PTA CANADA®

OPERATIONS MANUAL

WOLVERINE™

WIRE ROPE GRIP PULLER

IMPORTANT SAFETY INFORMATION

Please read, understand and follow all safety information contained in these instructions prior to the use of this tool. Retain these instructions for further use. These instructions are applicable for for **WOLVERINE™** Model Wire Rope Grip Pullers offered by Premium Tool & Abrasives Co. Ltd.

INTENDED USE

This winching tool is designed to be used to lift, pull, position or tension a load from a secured position. Only accessories specifically recommended by PTA Canada should be used with this tool. Use in any other manner or with other accessories could lead to unsafe operating conditions.

WARNING

This unit must only be used in compliance with all applicable safety regulations and standards concerning installation, use, maintenance and inspection of equipment lifting devices.

WARRANTY

Premium Tool & Abrasives warrants its Wire Rope Grip Pullers for a period of 1 year from the purchase date against manufacturing defects and will repair or replace (at its option) without charge any items returned. Repairs or replacements are warranted as described for the remainder of the original warranty period. Providing proof of purchase is strictly the responsibility of the customer. This warranty is void if the item has been damaged by accident or unreasonable use, neglect, improper service, or other causes not arising out of defects in material or workmanship. No other expressed warranty is given or authorized. Premium Tool & Abrasives disclaims any implied warranty of MERCHANTABILITY or FITNESS for any period beyond the expressed warranty and shall not be liable for incidental or consequential damages.

To obtain warranty service, return the item(s) prepaid to your nearest Authorized Warranty Repair Center or to Premium Tool & Abrasives at 10761 - 181 ST, NW. Edmonton, AB, Canada, T5S 1N3.

IMPORTANT SAFETY INSTRUCTIONS

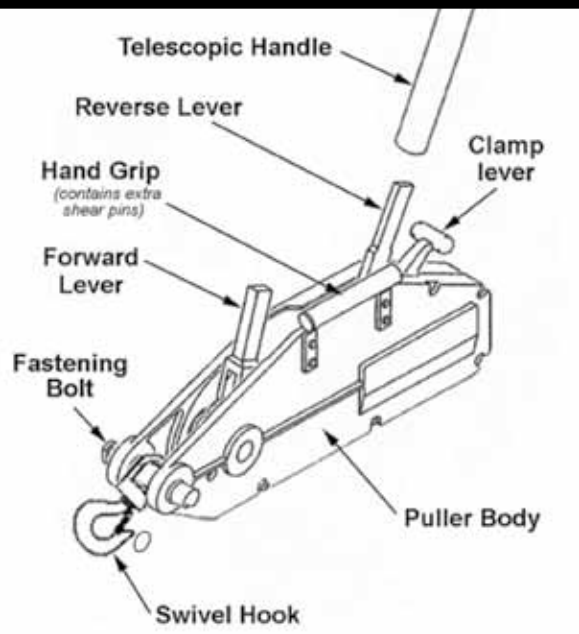
• Read, understand and follow the safety information contained in these instructions prior to using this tool. Keep these instructions for further reference.
• Do not exceed rated capacity.
• Supporting structure used with this device must provide adequate support to handle all puller operations plus the weight of the puller and attached equipment. If in doubt, consult a registered structural engineer.
• Never use handle extensions (cheaters).
• Do not use with twisted, kinked, frayed or otherwise damaged wire rope.
• Proper eye protection must be worn at all times.
• Do not use if grip puller is damaged or malfunctioning.
• Do not lift people or loads over people. Always keep people clear from load path.
• When using grip puller to lift vertically, make sure hook is centred under the puller.
• Do not use as a tow line.
• Do not use with a hook that is open or twisted, or without safety latch.
• Never run wire rope over a sharp edge.
• Never leave a suspended load unattended.
• Do not swing a suspended load.
• Always inspect the puller before each use. Replace if any component is damaged or malfunctioning.
• Always use gloves when handling wire rope. Do not wear loose clothing which can become entangled in moving parts.
• Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
• Do not operate this tool while tired or under the influence of drugs, alcohol or any medication.
• Failure to comply with the above warnings may result in personal injury and/or property damage.

