

# MAXPULL WINCH

## Instruction Manual

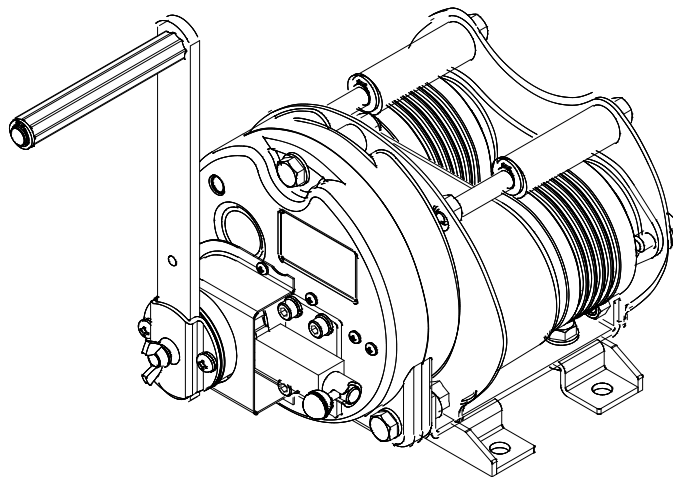
MAXPULL Manual Winch

Model ME-5-L

Model ME-10-L

(Manual Latch-type Stopper Brake)

\* For Horizontal Pulling work



### **WARNING**

- For your safety, always read this manual and understand the contents fully before starting operation.
- Keep this manual at a designated place at all times to have quick access when required.



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## [ How to Use This Equipment Safely ]

Thank you for purchasing MAXPULL manual winch.

Thoroughly read this Instruction Manual before using the equipment to ensure that the operator understands the equipment and can operate it correctly.

Store this Instruction Manual in a location that is easily accessible for everyone that will be operating the Winch and make sure everyone has read it.

2 categories "DANGER" and "WARNING" on this instruction manual.

	Indicates an imminently hazardous situation which, if ignored, will result in death or serious injury and/or property damage.
	Indicates a potentially hazardous situation which, if ignored, could result in death or serious injury and/or property damage.

### (General Handling)

#### DANGER

- Careless or incorrect handling may result in severe accidents. Do not allow the equipment to be handled by third parties or people who are not thoroughly familiar with the contents of this manual.
- Read this manual thoroughly before use, and familiarize yourself with the contents. Always store this manual within easy reach of any operators of this equipment.
- This winch is designed for horizontal load pulling only. Do not use it to lift people, or to move lifted equipment laterally. This equipment is not appropriate for lifting people, neither legally, structurally, or from a safety perspective.
- This winch has been designed and manufactured for use as a manual winch. Do not modify the winch to use other power sources (electrical motors, air motors, hydraulic motors, etc.).
- Fine operation adjustments have been made to the brake mechanism and reduction gears. Do not make any modifications, such as welding or machining, to this winch.
- Only use genuine winch product parts and accessories.
- Never apply loads in excess of the rated maximum load.
- Never operate the winch when you are tired, after drinking alcohol and/or having medicine.
  - ※ Please understand that we shall not be held responsible for any and all damage or loss arising from injuries or accidents that occur due to the customer's failure to follow the instructions described in this manual, or from injuries or accidents that occur due to the customer's remodeling.

#### [ Safety Precautions ]

- ◆ This winch has been designed and manufactured as a general purpose winch for industrial use. Therefore, be sure to install safety equipment such as emergency brakes and risk-sensing emergency stops on the equipment end when using the winch in applications where a major impact on human life and property is expected.
- ◆ Make sure to follow all required safety regulations for the location where the unit will be installed and for the equipment that will be used. (Ordinance on Industrial Safety, etc.)
- ◆ When using the product in places where condensation occurs due to temperature difference in the installing environment, such as on food machinery or in a clean room, and particularly when using on devices that cannot tolerate grease, please make sure to attach a damage prevention apparatus, such as an oil sump, in preparation for unlikely events of grease leakage.

#### WARNING

- CALIFORNIA PROPOSITION 65 WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

# 1 . Inspecting the Winch Upon Delivery



- Installing the wrong product may cause injury and damage to the equipment.  
In addition, do not remove nor disfigure any warning label or the name plate on the winch.
- To avoid danger, keep babies and children from the enclosed plastic bag, winch, and other parts and accessories.
  - Please check the following items first when the winch is delivered to you.
    - (1) Do the descriptions on the name plate such as the model and specifications etc., match what you have ordered?
    - (2) Are there any damages caused by accidents during transport?
    - (3) Are there any missing or detached parts?
    - (4) Are there any loose bolts and nuts?Please contact us if you have any questions or concerns regarding the above items.

# 2 . Specifications

Specifications on Model ME (Manual Latch-type Stopper Brake)

Model	ME – 5 – L	ME – 1 0 – L
Wire Rope Tension	500kg (1,100lbs)	1,000kg (2,200lbs)
Wire Rope (Wire Rope Composition)	Φ6mm (6×37) 1/4 inch (6×36)	Φ8mm (6×37) 5/16 inch (6×36)
Gear Ratio	13.3:1	19:1
Effective Handle Length	250mm (9.84 inch)	300mm (11.81 inch)
Handle Force	9.9kg (21.8lbs)	11.6kg (25.6lbs)
Weight (Winch+Handle)	About 30kg(66lbs)	About 30kg(66lbs)

- Model ME is an endless winch for both direction pulling.
- Model ME-5-L and ME-10-L (Manual Latch-type Stopper Brake) are suitable for both direction pulling of the truck on flat place or the safety nets and the banner.



The brake of this winch is a manual latch-type stopper brake. When performing the handle rotation operation, the manual latch-type stopper brake needs to be released.

•The ME-5-L and ME-10-L models of the manual latch-type stopper brake are designed and produced specifically for horizontal pulling (horizontal towing) work. Therefore, using them for vertical pulling (vertical lifting) work is extremely dangerous. Please make sure NOT to use them for vertical lifting work under any circumstances. It will lead to accidents and injuries.

•The operation of the manual latch-type stopper brake should be performed by the person who is conducting the rotation operation of the winch handle by him/herself. There is no brake applied during handle operation, so the load will start moving on its own if you let go of the handle. In addition, if the retention force of the handle to the load is weak, the handle will rotate and hit the operator in the body resulting in injury. Until the operator applies the manual latch-type stopper brake on his/her own, the operator should firmly keep hold of the handle.

•Be fully alert of accidents due to reverse-rotation of the handle caused by load when conducting handle operation. The brake is completely ineffective between the time of releasing the stopper and applying the stopper, so securely set the handle so it does not fall out during work and keep hold of it. There is risk that the handle will rotate in reverse or move due to the load resulting in serious consequences.

