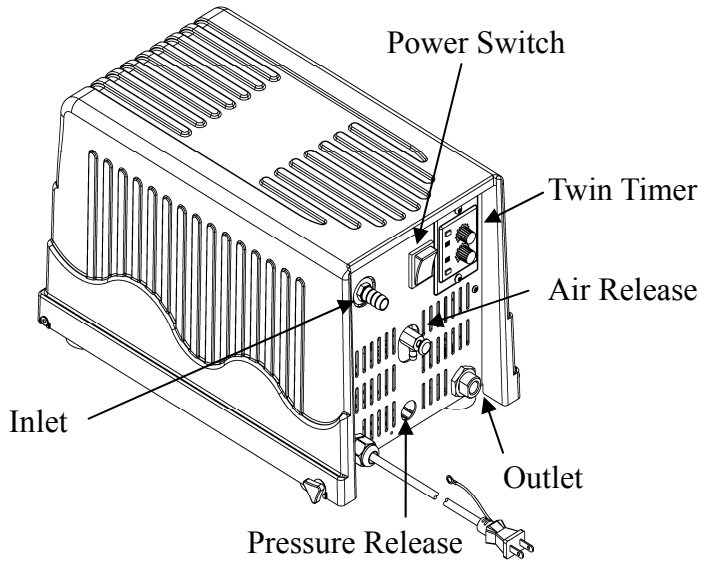
1. 幼童無法取得處、附近無危險物或火源的安全處。
2. 陽光無法直射、平坦、乾燥、清潔的地方。

若是發生不良狀況時，多半可以用下面的對策來解決，使機器恢復正常運作。萬一無法解決或是有不清楚的地方，請向購買的販售商詢問。詢問的同時，敬請告知您所購買的產品型號及機器流水號。

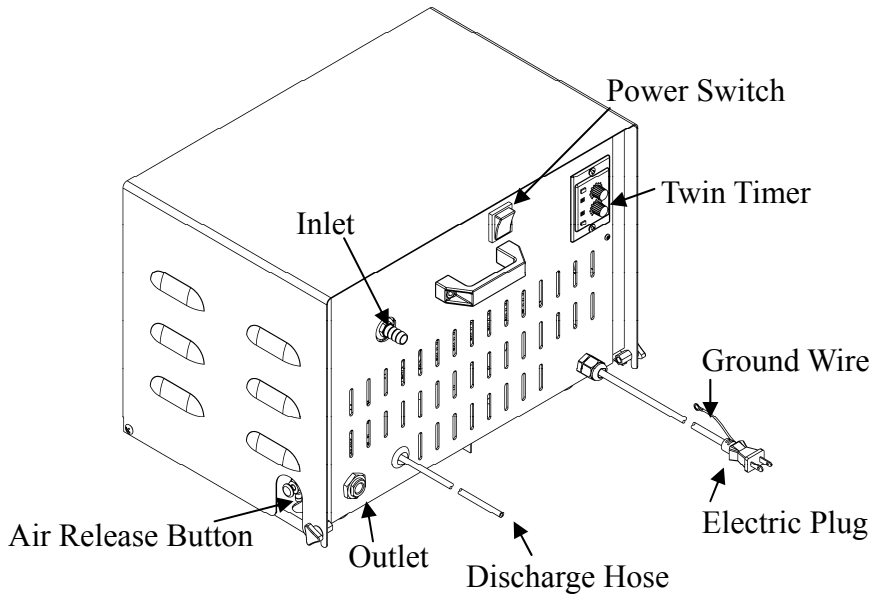
不良事項	原因	對策
<ul style="list-style-type: none"> 無法啟動馬達 	<ul style="list-style-type: none"> 電源失效 電壓過低 檢查水源是否充足 	<ul style="list-style-type: none"> 確認電源供應 檢查電壓 檢查進水壓力 檢查壓力開關
<ul style="list-style-type: none"> 運轉聲音大 	<ul style="list-style-type: none"> 電源受損 滲入空氣 迫緊受損 	<ul style="list-style-type: none"> 檢查電壓 按壓排氣開關 清潔進水過濾器 更換迫緊
<ul style="list-style-type: none"> 馬達停止運轉 	<ul style="list-style-type: none"> 過載保護跳脫 電壓不足 	<ul style="list-style-type: none"> 檢查電壓 檢查進水 向零售商詢問
<ul style="list-style-type: none"> 不進水 不出水 	<ul style="list-style-type: none"> 幫浦、管路有空氣 過濾器或噴嘴堵塞 活門沾黏 	<ul style="list-style-type: none"> 排除幫浦空氣 清理過濾器和噴嘴 向零售商詢問
<ul style="list-style-type: none"> 未達規定之壓力 	<ul style="list-style-type: none"> 噴嘴磨耗、出水量過大 幫浦不良 	<ul style="list-style-type: none"> 更換噴嘴 向零件商詢問
<ul style="list-style-type: none"> 出水量不穩定 	<ul style="list-style-type: none"> 噴嘴堵塞 滲入空氣 進水過濾器堵塞 	<ul style="list-style-type: none"> 清理噴嘴及過濾器 按壓排氣開關 檢查進水系統 向零售商詢問