BOX CONTENTS

Upon unpacking your grip puller make sure to check for any damage from the shipping process. Compare the contents of your package with the following parts list to make sure all the parts are intact. Do not discard any of the shipping material until the unit is assembled.

1 GRIP PULLER WITH SWIVEL HOOK
1 HANDLE (TM0605, TM0610 TELESCOPIC)
1 WIRE ROPE (SOLD AND PACKAGED SEPARATELY)
1 OWNER’S MANUAL
1 TEST CERTIFICATE

*THIS UNIT IS SHIPPED IN TWO PIECES



PRODUCT SPECIFICATIONS

PART NUMBER	TM0600	TM0605	TM0610
LIFTING CAPCITY kg (lbs)	800 (1,760)	1,600 (3,520)	3,200 (7,040)
PULLING CAPACITY kg (lbs)	1,250 (2,750)	2,500 (5,500)	5,000 (11,000)
MAX HAND EFFORT kg (lbs)	32 (70.4)	42 (92.4)	44 (96.8)
HANDLE LENGTH (MIN/MAX) cm (in)	80 (31.5)	80 (31.5) / 106 (41-9/16)	80 (31.5) / 106 (41-9/16)
DISTANCE PER STROKE mm (in)	52 (2-3/64)	55 (2-11/64)	28 (1-7/64)
WIRE ROPE DIAMETER mm (in)	8.3 (5/16)	11 (7/16)	16 (5/8)
APPROXIMATE NET WEIGHT kg (lbs)	6.8 (15)	12.7 (28)	23.6 (52)

ASSEMBLY AND SET-UP

PRE-LUBRICATION

Before assembling your grip puller, lubricate the puller as follows. Apply oil (such as WD-40) to the puller mechanisms while continuously operating the reverse lever. See Figure 1. This will help spread oil to the internal parts. Use special care to oil pawls and links well. A wear resistant oil is recommended.
CAUTION: Without proper lubrication, the pawls will fail to engage the wire rope and the rope will not move.

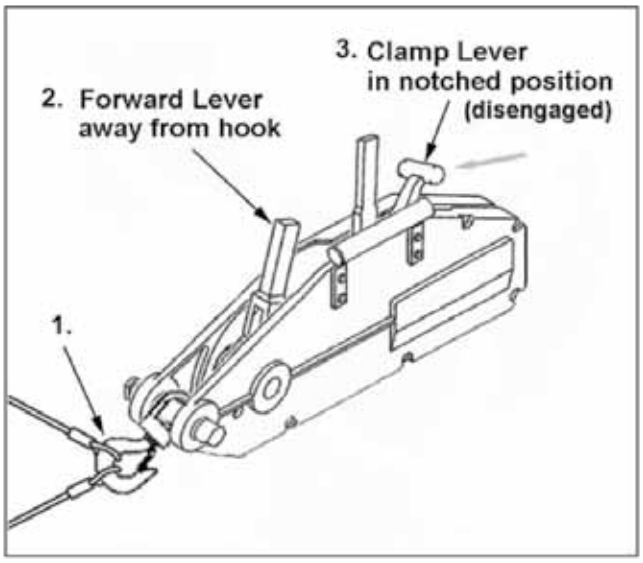


FIGURE 1

INSERTING WIRE ROPE

1. Make sure the forward lever has been pushed away away from the hook.
2. Release the clamp by pushing the clamp lever securely into the notch on the puller body.
3. Insert the end of the wire rope (the end is welded to provide easy entrance) into the rope inlet at the rear of the puller. Feed the wire rope through until it emerges at the other end.
4. Pull the wire rope through by hand to take up the slack and make sure that the exit point is not obstructed.
5. While keeping the wire rope taut, push down on the clamp lever and allow it to spring back to its natural position. This will engage the wire rope within the puller. See Figure 2.
6. Mount the handle to either the forward or reverse lever, according to the action desired. Rotate the handle until it is secure on the lever.
7. The puller is now ready to operate.