•Always check that you have securely set the handle into place before conducting work, and pay careful attention to continue to keep hold of the handle while operating.



# **⚠ DANGER**

- In all manual winch work, there is a risk depending on pulley resistance or installed position that the wire rope will twist, etc. resulting in an unpredictably large force exerted on the winch.
- Always make sure to use the winch below its capacity (wire rope tension) in order to safely perform work such as horizontal pulling.
- In using the manual winch, we recommend that you check the necessary safety regulations before conducting maintenance management, and that you educate workers regarding winch operations.

## 3. Names of Each Part

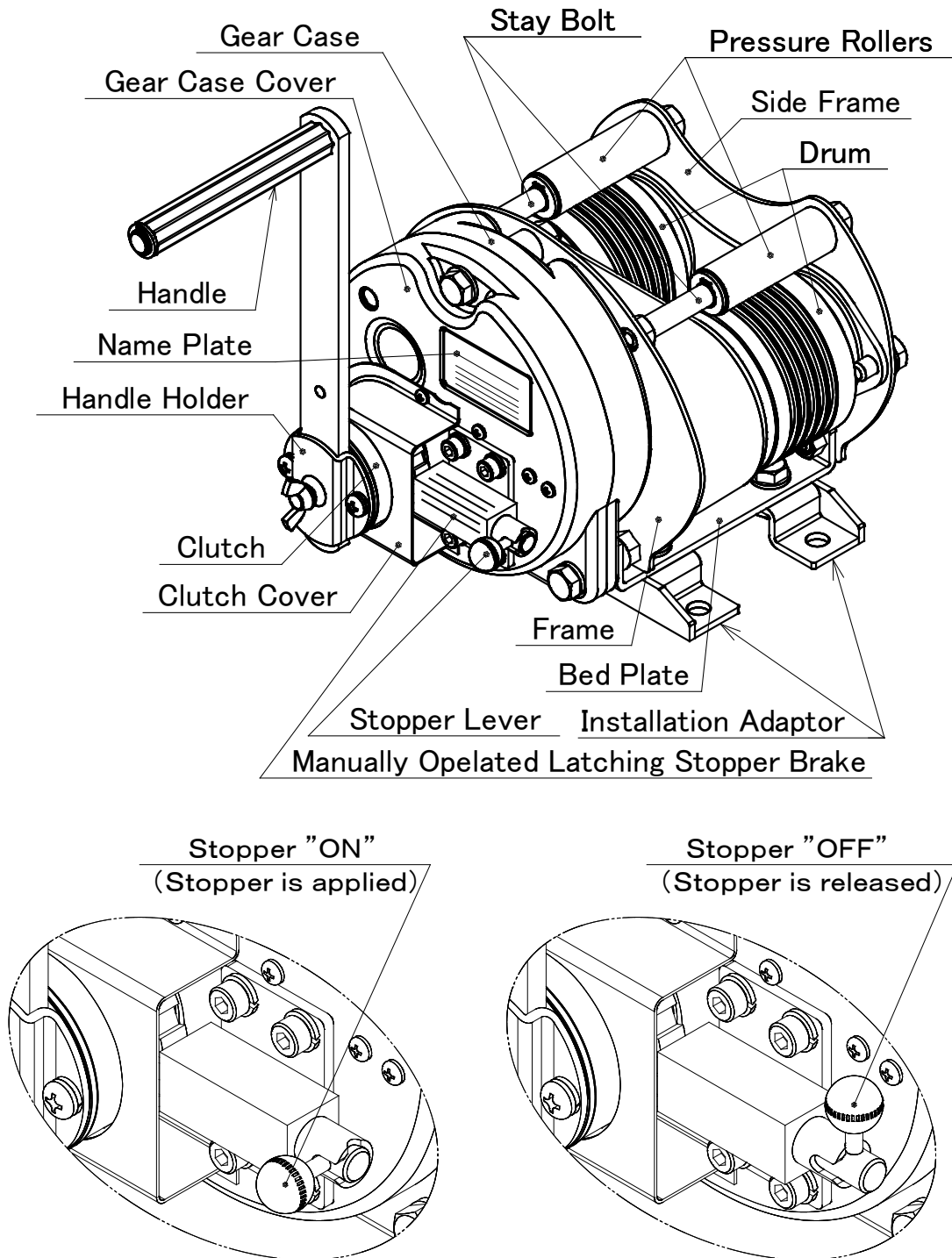


Figure 1 Names of Each Part

## 4. Installation

### **DANGER**

- Installation and mounting of the manual winch must NOT be performed by anyone other than specialized contractors or people with expert knowledge.

- Make sure the winch does not fall or tip over while in transport or during installation.

Be thoroughly careful when moving the winch.

- Install the winch in an area with easy access to the winch for inspections and maintenance.

- Please check that the installing area or mounting frame of the manual winch has sufficient strength and that it is a level surface.

- If there is a clearance due to distortion, etc. between the mounting adapter of the manual winch and the surface of the mounting frame, insert a shim plate and use the designated bolts and nuts to tighten and fix it into place.

- Please do not fix it into place by welding, because not only will it lower the precision of the winch and become a cause for injuries, it will also make it impossible to conduct maintenance.

- Please follow the items below when mounting the winch body.

- (1) The installation position of the winch in which it is easiest for the operator to conduct work is the position where the handle rotation center (clutch) is at the height of the worker's waist.

Please fix the winch into place at this height before working.

In addition, please do not install the winch in places where it is unstable under the worker's feet.

- (2) Please install the winch in a spacious area where work can be done safely that gives the operator a view of the load and wire rope conditions while operating the winch.
- (3) In terms of the position of the winch and pulley, they should be installed in a straight line along the wire rope that comes out of the drum, and use a winch that has a diameter (pitch diameter) over 15 times of the diameter of the wire rope being used and that rotates smoothly. In addition, please attach a non-slip device for the wire rope to the pulley.

### **WARNING**

- If the positions of the winch and pulley are not appropriate, the wire rope may drop off of the drum groove or the wire rope may be damaged resulting in shorter life. Furthermore, it may also cause failure or damage to the winch body.

- Install the pulley so that it is in a straight line along the wire rope coming out of the drum.

## 5. Precautions on Usage Environment

### **! WARNING**

Make sure not to install or use the winch in the following special environments, because it will shorten its life and it will be extremely dangerous.