Structure Appearance

WM Series Misting System



WN Series Misting System



Warning



Danger

- Please disconnect the plug during maintenance.
- Please don't touch the misting system with wet hands.



Warning

- Please shut off the misting system before removing the cover.
- Failure to do so may cause personal injury and property damage.



Attention

- Do not use the misting system if the cover or other safety devices are removed or damaged.
- Please keep water out of the system housing or it may cause the system to malfunction.
- Please turn off the misting system and unplug the power cable when not in use.
- Please drain all water from the misting system and all hoses/pipes before the first winter frost to avoid damage from water freezing inside.

Installation & Preparation

1. Please make sure the inlet hose is tightly fastened to the misting system and to the faucet.
ONLY CLEAN WATER SHOULD BE USED.
2. Install discharge hose by placing the open end of the clear hose in a drain or another location where water can be safely discharged.
3. Assemble the mist line, nozzles and the connector assemblies according to the instructions that match the type of mist line purchased.
4. After the mist line is installed, connect the mist line to the system outlet using high-pressure supply hose.
5. Plug in the power cable after confirming the power supply matches the system requirements.

6. If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Attention:

Please check whether the inlet pressure from the faucet is between 4 psi and 70 psi ($0.3\text{kgf/cm}^2 \sim 5\text{kgf/cm}^2$). If the inlet pressure is lower than 4 psi, the misting system will not start. If the inlet pressure is over 70 psi, the misting system may be damaged.

Mist Line Installation

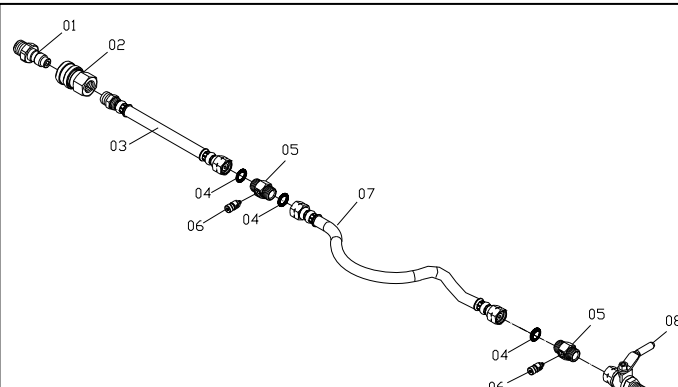
1. Please make sure flexible mist hoses are connected to the misting system via the connectors.
2. Please assemble the line at ground level before installing at the desired height.
3. Please use fasteners or fittings to secure the stainless steel pipes or flexible mist hoses tightly at the installation site.
4. If necessary, use a pipe-bending tool to alter the shape of stainless steel pipes.
5. To clean the misting line, open the ball valve at the end of the line and turn on the system momentarily. Shut off the system and close the valve to continue using misting operation.
6. If your misting line does not have a ball valve, clean the system by removing the last nozzle from the end connector and turning on the system momentarily. Shut off the system and replace the nozzle to continue using misting operation.



