

Model:

型号:

MSA Workman Winch User Instructions (Original Instructions)



WARNING

The user must be trained before using this product. Use this manual as part of a user safety training program that is appropriate for the user's occupation. These instructions must be provided to users before use of the product and retained for ready reference by the user. The user must read, understand (or have explained), and heed all instructions, labels, markings and warnings supplied with this product and with those products intended for use in association with it. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.

MSA Workman 卷扬机使用说明 (原始说明译文)



警告

用户必须经过培训方可使用本产品。除本手册外，请为用户安排与其工作相适的用户安全培训计划。这些说明必须在使用产品前提供给用户，且应妥善保管，以方便用户随时参阅。用户必须阅读、理解（或经他人说明）并遵守本产品以及为配合本产品使用所提供的其他产品随附之全部说明、标签、标记和警告。未遵守上述警告可能导致严重的人身伤害甚至死亡。



MSA(CHINA)SAFETY EQUIPMENT CO.,LTD

No.8 Rui En Lane, Suzhou Industrial Park, Jiangsu, China

After-sales Service Center: 4006-090-888

Website: www.MSAsafety.com

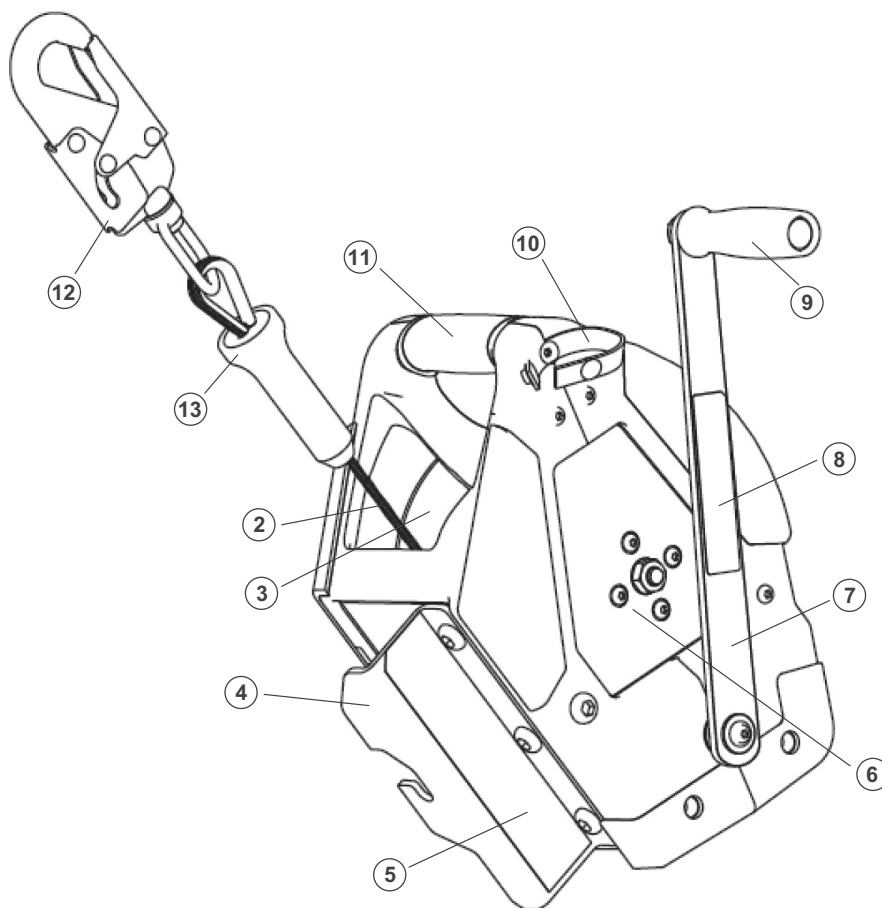
梅思安（中国）安全设备有限公司

中国江苏省苏州工业园区瑞恩巷8号

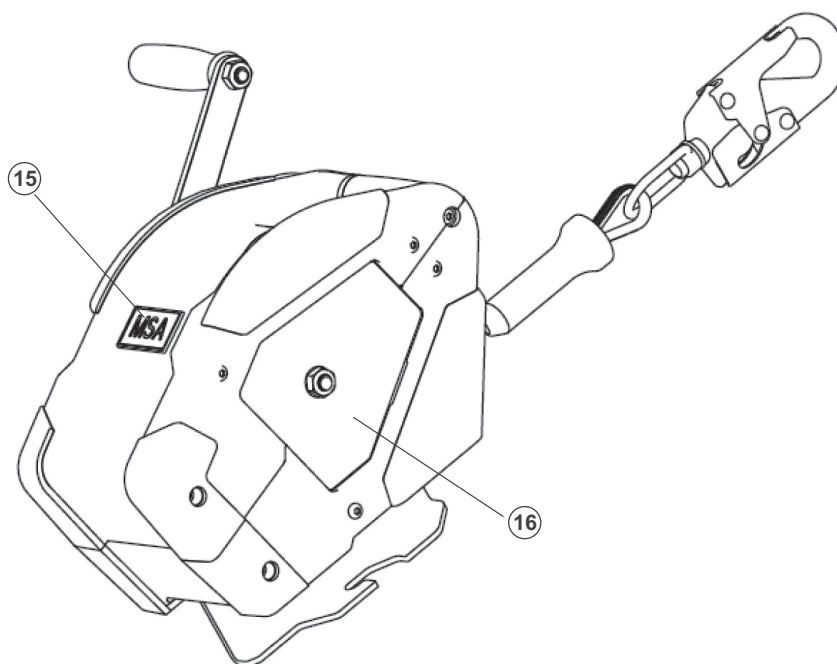
售后服务中心：4006-090-888

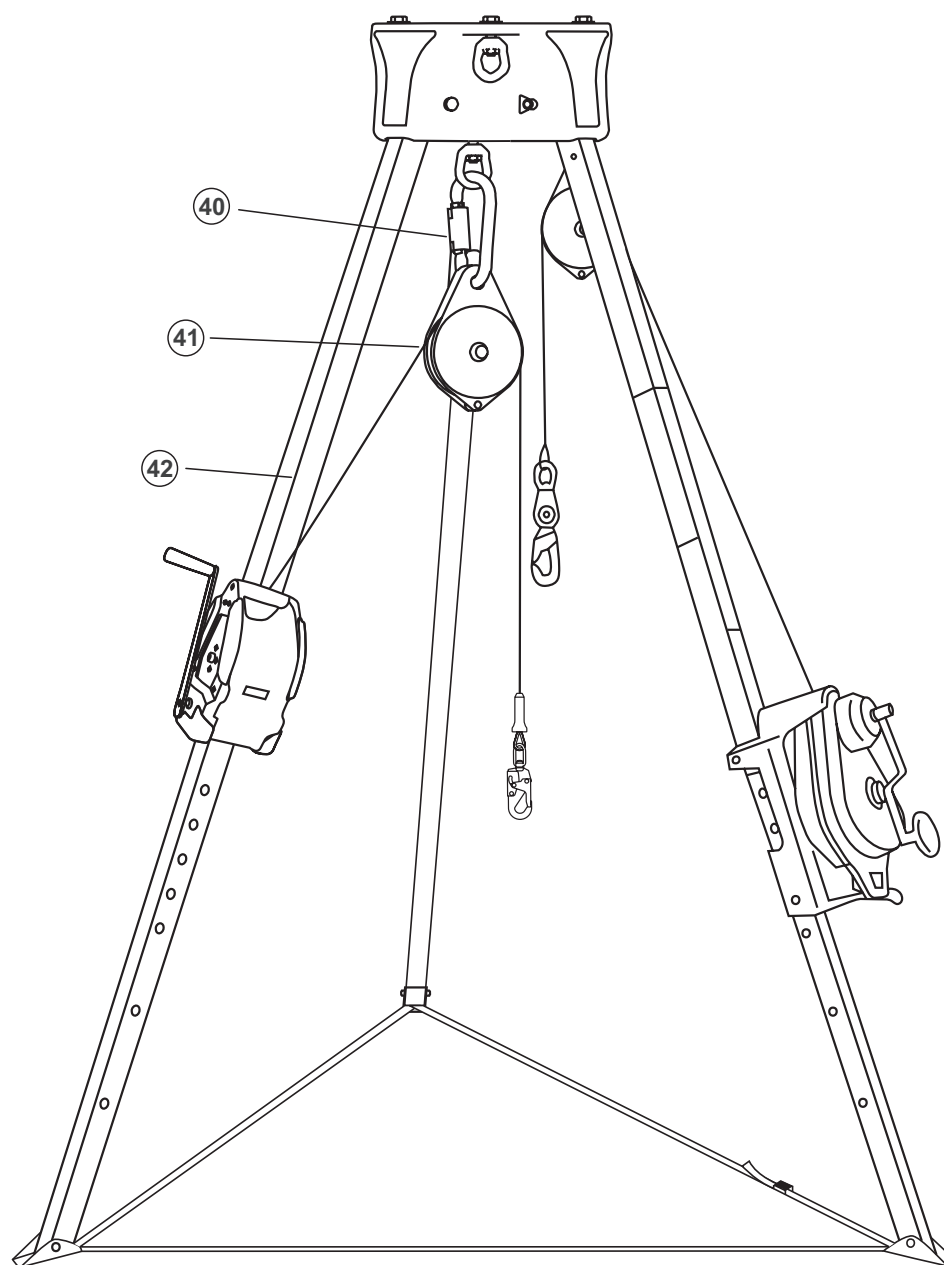
网址： www.MSAsafety.com

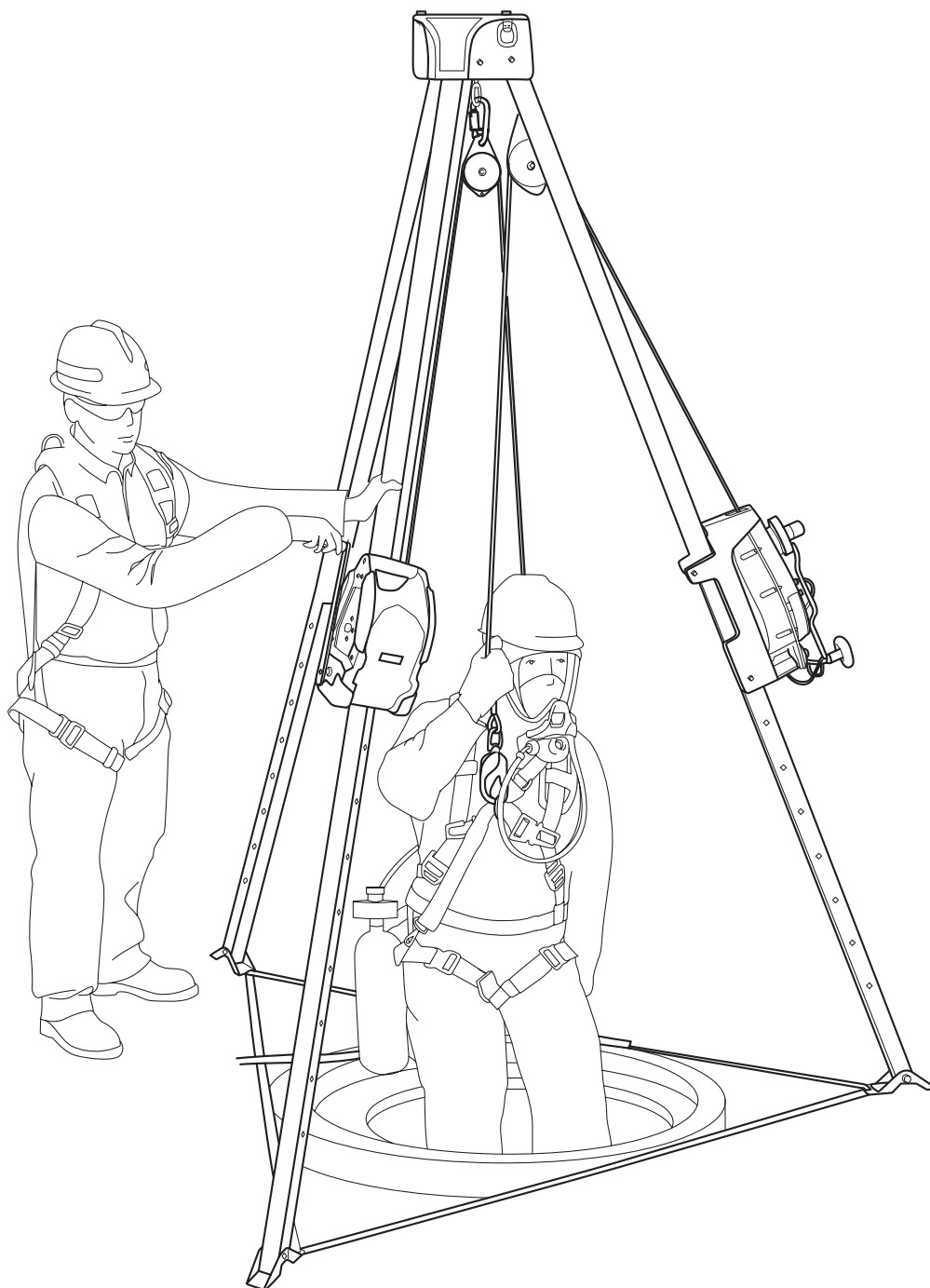
1

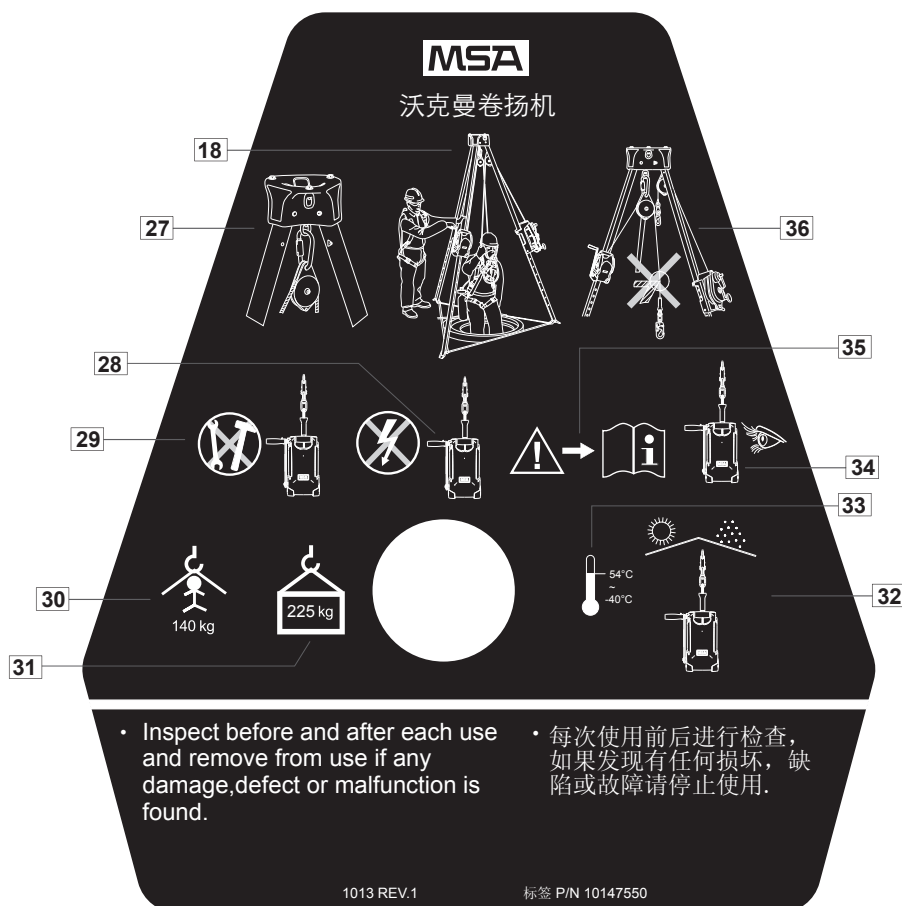
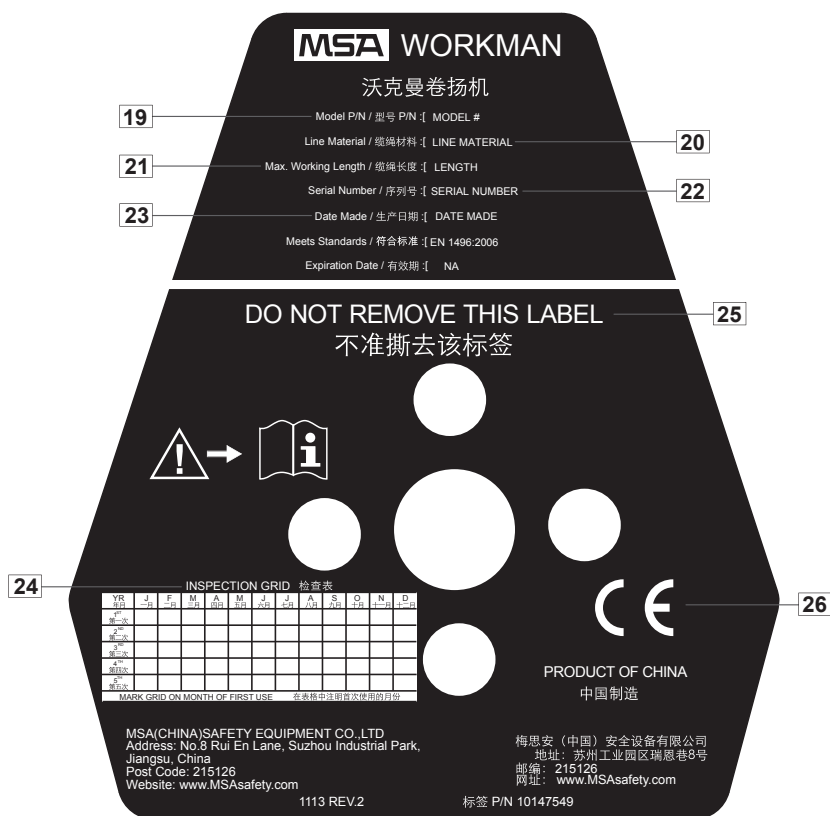