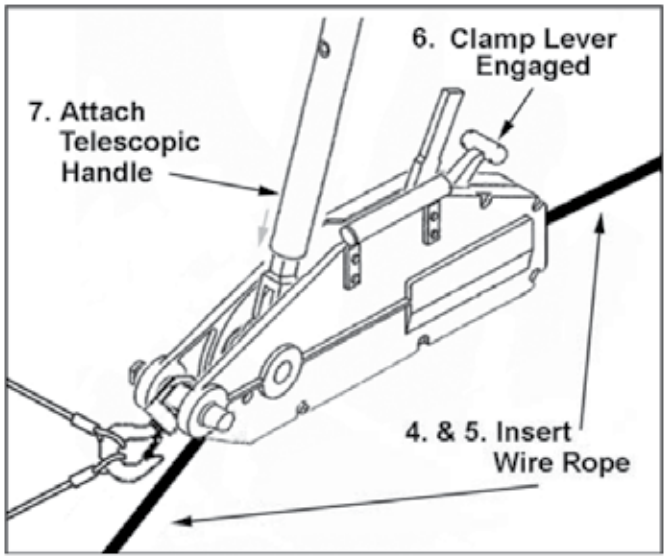


FIGURE 2

OPERATION

The grip puller uses metric wire rope and may be used in any position to lift, pull, lower or stretch heavy loads. Before attempting operation of this product, you should become thoroughly familiar with the warnings on page 2.

To operate the grip puller:

1. Place load cable(s) in the middle of the hook and inside the safety latch. DO NOT attach any cables outside the safety latch on either side of the puller hook or the wire rope hook. See Figure 3.
2. Lay out the wire rope correctly without twisting. Twisting the wire rope reduces its strength. See Figure 4.
3. To send the wire rope forward, set the telescopic handle on the forward lever and move it back and forth.
4. To send the wire rope backward, set the telescopic handle on the reverse lever and move it back and forth.

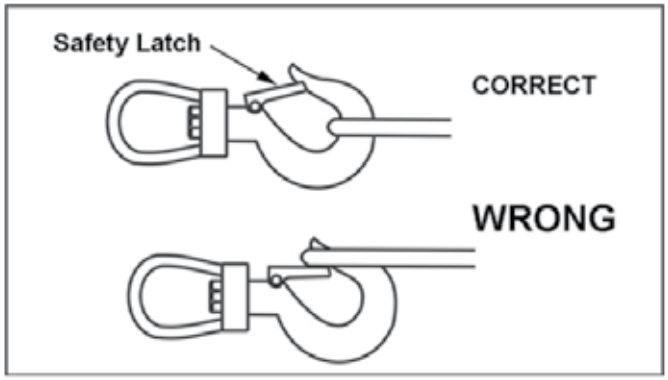


FIGURE 3

IMPORTANT:

Two shear pins are installed in the lever handle (TM0600) or the unit handle (TM0605, TM0610) . If the load being handled is too excessive for the puller's capacity, the shear pin is designed to break. If this occurs, **decrease the load or use other equipment of higher pulling capacity. Replace the shear pin. See Figure 11/12.**

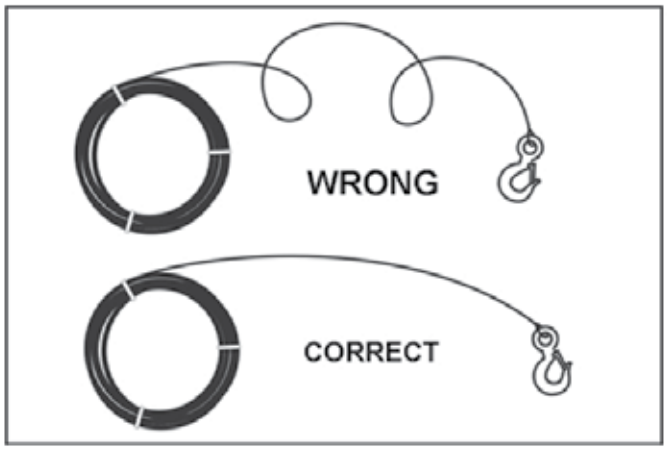


FIGURE 4

BEFORE STORING THE GRIP PULLER:

5. After use, remove the wire rope from the main body by setting the clamp lever into the notch (disengage the clamp, then pulling the wire rope from the inlet side at the rear of the puller.
6. After the wire rope is removed, push the clamp lever out of the notch and let it snap back into its original position. If the clamp lever is kept in the notch for an extended period of time, its spring may become stretched.
7. Wipe off any sand or water from the puller body, including internal mechanisms, and the wire rope, then apply oil liberally to both.
8. Store the grip puller away from rain, dew, high humidity areas or around acidic chemicals, which will promote rusting.