Attention:

When flushing out the mist line, be certain to direct the path of the spray away from people, animals and electrical goods. Water will be traveling at high velocity and may cause personal injury and/or property damage.

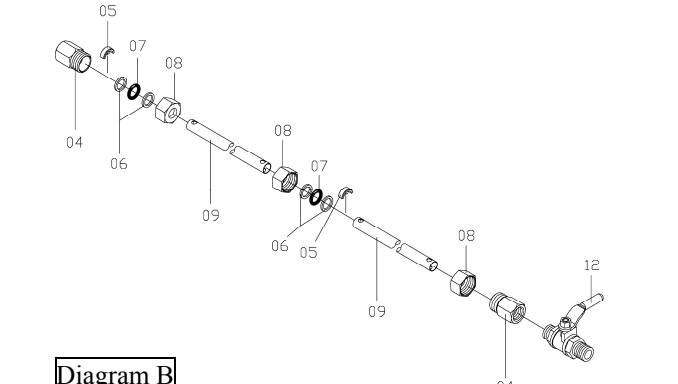
Flexible Mist Hose



Code	Description
01	Quick Connector
02	Quick Connector
03	Flexible Mist Hose
04	O-ring
05	Connector
06	Nozzle
07	Flexible Mist Hose
08	Ball Valve

Diagram A

Stainless Steel Pipe



Code	Description
04	Connector
05	Set Pin
06	Gasket
07	O-Ring
08	Nut
09	Pipe
12	Ball Cock

Diagram B

1.Flexible Mist Hose

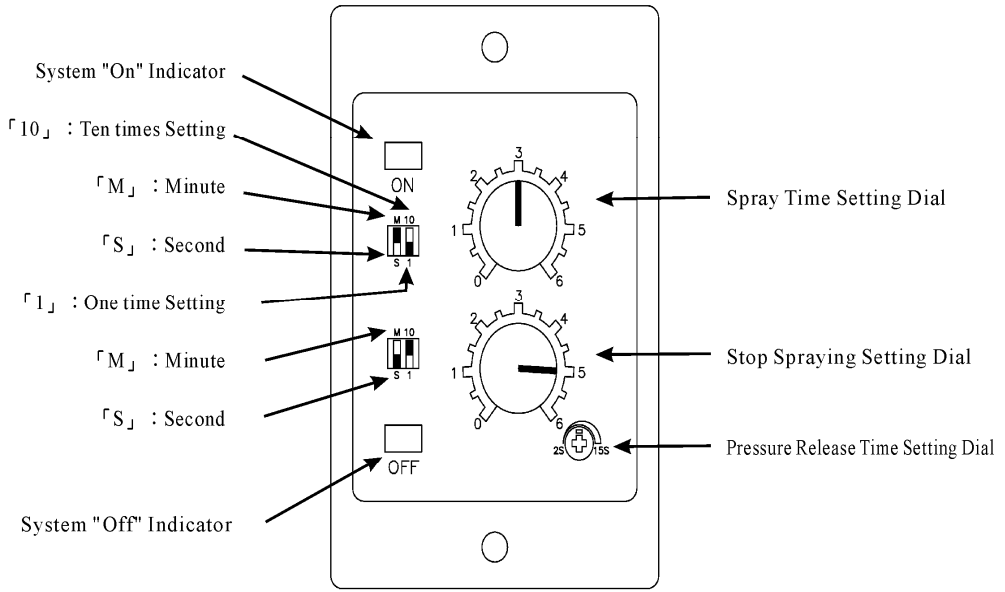
Per diagram A, tighten the nozzles, connectors after installation securely to ensure the nozzles / connectors does not leak.

2. Stainless Steel Pipe

Per diagram B, assemble the connector by placing parts on the pipe in this order: No.8→No.6→No.7→No.6→No.5 (2pcs). The peg in the center of the crescent-shaped pin (No.5) should fit into the hole on the side of pipe. Then, fasten the nut (No.8) to the connector body.