14

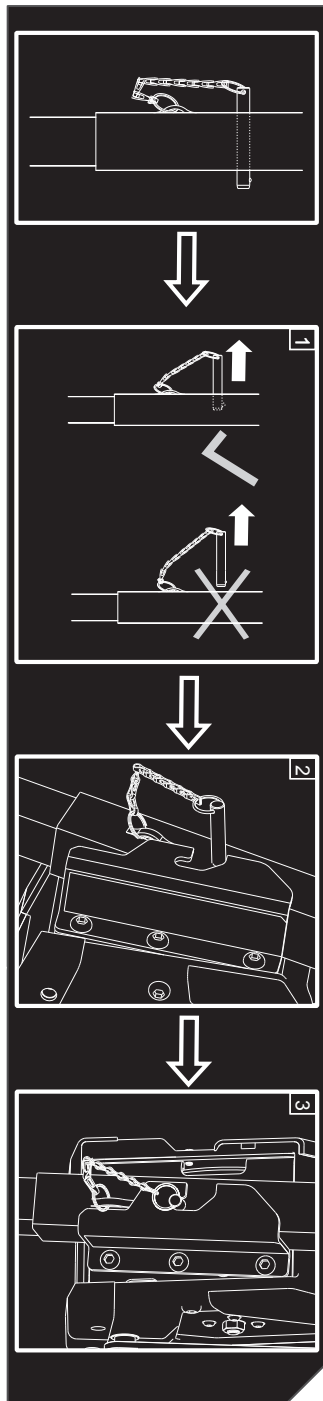




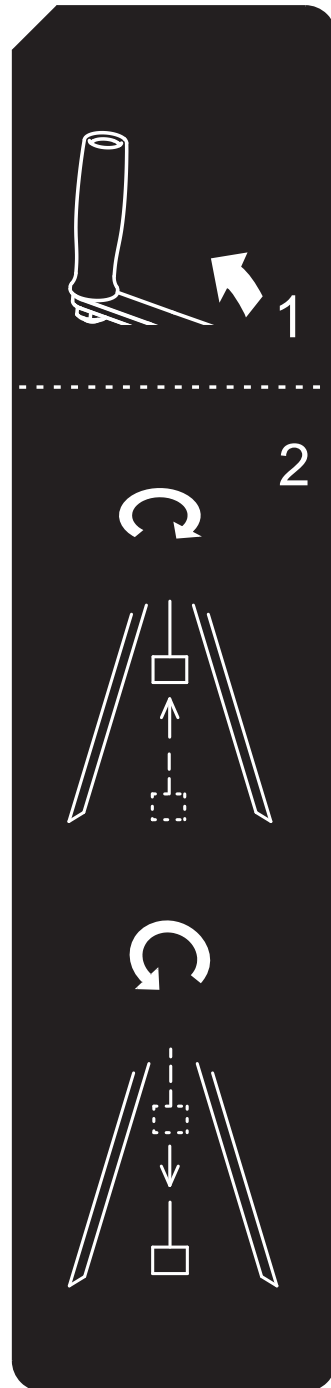




38



39



ENGLISH

1. Workman Winch (view from handle side)
2. Winch line
3. Drum
4. Bracket
5. Installation Label
6. Information Label
7. Winch crank handle
8. Handle label
9. Foldable Handle
10. Handle Holder
11. Carrying handle
12. Snaphook
13. RFID
14. Workman Winch (reverse view)
15. MSA LOGO
16. Instruction Label
17. MSA Workman tripod, Workman Winch and MSA Rescuer
18. Application Demonstration
19. Model Number
20. Line Material
21. Line Length
22. Serial Number
23. Date of Manufacture
24. Inspection Grid
25. Don't Remove Labels
26. Read Manual
27. Installation
28. Avoid electricity
29. No Field Repairs Allowed
30. Personal Maximal Capacity
31. Material Maximal Capacity
32. Avoid Direct Sunlight and Rain
33. Maximal and Minimum temperature
34. Inspect Before Each Use
35. Read Manual
36. Avoid Edges
37. Labels
38. Installation Label
39. Handle Operation Label
40. Carabiner
41. Pulley
42. MSA Workman Tripod

简体中文 (CN)