ANCHORING

Failure to anchor the **WOLVERINE™** grip puller correctly can result in a serious accident. The user must always ensure the anchor point for the machine and the wire rope are of sufficient strength to hold the load before using the machine. It is recommended that the **WOLVERINE™** machine should be anchored to a fixed point or to the load using an appropriate capacity sling. See Figure 6-7. It is forbidden to use the machine's wire rope as a sling. See Figure 5.

RIGGING ARRANGEMENTS

Various ways of rigging are shown in Figure 8 and the scope of application is illustrated in Figure 16. The machine may be anchored to a fixed point with a wire rope travelling towards the machine, or travel along the wire rope, with the load, the wire rope itself anchored to a fixed point. In example 8B, the maximum working load of the pulley and the anchor point should be equal to or greater than twice the load.

Whatever the rigging arrangement, and if the machine is anchored directly to a fixed point, ensure that there are no obstructions around the machine which could prevent the wire rope, the machine and anchor from operating in a straight line. It is therefore recommended to use a sling of an appropriate capacity between the anchor point and the machine.

SHEAVES

The capacity of the machine may be increased considerably for the same effort by the operator by using multiple sheave blocks. See Figure 9 and 10. The diameter of the pulleys used should be equal to at least 18 times the diameter of the wire rope.

⚠ WARNING:

Any rigging arrangement which requires the calculation of the forces applied should be checked by a competent engineer, with special attention to the appropriate strength of the fixed point used.

TROUBLESHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
Wire rope will not move.	Insufficient lubrication.	Oil the puller and wire rope.
	Puller is dirty.	Disassemble and clean out dust, dirt or other foreign matter. Oil the puller after reassembly.
	Clamp lever is not in proper position.	Release clamp lever from notch, and allow it to return to engaged position.
The forward operating lever moves freely and does not operate the mechanism.	The machine has been overloaded the the shear pins are broken.	Replace shear pins.
Wire rope will not advance during normal operation, or advances with great difficulty.	Clamp lever is not in proper position.	Release clamp lever from notch, and allow it to return to engaged position.
	Pawls are not lubricated.	Oil the pawl linkages properly; the pawls must engage the wire rope.
	Load is beyond puller capacity.	Decrease the load.
	There is an obstruction within the wire rope's path.	Remove the wire rope; clean and oil the puller and wire rope.
	The reverse lever is engaging the wire rope.	Check the position of the reverse lever. Correct as needed.
	The wire rope is damaged and is blocking the pawls.	Using all safety precautions, transfer the load to another machine on a seperate wire rope, or other means, then when the blocked machine is no longer under load, release and remove the damaged wire rope.
The machine moves in a jerky motion.	Lack of lubrication.	Clean and lubricate the machine as needed.
Clamp lever will not engage the wire rope properly.	Spring on clamp lever has become stretched.	Replace spring.

MAINTENANCE

GRIP PULLER

The machine should be inspected, cleaned, and lubricated at regular intervals, at least annually. Never use grease or oil containing graphite additives or molybdenum disulphide.

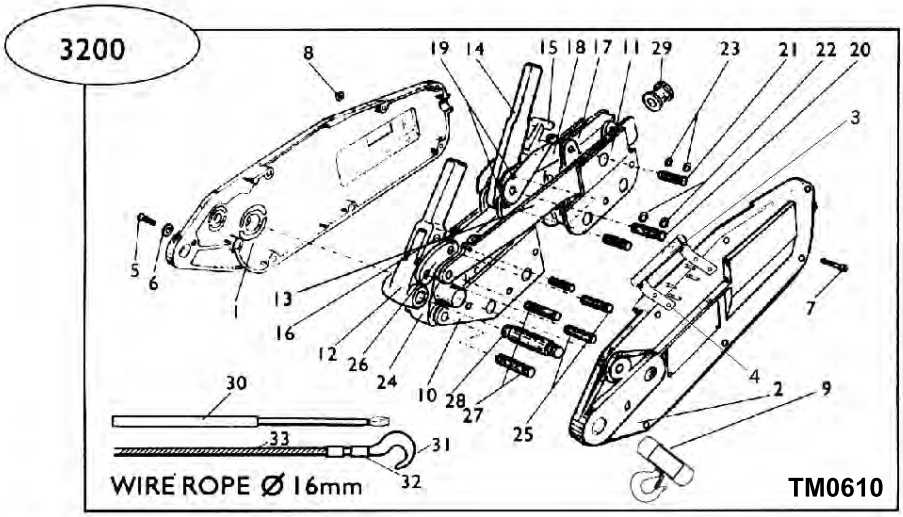
Make frequent and careful inspections of the puller. Make sure puller and wire rope are sufficiently oiled, and that they are free of any sand, dirt, dust or other obstruction or abnormality. Make sure hooks are not deformed and that the puller body has not been warped or damaged.