Twin Timer Instruction

1. Parts Of the Timer



2. Setting The Spray And Stop Intervals

【Example】 How to make the "Spray 3 minutes and stop 50 seconds" setting:

⊙ Setting the spraying time:

- Use the "Spray Time Setting Dial" and turn it to 3
- Set the switch to "M" which is left of "Spray Time Setting Dial"
- Set the switch to "1" to get one time setting

The system will spray for 3 minutes.

⊙ Setting the stop spraying time:

- Use the "Stop Spraying Setting Dial" and turn it to 5.
- Set the switch to "S" which is left of "Stop Spraying Setting Dial".

- Set the switch to "10" to get ten times setting.
The system will remain stopped for 50 seconds.

※Note : The minimum stop time is 15 seconds in order to protect the machine and extend its life.

3. Setting the pressure release time

- The maximum pressure release time is 15 seconds. The stop spraying time must be longer than pressure release time in order to make sure the two actions do not overlap.
- The longer the misting line, the more pressure release time is needed.

4. Turning On / Off the Misting System

- Press the power switch "On" & "Off" to start & stop machine.

5. Pump stops running without water

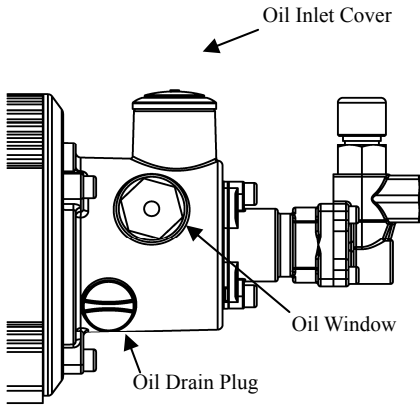
- The "On" & "Off" indicator lights will be off even though the power switch is turned on. The misting system will stop running automatically when the water supply to the pump is stopped.
- Never attempt to run the pump without water. Please make sure the water supply is sufficient, then re-start the pump.

Routine Maintenance

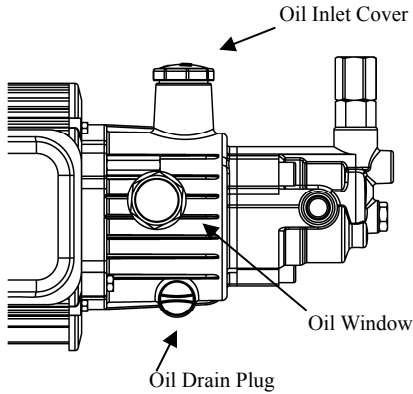
1. Routine Maintenance Schedule

Description	Action	Frequency
Pump	Check Oil Level	Before every use
Filter	Clean	Every 15 days
Nozzles	Clean	As necessary
Pipes/Hoses	Flush	Every 15 days

2. Change Pump Oil



WM Series misting pump



WN Series misting pump

	WM Series	WN Series
Machine Oil Type	SAE 30~40	
Oil Volume	80 cc	270 cc
Change Timing	1. First 30~50 hours of use. 2. Every 100~200 hours of use	

- Open the cover.
- Unscrew the oil drain plug. Please use a container or a tray to catch oil as it comes out of the pump. When the oil stops draining, please refasten the plug.
- Take off the oil inlet cover. Carefully refill the appropriate amount of motor oil of #30 or #40 weight and make sure the oil level is up to the middle of the oil window. Do not overfill.
- Refasten the oil inlet cover.



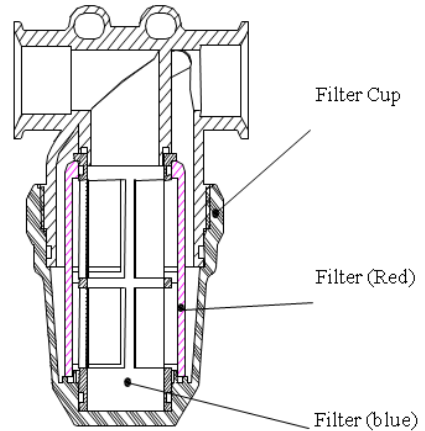
Attention : Please do not change oil immediately after using the misting system. The oil will be hot and might cause personal injury.