- The limit of usage and installation in cold climates is  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ). Using it at  $-10^{\circ}\text{C}$  ( $14^{\circ}\text{F}$ ) or below will cause cold shortness of the metal, as well as alteration and deterioration of grease, resulting in accidents.
- Locations with a high ambient temperature of  $40^{\circ}\text{C}$  ( $104^{\circ}\text{F}$ ) or over and humidity that exceeds 90%.
- Locations with a lot of dust, oil or locations that require waterproof properties.
- Locations with a lot of acid or salt.
- Locations outdoor exposed to wind, rain or snow.
  - (1) Please consult us in advance when using the winch in special environments such as the ones described above.
  - (2) When the winch is installed outdoor and exposed to wind, rain or snow, we recommend protecting it with a rainproof cover in order to prevent corrosion due to rust.
  - (3) Depending on the installation location, we recommend installing a tray, etc. to collect oily liquid, because condensation may occur inside the gear case and brake mechanism of a winch installed in a location with temperature difference; and, over time, the grease coated on the gear and sliding part inside may become oily by dissolving in the condensed water; and the oily grease may drop from the joint of the gear case.

## 6. Installing the Wire Rope

In the ME model winch, the wire rope can be wound around the drum from any location.

### **! DANGER**

- Use a wire rope that meets the specifications for the winch.

Using a wire rope with the wrong specifications may cause it to break.

- Follow this procedure to install the wire rope onto the drum.

- (1) Loosen the side frame fixing bolts and side frame fixing nuts, then remove the side frame and pressure rollers.

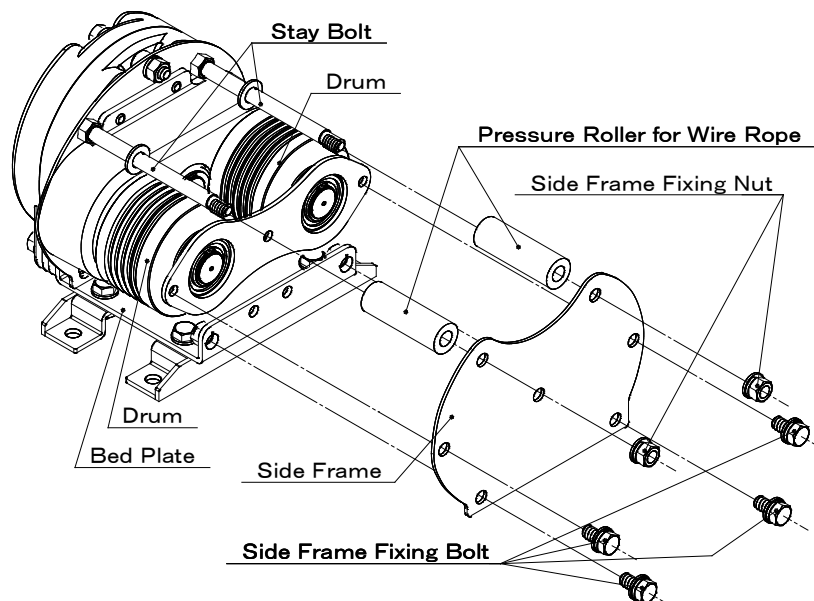


Figure 2 Remove the Side Frame and the Pressure Rollers for Wire Rope

- (2) Pass the wire rope through the groove in the end on the stay bolt side of the drum on the left, take it out from the bed plate side after winding it half way around along the groove in the end of the drum on the right, wind it half way around along the second groove from the end of the drum on the left, and then wind it to the drum on the right from the stay bolt side.

As described now, please wind the wire rope around the left and right drums in spiral form.

Ⓐ When taking both ends of the wire rope out of one side, the wire rope needs to be wound around the 3.5 winding drum as shown in Figure 3-1, and then finally taken out from the bed plate side of the drum on the left. (The groove in the front of the drum on the right is free.)

Ⓑ When taking one end of the wire rope out of one side, the wire rope needs to be wound around the 4 winding drum as shown in Figure 3-2, and then finally taken out from the stay bolt side on the right.

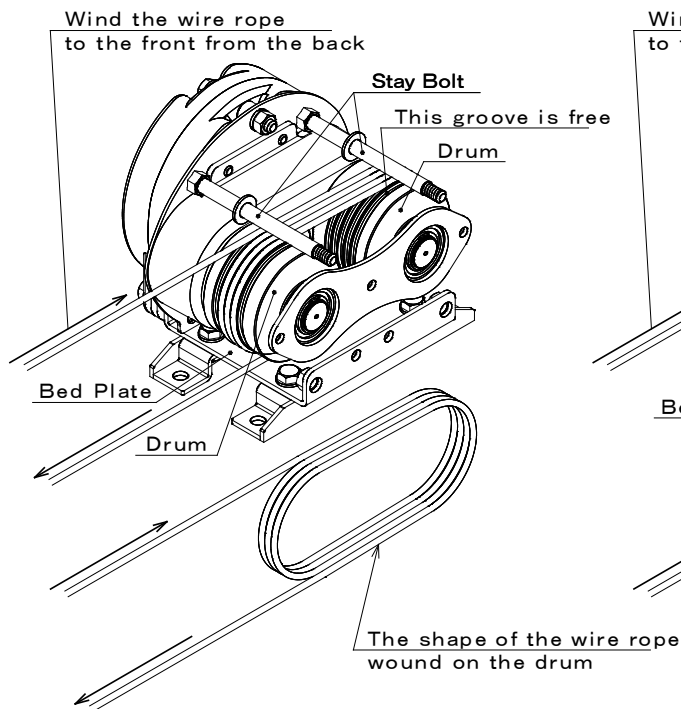


Figure 3-1 Ⓐ How to wind the wire rope when taking both ends of the wire rope out of one side

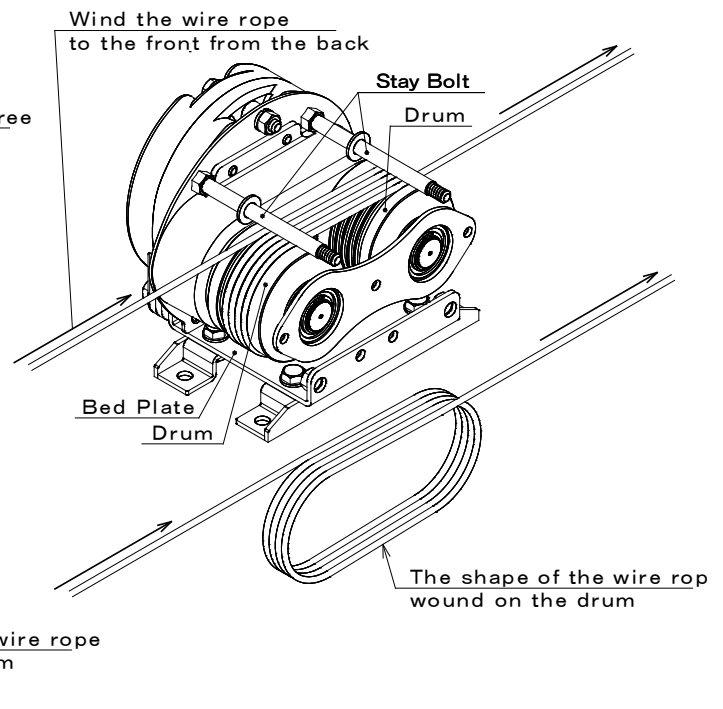


Figure 3-2 Ⓑ How to wind the wire rope when taking one end of the wire rope out of one side