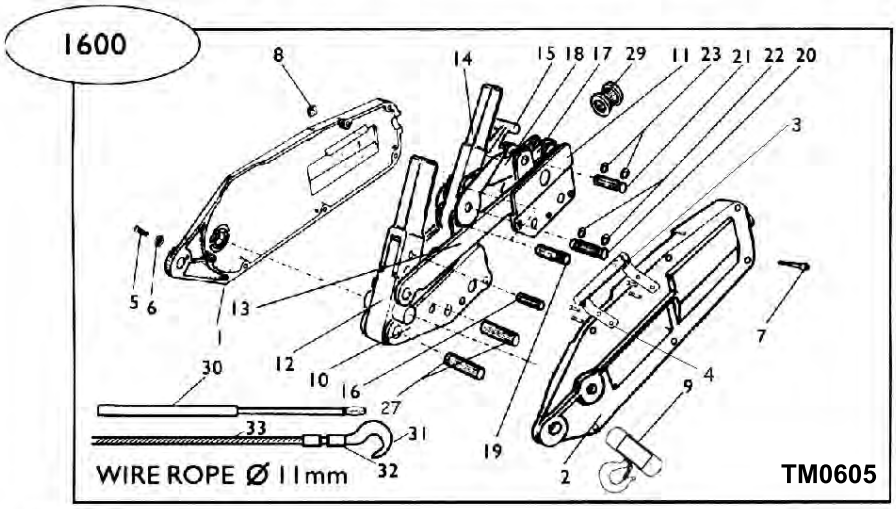
WIRE ROPE

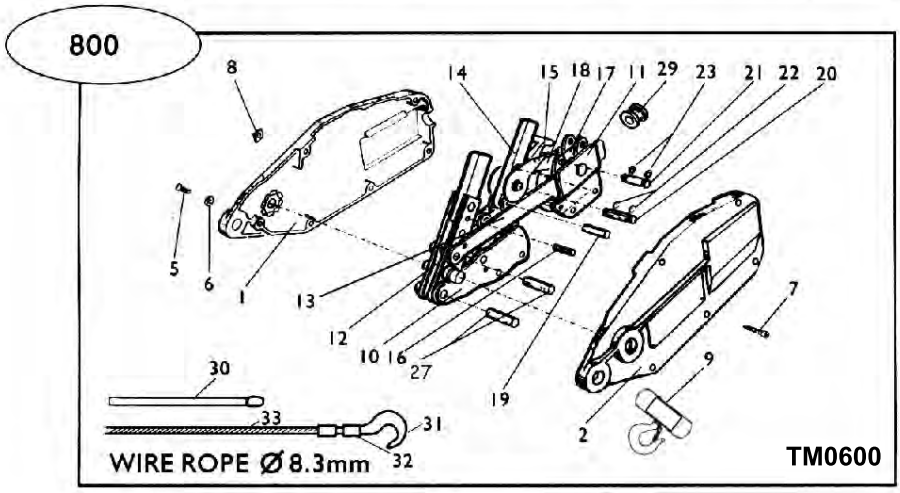
To guarantee the safe operation of **WOLVERINE™** machines, it is essential to use them exclusively with **WOLVERINE™** wire rope which has been specially designed to meet the requirements of the **WOLVERINE™** machine.
Use care to prevent the wire rope from kinking. If the rope is left shaped like a basket or is kinked many times at a single point, its strength is greatly diminished and may result in failure.