1. Workman 卷扬机 (摇柄侧视图)
2. 卷扬机绳索
3. 轮毂
4. 固定支架
5. 安装标签
6. 信息标签
7. 卷扬机摇臂
8. 摇把标签
9. 折叠式摇柄
10. 摇臂固定带
11. 提手
12. 挂钩
13. 电子标签
14. Workman 卷扬机 (反面视图)
15. MSA 徽标
16. 说明标签
17. MSA Workman 三脚架、Workman 卷扬机和 MSA 带救援装置的速差自控器
18. 应用示范
19. 型号
20. 绳索材料
21. 绳索长度
22. 序列号
23. 制造日期
24. 检查表
25. 请勿移除标签
26. 阅读手册
27. 安装
28. 避免与电接触
29. 禁止现场维修
30. 最大载人重量
31. 最大载物重量
32. 避免阳光直射, 避免雨淋
33. 最高温度和最低温度
34. 每次使用前请检查
35. 阅读手册
36. 避免锐利边缘
37. 标签
38. 安装标签
39. 摇柄操作标签
40. 连接锁
41. 滑轮
42. MSA Workman 三脚架

MSA Workman Winch INDIVIDUAL PROTECTIVE EQUIPMENT RECORD CARD

MSA Workman 卷扬机个人防护设备记录卡

Model:		Manufactured by:	MSA(CHINA)SAFETY EQUIPMENT CO.,LTD
型号:			No.8 Rui En Lane, Suzhou Industrial Park,
Date of Manufacture:			Jiangsu, China
生产日期:		After-sales Service Center:	4006-090-888
Date of first Use:		Website:	www.MSAsafety.com
首次使用日期:			
Serial Number:		制造商:	梅思安(中国)安全设备有限公司
序列号:			中国江苏省苏州工业园区瑞恩巷8号
Date of Purchase:		售后服务中心:	4006-090-888
购买日期:		网址:	www.MSAsafety.com
User Name:			
用户名称:			

INSPECTION:

检查:

Date 检查日期	Relevant organization or person 相关组织或人员	Result 检查结果	Next due date for periodic examination 定期检查的下一到期日期
1			
2			
3			
4			
5			
6			

Comments:

注释:

ENGLISH

INSTRUCTIONS FOR USE

1. Workman Winch description

The MSA Workman Winch is suitable for lifting, lowering and positioning either personnel or materials. It is not to be used as a fall arrest device. It is designed for use in conjunction with MSA anchorage connectors, fall arresters and other components to make up complete systems for personnel riding, work positioning, emergency rescue and evacuation. MSA components are available to provide backup fall arrest for all such systems. MSA Workman Winch accompanied with MSA Workman Tripod can be used in vertical direction.

The line lengths of Workman Winch are available in 15 m and 20 m. See table for detailed information of these configurations.

LINE CONSTRUCTION			
Product Name	Material	Line Size	Length
Workman Winch	Non-rotatable Stainless Steel	5 mm dia.	15 m
			20 m
	Galvanized Steel	5 mm dia.	15 m
			20 m

(1) Description of Winch: The winch is designed for use with the Workman Tripod (Figure 17). It may also be used with other anchorage connectors approved by MSA. The winch serves as the primary lifting-lowering device for systems which use the tripod to position equipment for confined space entry above the area to be accessed. The winch mounts to the side of the tripod leg. This position permits operation of the winch by a surface attendant positioned away from the confined space access point, maximizes the usable space to the interior of the tripod and increases stability by lowering the tripod's center of gravity.

Caution

When Workman Winch is installed on the MSA Workman Tripod, a pulley and a carabiner are required for rigging the winch line at the center eye of tripod head. See figure 17.

Note: When using the winch for lifting-lowering of personnel, an independent fall arrest system is required. The MSA retractable Type fall arrester is recommended. Other fall arrest systems are also available from MSA.

(2) Internal mechanisms of the Winch are protected by robust plastic housings. All parts are zinc plated or stainless steel to resist corrosion. The load end of the line is terminated with a self-locking swivel snaphook which requires two separate and distinct manipulations to unlock and open the snap gate. When released, the snap gate will automatically close and lock.

Caution

The user should prevent the buildup of slack line that would allow free fall. To prevent loose coils of line on the drum, always maintain at least 6.75 kg of tension on the line when paying it out.

The winch is normally operated with the standard manual crank handle shown in Figure 1. To extract line or lower a load, rotate the handle in a counterclockwise direction. To retract line or raise a load, rotate the handle in a clockwise direction. To suspend a load, release the handle. A brake in the drive mechanism inhibits the drum from free wheeling. The brake operates even when the manual force is removed.