3. Check Oil Level

- If the oil is below the middle of the oil window, please refill the oil up to the middle.
- If the oil is above the middle of the oil window, please be aware the oil may splash out and cause the misting system to malfunction over time.

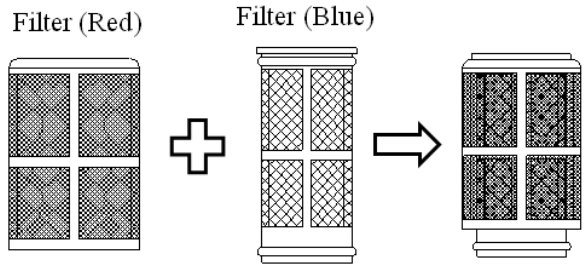
4. Clean The Filter

- Loosen the filter cup.
- Remove both filter meshes from the base.
Please remember which ends are the tops and which are the bottoms.
- Use water and a soft brush to clean the mesh.
- If the filter meshes are not reassembled correctly, the filter will not close properly.



5. Clean The Nozzles

- Open the nozzle by unscrewing the spray tip from the nozzle body.
- Clean the ball valve and area around the orifice.



6. Clean The Pipes Or Hoses

- Open the ball valve at the end of the misting line.
- Run the misting system 2 to 3 minutes.
- Close the ball valve.

Turning Off the Misting System & Storage

- Turn off the power on the machine and unplug from the electrical outlet.
- Turn off the water supply.

If the system will not be used for a long period, please follow these additional instructions.

- Unfasten the supply hose, inlet hose and discharge hose.
- Open the cover.
- Clean the filter to prevent dirt solidifying and algae growth.
- If your model has a reservoir, please drain it and refasten the drain plug.
- Close the cover and tighten the knobs securely.
- Unplug the power cable from the socket.
- Store the unit in a cool dry place away from hazardous conditions.

Troubleshooting

Please consult the list below for common problems and their symptoms.

If the advised solution does not solve the problem, please contact your sales agent.

Problem	Possible Causes	Recommended Action
<ul style="list-style-type: none"> ● Motor does not start 	<ul style="list-style-type: none"> ● No power supply ● Low Voltage ● Insufficient water pressure 	<ul style="list-style-type: none"> ● Check power cable and power supply ● Confirm voltage ● Check water inlet for obstructions
<ul style="list-style-type: none"> ● Loud noise 	<ul style="list-style-type: none"> ● Unsteady power supply ● Air in pumps 	<ul style="list-style-type: none"> ● Check power supply ● Check the inlet hose and filter
<ul style="list-style-type: none"> ● Motor stops 	<ul style="list-style-type: none"> ● Water supply interrupted ● Motor overload 	<ul style="list-style-type: none"> ● Check water supply ● Confirm voltage ● Press reset button on motor
<ul style="list-style-type: none"> ● No Suction ● No output 	<ul style="list-style-type: none"> ● Air in the pump or hose ● Clogged nozzles or filter ● Damaged pump 	<ul style="list-style-type: none"> ● Press air release button ● Unfasten pump outlet, let water run 2 to 3 minutes ● Clean nozzles and filter ● Return pump for repair
<ul style="list-style-type: none"> ● Insufficient pressure 	<ul style="list-style-type: none"> ● Nozzles worn out ● Damage to pump ● Too many nozzles in use ● Mist line is too long 	<ul style="list-style-type: none"> ● Replace nozzles ● Return system for repair ● Reduce the nozzles to ones with smaller orifice ● Reduce length of mist line
<ul style="list-style-type: none"> ● Unstable water output 	<ul style="list-style-type: none"> ● Clogged nozzles or filter ● Air in pump ● Damage to pump 	<ul style="list-style-type: none"> ● Press air release button ● Unfasten pump outlet, let water run 2 to 3 minutes ● Clean nozzles and filter ● Check the inlet connections
<ul style="list-style-type: none"> ● Nozzles dripping 	<ul style="list-style-type: none"> ● Pressure release interval too short 	<ul style="list-style-type: none"> ● Gradually adjust pressure release setting to longer interval