- (3) Once you are done winding the wire ropes: [1] Set the pressure rollers to the stay bolt so that the wire rope does not drop off of the drum groove. [2] Set the side frame back to normal. [3] Use your hand to screw in the two bottom bolts. [4] Use your hand to screw in the two top bolts. [5] Use your hand to screw in the two nuts of the stay bolt. After you have screwed in all bolts and nuts with your hand, use a tool such as a wrench to do the final tightening in the same order, and check that the bolts and nuts in each part are tightened securely. Also, confirm that the wire rope is inserted in the drum grooves in the proper order. (A flat washer and spring washer are attached to each bolt and nut)

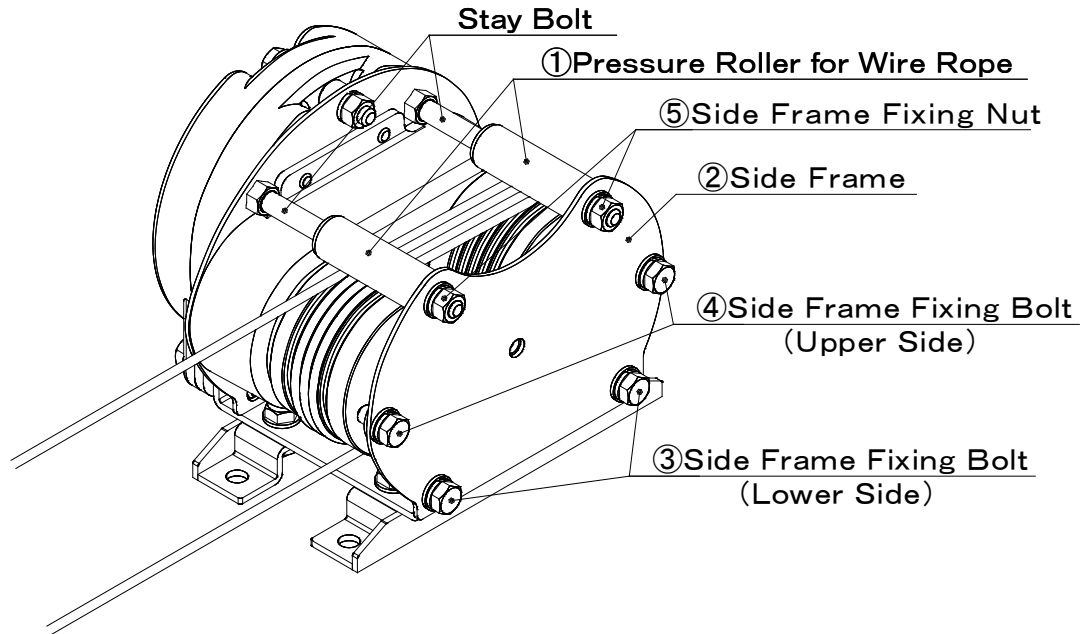


Figure 4 Attaching of Side Frame

- (4) Wire ropes that are wound just by your hands are loose.
- When using an endless wire rope, remove the looseness of the wire rope by sufficiently tightening it with a wire stretcher (Shimelar, etc.). (Refer to Figure 5-1)  
Next, operate the handle to rotate both winch drums about 15 to 20 times each to the left/right in order to remove the looseness of the wire rope between them. (Refer to Figure 5-2)  
Lastly, use the wire stretcher to do the final tightening one more time, and check that the looseness of the wire rope has been completely removed before conducting the actual work. (Refer to Figure 5-3)
  - When using the wire rope in a method other than the endless method, constantly pull the outgoing wire rope and apply tension. (Refer to Figure 6-1)  
The looseness between the winch drums will be gradually removed. Once you stop applying tension, the wire rope between the two drums will start getting loose, so make sure to apply tension at all times. (Refer to Figure 6-2)
- In both cases, always set the side frame and perform the work to remove looseness from the wire rope, or to apply tension, in a state where the wire rope is fixed into place.
- (5) Looseness in the wire rope will result in slipping, so even in cases where the wire rope stretches depending on the usage condition, follow the same steps as described above to remove the looseness of the wire rope.

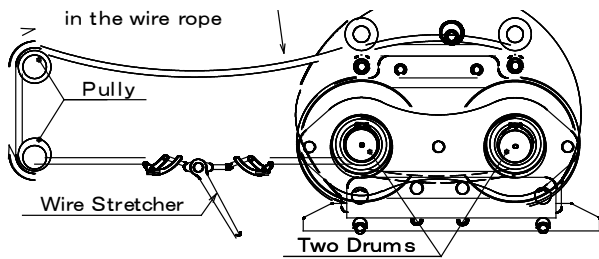
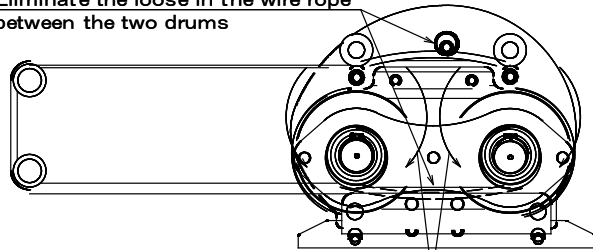


Figure 5-1 Tightening the endless wire rope

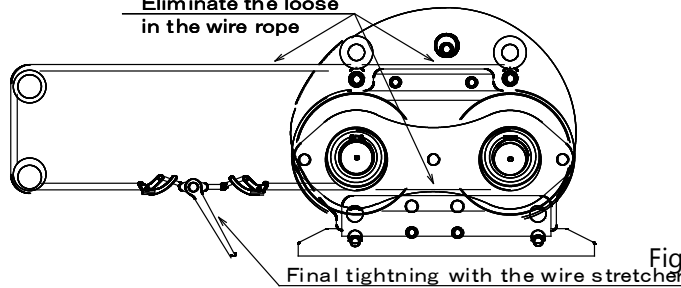
Eliminate the loose in the wire rope between the two drums