2. Specification: All Workman Winch embody several standard features: (1) Rated working load 140 kg for personnel and 225 kg for material. (2) An open drum wound with 5 mm steel cable. (3) Built in shock absorber. (4) Clutched drive to prevent winch overload, and reduce the possibility of injury to a person if snagged on a structural member during lifting. (5) Double-braking system. (6) Robust housing and mounting bracket. (7) Self-locking swivel snaphook. (8) Manual foldable crank handle. (9) Level Wind Mechanism for a tangle free cable drum. (10) RFID enabled.

3. Training: It is the responsibility of the purchaser of MSA Workman Winch to assure that product users are made familiar with these user instructions and trained by a competent person. Ensure that you have been adequately trained in the use of this MSA Workman Winch and make sure that you fully understand how it works.

4. Anchorage requirement: The anchorage used to suspend the winch for personnel hoisting must be strong enough to support the load with an adequate safety factor. The required safety factors are 10:1 for personnel and 6:1 for material lifting/lowering. For personnel hoisting, the anchorage must have strength of at least 10 KN. A backup fall arrest system must be utilized.

5. Rescue plan: The user must have a rescue plan and the means at hand to implement it; and that plan must take into account the equipment and special training necessary to effect prompt rescue under all foreseeable conditions. There

should be direct or indirect visual contact or some other means of communication with the rescue at all times during the rescue process.

6. Compatibility of system parts: All components (e.g. full body harness, self retractable lanyard, carabiner, snap hook, etc.) connected to this MSA Workman Winch MUST be compatible. MSA Workman Winch is designed to be used with MSA approved components and connecting subsystems. Use of the MSA Workman Winch subassembly with products made by others that are not approved in writing by MSA may adversely affect the functional capability between system components and reliability of the complete system. Contact MSA with any questions or for further information.

7. Physical limitations: Good physical condition is necessary in order to carry out work at a height. Certain medical conditions can threaten the users' safety during normal use of MSA Workman Winch and in emergencies (taking medications, cardiovascular problem, etc.). In any case of doubt, consult your physician before using. Pregnant women and minors MUST NEVER use the MSA Workman Winch.

8. Operation of the Winch

(1) Personnel using the Winch for lifting/lowering/positioning must have a backup fall arrest system, such as a MSA Rescuer or MSA RTFA (Retractable Type Fall Arrestor), plus a full body harness to EN 361. When using the Winch for personnel, never have more than one person on the Winch at the same time. Never carry personnel and materials at the same time.

Caution

(1) Never leave a load hanging from the Winch while the Winch is unattended. (2) Always be sure the line is pulling straight out from the Winch drum—never at an angle. (3) Never exceed the maximum rated personnel loads listed on the Winch specification label. (4) Never alter the mechanics of the Winch. (5) Never use two or more Winch to raise or lower a personnel load. Personnel load shifting may place the entire load on one Winch, causing sequential failure of both units. (6) Each time a load is lifted; first test the Winch by lifting the load a few inches. (7) Always keep hands away from pinch points around load-bearing lines, pulleys and drums during operation. (8) Always ensure level winding when extracting or retracting line by guiding the line. Use a gloved hand when guiding the line to avoid cuts and wire slivers. Continually inspect for level winding during operation. (9) It is critical that the Winch operator remain a safe distance away from any fall hazard or personnel load which could cause injury in the event of a loss of balance on the part of the operator, or in the event of a personnel load fall. When operating the Winch in a fall hazard area, the operator must wear appropriate fall protection equipment connected to an independent anchorage. (10) All labels must be visible and the operator should never come between the Winch housing and line. The Winch operator must always operate the Winch with the housing and crank between him or her and the personnel load. (11) Never install the Winch where any member of the work crew must be stationed in line with a tensioned Winch line. Should the line fail, stored energy may cause recoil of the line with sufficient force to cause serious or fatal injury.

(2) Lowering a personnel load: To lower a load with personnel suspended, rotate the crank handle counter clockwise. To extract line from the Winch when there is no suspended load, rotate the handle counter clockwise while pulling on the line with at least 6.75 kg of force. To resume lifting, make clockwise revolutions of the crank handle.

(3) Suspending a personnel load: To suspend a personnel load, slowly release the crank handle.

(4) Raising a personnel load: To raise a personnel load, rotate the crank handle clockwise. A clicking sound will be heard as line is reeled in. When reeling in line, check to be sure the line wraps evenly and tightly around the drum.

Caution

In the event of a fall, lift before lowering to disengage the secondary brake pawls. Lift first at least one half turn of the drum before attempting to lower. Unless the secondary brake pawls are disengaged after a fall, the winch will not pay out line.