It is necessary to continuously monitor the state of the wire rope, to clean and oil it with a rag soaked with motor oil or grease. The rope should be examined daily to detect any signs of wear (damage or broken wires).

Replace wire rope immediately if:
• The thickness of the rope is reduced by 10% in diameter from the original value due to abrasion. See Figure 15.
• The rope exhibits basket-like shapes, kinks, or any abnormal deformation. See Figure 14.
• The rope is given an exceptionally heavy shock during operation; this can fatigue the rope even if the load is within puller capacity
• The clamp is deformed.







Parts Name

1. Left Side Plate
2. Right Side Plate
3. Handle
4. Rivet
5. Hex-Washer
6. Spring Washer
7. Hex-Bolt
8. Hex-Nut
9. Anchor Bolt and Hook
10. Front Jaw Block
11. Back Jaw Block
12. Forward Handle
13. Long Connecting Rod
14. Backward Handle
15. Release Lever
16. Safety Bolt
17. Upper Grip Jaw
18. Connecting Rod
19. 2nd Pin
20. 3rd Pin
21. 4th Pin
22. Bushing
23. Bushing
24. Snake Rod
25. 5th Pin
26. Connecting Rod
27. Crank Axle
28. 6th Pin
29. Guide Tube of Wire Rope
30. Tube Handle
31. Hanging Hook
32. Rivet Buckle
33. Wire Rope