Rotate the two drums to the left and right

Figure 5-2 Tightening the endless wire rope

Eliminate the loose in the wire rope



Final tightning with the wire stretcher

Figure 5-3 Tightening the endless wire rope

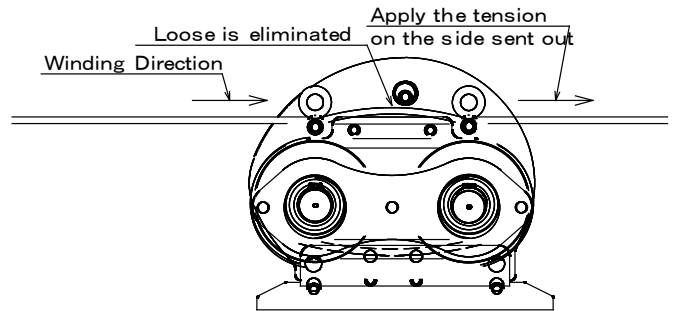


Figure 6-1 If the endless method is not used

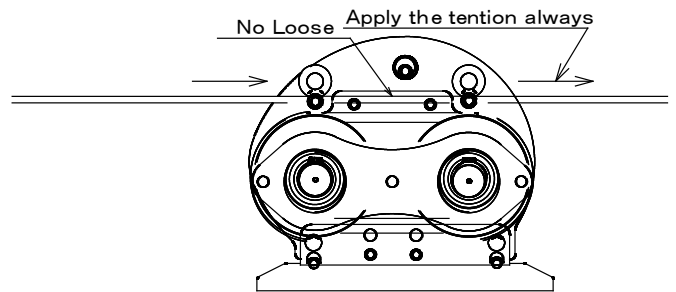


Figure 6-2 If the endless method is not used

\*These figures are for explaining how to remove the looseness from the wire rope and are different than setting up the wire rope.

## **⚠ WARNING**

- It is shown without the side frame to make it easier to understand.
- When using a wire stretcher to tighten the wire rope, perform the operation with the side frame set into place.
- Do not apply load when the side frame is removed.
- When removing the side frame, confirm that no load is applied to the wire rope.

## 7. How to Operate the Winch, and Pre-work Inspection/Precautions

### **DANGER**

- Please check that the winch body is completely attached and fixed into place.

If you start work while the attachment/fixing of the winch is unstable, it will lead to accidents and injuries.

- Check that the load is below the winch's capacity before starting work.

When working with the winch, there is a risk that the wire rope will become twisted or an unpredictable overload will be applied to the winch due to the pulley resistance or the installed position of the pulley.

Always make sure to use the winch below its indicated capacity in order to conduct the horizontal pulling work safely.

- It is dangerous to wind the wire rope in the wrong direction, because the moving direction of the pulled load will be opposite.

Only conduct work after checking the winding direction of the wire rope and the moving direction of the pulled load.

- Check that the latch-type stopper can be switched smoothly.

Set the stopper in the proper position by following the instructions in this manual and on the warning sticker attached to the winch.

- Check that the wire rope is properly inserted in the left/right drum grooves and the designated number of winding times is secured.

- Check that the wire rope is coming out in parallel to the drum groove so that the wire rope does not drop off of the drum groove.

- Immediately replace the wire rope when any of the following conditions occur: breakage of the wire rope's wire strands; reduction in outer diameter (those with diameter reduction ratio of 7% or more than the nominal diameter); wire rope with a kink; considerable deformation; or, corrosion, etc.

- Make sure there are no damaged parts or other conditions that may affect the operation of the winch.

### **WARNING**

- Please do not take off the warning sticker and name plate attached to the winch body.

Do not take off the sticker or name plate indicating the "stopper position" etc., or use the winch when dirty.

When you cannot read the sticker or name plate due to considerable dirt, or when it has fallen off and has been lost, please submit a request to us for a new one and re-attach it to the designated location.

- The latch-type stopper on a winch that has been left out without using for a long time may not operate properly.

Please conduct inspection and confirm that it operates properly before using the winch.

## Inspection Before Use

- Always conduct inspection of the following items before use.

Confirmation of the manual latch-type stopper brake

When the stopper lever (red knob) is pulled up, the stopper will be turned off and the brake will be released, and when it is laid flat (pulled down to the front) the stopper will be turned on and the brake will be applied. (Refer to Figure 1 on pg. 4)

Check that the drums or handle does not rotate when the stopper is turned on.

If the winch is already installed and the wire rope is wound up, then firm hold on to the handle, switch the stopper 3 or 4 times, and check that the brake operates properly before conducting work.

It may be difficult to release the stopper when a load is applied. Rotating the handle by a little to reduce the load on the stopper will make it easier to release the stopper.

When releasing the stopper, the entire load will be applied to the handle. Set the handle securely so that it does not fall out, and pay careful attention when conducting work.

## How to Use the Manual Latch-type Stopper Brake

The brake method of this winch is manual latch-type stopper method. The brake will not work if the stopper is released. Follow the items below to safely conduct work.

### **⚠ WARNING**

- When conducting handle operations, be fully alert of accidents caused by rotation of the handle due to load. The handle will rotate if the stopper is released when tension is being applied to the wire rope. The brake does not work at all during the time from turning the stopper OFF (release) until turning it ON (apply), so set the handle securely to ensure that it does not fall out while working and keep hold of it. There is risk that the handle will rotate and cause serious injury.
- Always be very careful to conduct work after checking that the handle has been set securely in place and to continue to keep hold of the handle.

(1) First, grasp the handle firmly in your hand, keep hold of it, and then move the lever to the position shown in Figure 7 to turn the stopper OFF (release). It may be difficult to release the stopper when a load is applied because it will weigh down the stopper. Rotating the handle by a little will be easier to release the stopper. In addition, if the stopper is released without holding onto the handle while tension is being applied on the wire rope, no brake will be applied, and the drum and handle will rotate rapidly. This is very dangerous because it may result in serious injuries to the arm or other areas caused by the rotating handle.

(2) When ending the handle operation and activating the brake, apply the stopper while firmly holding on to the handle. At this time, perform the handle rotating operation so that the stopper is applied to the ratchet. Take your hands off of the handle after confirming that the stopper is securely applied to the ratchet. (Refer to Figure 8)

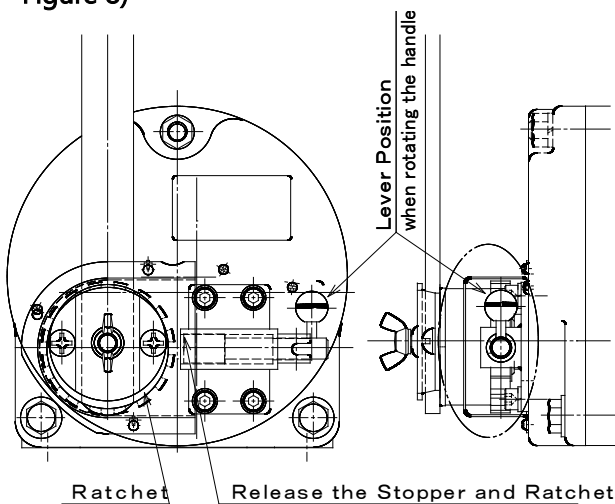


Figure 7 When conducting handle operation

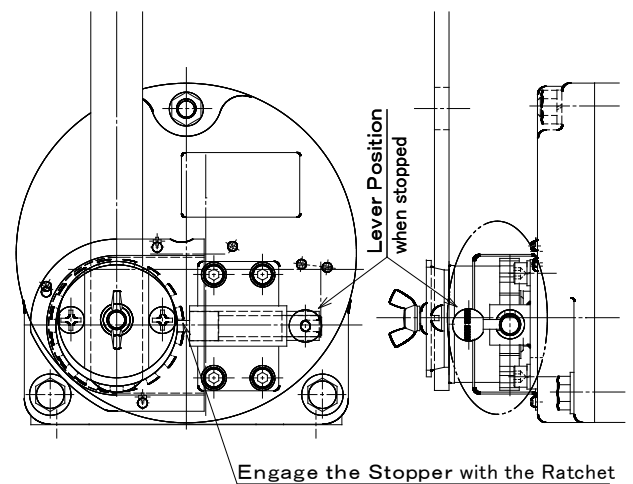


Figure 8 When ending handle operation



## How to Fix the Handle into Place

For all winch models, loosen the wing screw as shown in Figure 9, and insert the handle into the handle holder. Make sure that the handle does not fall out while working by firmly screwing in the wing screw, which fixes the handle into place, into the blind holes of the handle. If the wing screws loosen while working, screw them into the blind holes one more time before restarting to work.

**Please do not fix the handle into place in positions other than the blind holes. It is dangerous because the handle will fall out.**

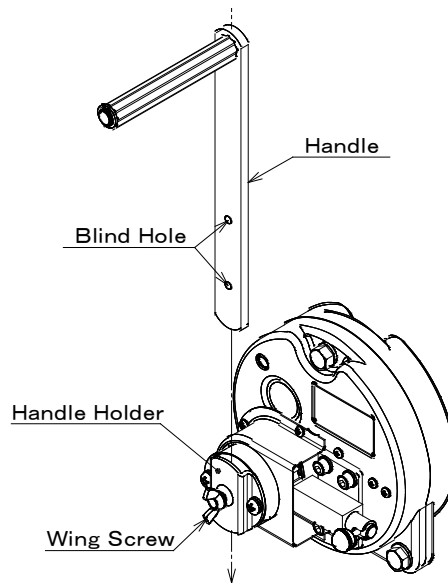


Figure 9 Handle Set

## Precautions While Working

### **DANGER**

- Never use the winch for purposes such as traversing with a person on top, going on top of the load, etc.
- Before starting work, always conduct an inspection of the winch and wire rope as well as the entire traversing equipment.

If you find a problem, fix it immediately and start working after that.

- Keep out of the range in which the traversing load moves while working.

Entering the range may result in serious accidents such as being run over by the load or being wedged between it.

- Workers should not be distracted from the load or traversing equipment while working.
- Never apply a load exceeding the winch's capacity under any circumstances.
- Absolutely refrain from extending the length of the handle to conduct work beyond the winch's capacity, from pulling down the handle with your weight by hanging onto it, and from pressing your leg against the handle to operate it.

It could lead to serious accidents such as by causing damage to the winch body or stopper break, or by cutting the wire rope.

- Keep all personnel away at safe distances from 1) operating winches, 2) loads, 3) transverse areas, and 4) areas near the wire rope to avoid potential breaks.
- Always wear anti-slip safety shoes to protect your toes and keep proper footing and balance at all times.
- Always wear safety glasses, helmet, heavy duty working gloves, and protective clothing when handling wire ropes and winches.

### **WARNING**

- Make sure to temporarily stop the winch operation when the winding wire rope is stretched, check whether there are any problems with the load condition or equipment, etc. before conducting work.
- When operating the winch, firmly screw in the wing screws (wing bolts) into the blind holes for fixing the handle into place before conducting work.

## Troubleshooting and Its Measures

Problem	Checking of the Cause	Measure
The stopper brake does not work	Is the stopper not applied?	Please apply the stopper.
	Is the wire rope loose?	The load cannot be stopped unless the wire rope is stretched. Please stretch the wire rope.
	Is there any mud or debris stuck to the stopper brake?	If the stopper is dirty, disassemble and clean it while referring to "Disassembling and Inspecting the Manual Latch-type Stopper Brake".
	Is there settling of the stopper brake spring?	Please replace the parts.
	Is the stopper brake damaged?	Please replace the damaged parts.
	Has the minimum temperature of the installation and usage location dropped -10°C (14°F) or below?	Please consult us.
The handle does not rotate	Are parts such as the gear damaged due to excessive load?	Please replace the damaged parts.
It makes an abnormal sound when operating	Is there wear in the gear or shaft bearing?	Please replace the worn parts.
The handle load has suddenly become heavier	Has the wire rope dropped off of the drum groove?	Please make sure that the wire rope does not drop off of the drum groove, because there is a risk that the winch will break.
	Is it getting caught in something on the way?	Please stop the work and remove the obstacle before restarting.
	Does the wire rope have any twists, kinks, etc.?	Please replace the wire rope.
The handle load has suddenly become lighter	Are the drum and wire rope slipping?	If they are slipping due to wear, please replace the worn parts. If the wire rope is loosening, please stretch the wire rope.

## 8 . Maintenance Inspection and Repair

Maintenance inspection and repair are necessary in order to maintain the performance of the MAXPULL Winch and to conduct work safely and securely. This maintenance inspection and repair consist of the following two types: daily inspection, which is conducted before work; and regular inspection, which is a combination of daily inspection + disassembly and inspection of stopper brake, conducted periodically.

For both types of maintenance inspection and repair, please make sure that someone with expert knowledge is conducting it, and clearly indicate that it is "under maintenance inspection and repair" so that the winch is not operated by mistake.

In addition, maintenance inspection and repair should be done after confirming that no tension is applied to the wire rope.

Please conduct the maintenance inspection and repair while recording the results in the Appendix, "MAXPULL Winch Inspection Sheet".

### **DANGER**

- Please conduct the maintenance inspection and repair after making sure that no tension is applied to the wire rope.
- Someone with expert knowledge should perform the maintenance inspection and repair.
- During maintenance inspection and repair, clearly indicate that the winch is "under maintenance inspection and repair" so that the winch is not operated by someone else.
- Please do not conduct work without completing the daily inspection.
- If there is a problem, do not start work without fixing the problem. Repair and replace the parts before starting work.
- Wire ropes are consumables. If there is a problem with even one part of it, please replace it.
- Please do not use any parts other than genuine parts.
- If repair is necessary, please clearly indicate that it is "out of order" so that it is not used.