RIGGING INSTRUCTIONS

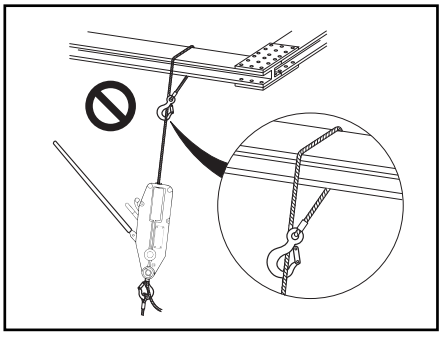


FIGURE 5

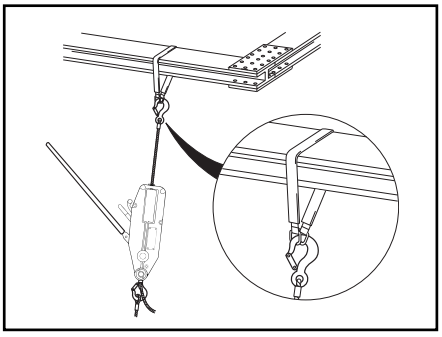


FIGURE 6

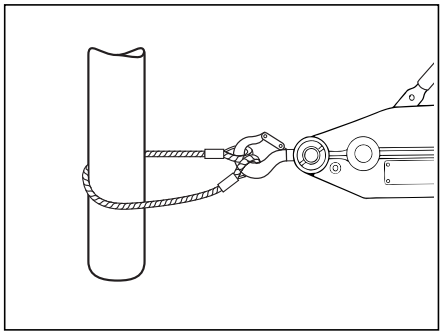


FIGURE 7

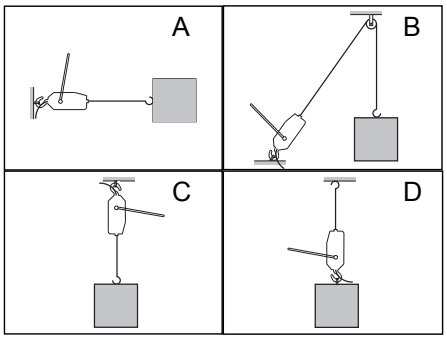


FIGURE 8

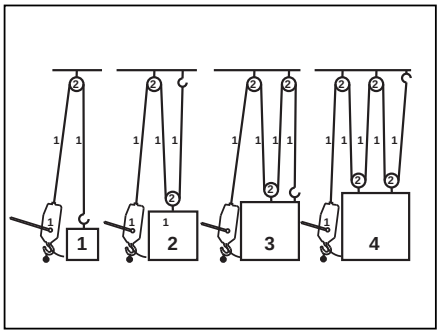


FIGURE 9

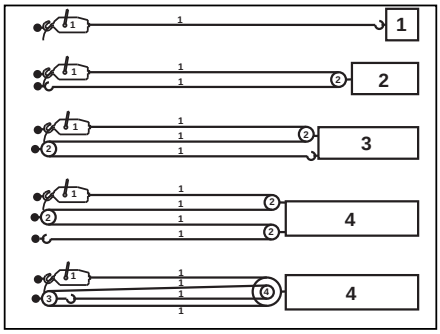


FIGURE 10

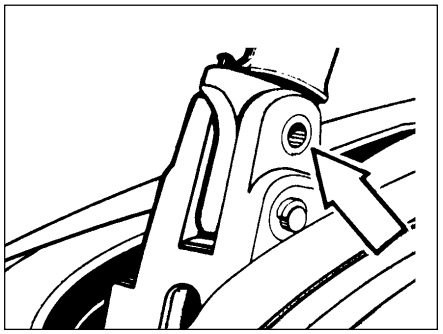


FIGURE 11

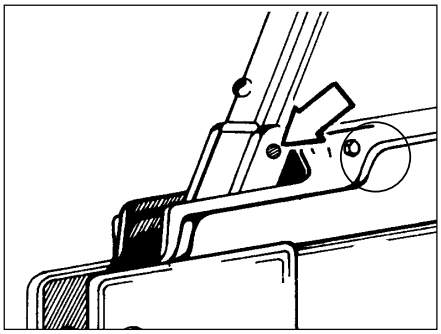


FIGURE 12

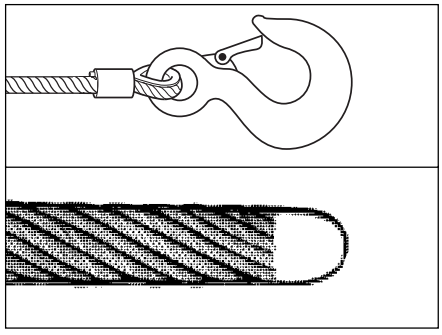


FIGURE 13

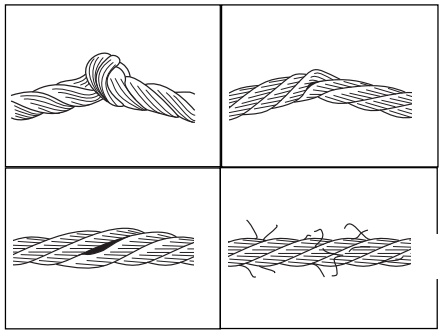


FIGURE 14

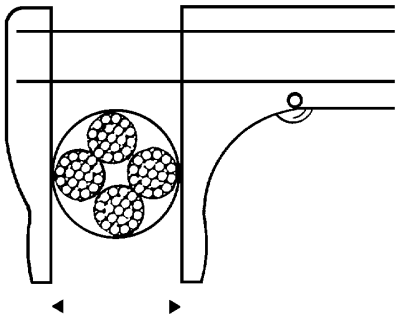
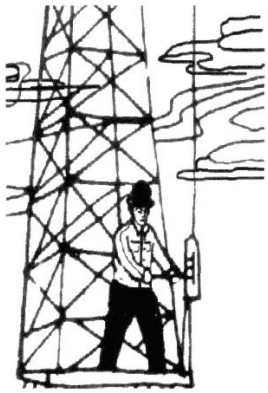
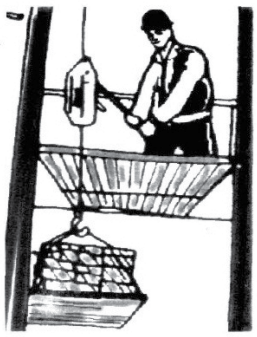
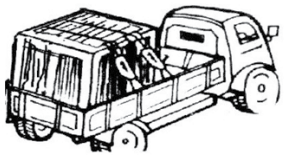


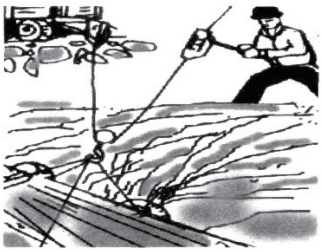
FIGURE 15

SCOPE OF APPLICATION

FIGURE 16

PRODUCT INFORMATION

Part Number: _____

Serial Number: _____

Date of Purchase: _____

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