### Disassembling and Inspecting the Manual Latch-type Stopper Brake

#### **DANGER**

- Always perform the maintenance inspection after confirming that there is no tension (load) applied to the wire rope.
- Someone with expert knowledge should perform the maintenance inspection.  
Please wear work clothes for the inspection, and conduct inspection after making sure that you are suitably attired.
- Movement of the stopper brake deteriorates when mud, dirt or water enters, becoming a cause for the stopper not to function, so please periodically disassemble and inspect the stopper brake.

Indoor: Every year

Outdoor: Every 6 months

Very dusty places: Every 3 months

Slight differences exist depending on the installing location and usage frequency.

- If the winch is left out or unused for a long period, the latch-type stopper brake may not work properly. Please operate the winch at least once every two weeks. When using the winch after it has been unused for a long period, always disassemble and inspect the latch-type stopper brake.
- If dirt, dust or the like gathers on the gear teeth of the ratchet wheel of the manual latch-type stopper brake, the stopper will not turn on and the brake will not be applied. Always conduct maintenance inspection and repair periodically, and remove dust, dirt or the like gathered on the ratchet wheel, if any. In addition, grease up the moving parts.

- ( 1 ) Follow the steps below to disassemble and inspect the latch-type stopper brake. (See the parts list in the Appendix)
- (a) **Completely eliminate load from the wire rope and make sure that no force is applied to the winch**, either by removing the load that is being pulled or by killing the tension in the wire rope that is wound around the drum by using a tensioning device (Shimelar, etc.). Disassembling the latch-type stopper brake while there is tension working on the wire rope will cause accidents. **Always confirm that the wire rope is completely free of load before starting work.**
  - (b) Remove the handle, remove the two pan head screws (No. 56), and then remove the handle holder (No. 25) and clutch shield plate (No. 26).
  - (c) Remove the three tapping screws (No. 43), and then remove the clutch cover (No. 10).
  - (d) Remove the hardlock nut (No. 47) and then remove the plain washer (No. 46).
  - (e) The clutch (No. 20) is a screw, so if you turn it to the left it can be removed, and the clutch collar (No. 98) will come off as well.
  - (f) On the clutch (No. 20), the ratchet wheel (No. 71) is fixed into place with the hexagon socket head cap screw (No. 72) (with a helical spring lock washer), so disassemble the ratchet wheel by removing the hexagon socket bolt.
  - (g) Remove the four hexagon socket head cap screws (No. 97) and then remove the stopper holder (No. 96).
  - (h) This completes the disassembly of the latch-type stopper brake part.  
There are small parts, too, so be careful not to lose any of the removed parts.
  - (i) Wipe off any dirt on each of the parts and check that there are no scratches or deformation. If, by any chance, there are parts in which you find a problem, please replace them with new parts.
  - (j) For assembly, please conduct the steps described above for disassembly in reverse order. When assembling, coat the greasing on the triple thread screw and moving parts of the clutch pinion (No. 14).  
The recommended grease for the brake part is Multinoc Wide 2 by JX Nippon Oil & Energy Co.  
Please use this grease or a grease with equivalent performance as this.
  - (k) Make sure to tighten nuts, screws and the like so that they do not loosen. Once you are done with assembling and adjusting, please check that the brake operates properly by following the procedures described in "Confirmation of the manual latch-type stopper brake".

This completes the disassembly and inspection work for the latch-type stopper brake.

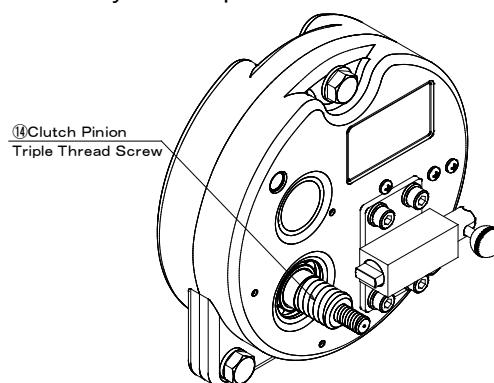


Figure 10 Triple Thread Screw

## 9 . Questions or Comments

If you have any questions about unclear problems, repairs or parts on the parts list, please look up the following information and contact the distributor, agent or our offices for more information

Check items

- ① Model      ②Serial Number
- ③Installation Location(Use Environment)      ④Years in Service

# Appendix 1. MAXPULL Winch Inspection Sheet

Inspector \_\_\_\_\_ Inspection Date \_\_\_\_\_ year \_\_\_\_\_ month \_\_\_\_\_ day \_\_\_\_\_

Model \_\_\_\_\_ Serial Number \_\_\_\_\_

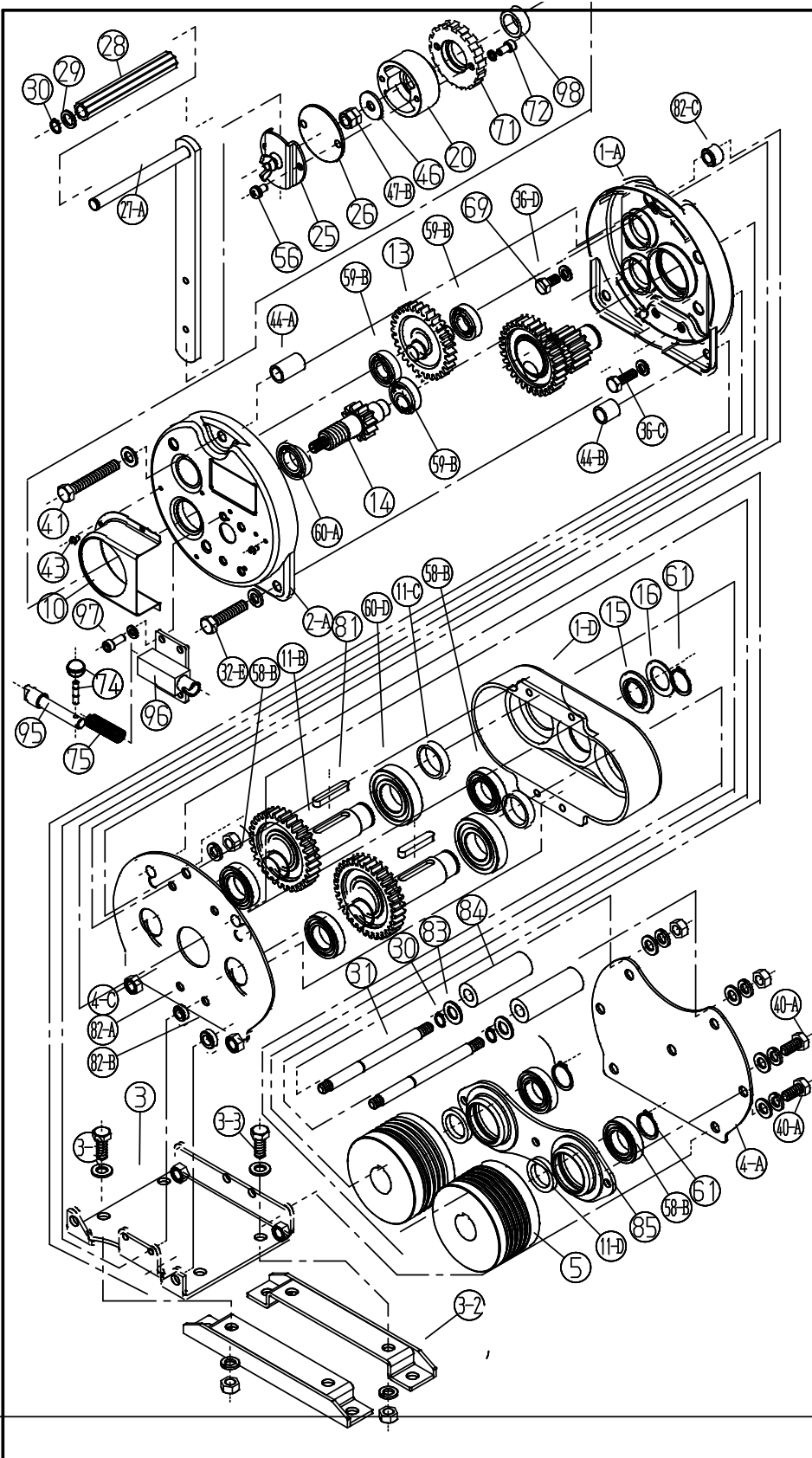
Inspection Period		Contents of Inspection	Judgment
Daily	Periodical		
<input type="radio"/>	<input type="radio"/>	The name plate and warning labels are affixed in the correct locations, and are clearly legible.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The mounting bolts of the winch are not loosened.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	There is no defect on the installation base of the winch.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	There is no damage, missing parts, or defect on the winch.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	All bolts, nuts and screws are tightened securely.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	There is no deformation or abnormality in the handle and it functions properly.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	Check that the latch-type stopper can be switched smoothly and it functions properly.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	There is no kink on the wire rope.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	There is no frayed the element wire of the wire rope.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope is lubricated properly.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope diameter has not fallen by 7% or more of its nominal diameter.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	There is no abnormality in the joints of the endless wire rope. (If endless type is used)	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope is not deformed.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope is not corroded.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope wound around the drum is properly inserted in the drum grooves.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope coming out of the winch is in parallel to the drum groove.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope is not loose.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The wire rope is wound around the drum 3.5 or 4 times.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	The designated amount of tension is applied to the wire rope on the side it is sent out of the winch.	Pass / Fail
<input type="radio"/>	<input type="radio"/>	There is no wear or damage on the wire presser and it is functioning properly.	Pass / Fail
Refer to "Disassembling and Inspecting the Manual Latch-type Stopper Brake" for the following inspection			
<input type="checkbox"/>	<input type="radio"/>	There is no damage, abrasion or deform on the stopper.	Pass / Fail
<input type="checkbox"/>	<input type="radio"/>	There is no damage, abrasion or deform on the ratchet wheel.	Pass / Fail
<input type="checkbox"/>	<input type="radio"/>	There is no damage, abrasion or deform on the clutch.	Pass / Fail
<input type="checkbox"/>	<input type="radio"/>	There is no settling of the spring and the spring functions properly.	Pass / Fail

\* If any defects are found during inspection, correct them before the operation.

\* When repairs are required, clearly state that the winch is "OUT OF ORDER" to prevent the winch being used accidentally.

Remarks \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Appendix 2. Parts List for ME-5-L and ME-10-L



Part No	Part Name	Qty	Remarks
1-A	Gear Case	1	
1-D	Gear Case C	1	
2-A	Gear Case Cover	1	
3	Bed Plate	1	
3-2	Attachment Adapter	2	
3-3	Hexagon Head Bolt	M12×30	4 *2
4-A	Side Frame	1	
4-C	Frame	1	
5	Drum	2	*1
10	Clutch Cover	1	
11-B	Drum Shaft Main Gear	2 Sets	
11-C	Shaft Collar A	2	
11-D	Shaft Collar B	2	
13	Spur Gear Pinion	1 Set	
14	Clutch Pinion	1	
15	Shaft Washer A	1	
16	Shaft Washer B	1	
20	Clutch	1	
25	Handle Holder	1	
26	Clutch Shielded Plate	1	
27-A	Handle Arm	1	
28	Handle Grip	1	
29	Handle Washer	1	
30	Retaining Ring C Type S-14	3	
31	Stay Bolt	M12	2 *2
32-B	Hexagon Head Bolt	M12×55	2 *3
36-C	Hexagon Head Bolt	M10×30	2 *3
36-D	Hexagon Head Bolt	M10×20	2 *3
40-A	Hexagon Head Bolt	M12×25	4 *4
41	Hexagon Head Bolt	M12×80	1 *2
43	Tapping Screw	M5×8	6
44-A	Spacer	1	
44-B	Spacer	2	
46	Plain Washer	1	
47-B	Hardlock Nut	M12	1
56	Phillips Pan Head Screw	M8×15	2
58-B	Bearing	6006	5
59-B	Bearing	6004	3
60-A	Bearing	6005	1
60-D	Bearing	6207	2
61	Retaining Ring C Type S-30	3	
69	Main Gear Pinion	1	*5
71	Ratchet Wheel	1	
72	Hexagon Socket Head Cap Screw	M8×15	2 *3
74	Switch Lever	1 Set	
75	Coil Spring	1	
81	Parallel Pin	2	
82-A	Collar A	2	
82-B	Collar B	2	
82-C	Collar C	1	
83	Washer	M14	2
84	Pressure Roller	2	
85	Shaft End Distance Plate	1	
95	Latching Stopper	1	
96	Stopper Holder	1	
97	Hexagon Socket Head Cap Screw	M8×18	4 *3
98	Clutch Collar	1	

- \* 1 Same Left and Right
- \* 2 With Helical Spring Lock Washer, Plain Washer and Nut
- \* 3 With Helical Spring Lock Washer
- \* 4 With Helical Spring Lock Washer and Plain Washer
- \* 5 With Bearing



(memo)

# Safety Information

Read this manual thoroughly before installing and using this product, operate the winch correctly.  
Comply with relevant laws and regulations.



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