(5) Acidic, alkaline, or other environments with harsh substances may damage the hardware elements of this Workman Winch. If working in a chemically aggressive environment, consult MSA to determine acceptable system components for your specific conditions. Chemical hazards, heat and corrosion may damage the Workman Winch. More frequent formal inspections are required in environments with chemical hazards, heat and corrosion. Do not use in environments with temperatures lower than -40 °C and greater than 54 °C. Do not expose to corrosive environments for prolonged periods. Use extreme caution when working near energized electrical sources. Maintain a safe working distance (preferably at least 3 m) from electrical hazards. When working near moving machinery parts (e.g. conveyors, rotating shafts, presses, etc.), make sure that there are no loose elements in any part of the system.

9. Inspection guidelines: All MSA products are inspected and tested under controlled conditions at the factory before shipment. User inspection, maintenance and storage of the equipment take on added importance once the device is subjected to potentially severe environmental and work place conditions.

Before each use the user should carefully inspect the device by following the instructions and labels. Inspect the functioning of the device according to the instructions in this section and examine the unit for excessive wear, damage, alteration or missing parts. The frequency of periodic inspection depends on the severity of environmental conditions and frequency of use of the unit, but must be performed at least every 6 months by a competent person. The results of this inspection must be documented using the inspection forms at the end of this user instruction. The appropriate month and year on the inspection grid on the product must also be permanently marked using a steel stamp, taking care to not damage the winch housing.

Caution

When a test load is needed to allow inspection of any winch function, do not use personnel as a load. Make sure the area below winch is free and clear of any obstructions. Always inspect the winch functions prior to each use.

(1) Inspecting line payout and retrieval: Mount the winch to a suitable anchorage connector (such as the Workman Tripod) to allow operation of the crank. Maintaining tension on the winch line, rotate the crank counterclockwise to pay the line out. Then rotate the crank clockwise to check for proper line retrieval. A clicking sound indicates that line retrieval is functioning correctly. Remove the product from use and return it to MSA if no clicking sound is heard. During line extraction and retraction, check that the winding guide wraps the line tightly around the drum.

(2) Inspecting handle: Check for cracks, bends and corrosion on the handle. Remove the product from use if any of these conditions are found and contact MSA for a replacement handle.

(3) Inspecting marking: Check for presence of all labels. Make sure all labels are clear (not damaged) and legible. Check that the inspection grid date is within the previous 6 months. If 6 months have passed since the previous inspection, remove the product from use for inspection by a competent person, according to the inspection guidelines of this user instruction.

(4) Inspecting bolts and nuts: Using fingers check all bolts and nuts on the housing to ensure their tightness. If loose, tighten them. Check to see if any bolts, nuts or other parts are missing or have been improperly substituted or altered in any way.

(5) Inspecting installation bracket, housing and drum: Look carefully for signs of cracks, dents, deformation or ruptures in the housing, drum and installation bracket. Minor dents which do not affect function do not require user action. Return for service if material cracks found. Accidentally dropping the unit may lead to some deformation of internal components. Check for signs that the press plate and drum are rubbing. This will be evidenced by wear on the drum flanges, also the user may experience uneven resistance when rotating the crank handle. Whenever there is damage that prevents the winch from operating normally, remove the unit from use. Minor dents or deformations which do not affect function do not require user action.

(6) Inspecting the snaphook: Check all parts of the swivel snaphook for signs of alteration, distortion, cracks, deep nicks, dents or cuts. Also check for indications that the snaphook has been subjected to intense heat which could affect its strength. Inspect for signs of corrosion or excess wear and remove the product from use if there is any question whether detected wear and/or corrosion may affect strength or function. Check to see that the snap body swivels freely around the bolt connecting it to the snap eye.

(7) Inspecting line fittings: Check the two ferrules and the thimble. If the user's unit has a splice as the means of attaching the snaphook, the splice must be completely and tightly tucked with no loops or loose ends.

(8) Inspecting pulley: Check all parts of the pulley for signs of alteration, distortion, cracks, deep nicks, dents or cuts. Inspect for signs of corrosion or excess wear and remove the product from use if there is any question whether detected wear and/or corrosion may affect strength or function.

(9) Inspecting carabiner: Check all parts of the carabiner for signs of alteration, distortion, cracks, deep nicks, dents or cuts. Inspect for signs of corrosion or excess wear and remove the product from use if there is any question whether detected wear and/or corrosion may affect strength or function.

WARNINGS

A full body harness is the only acceptable body holding device that can be used in a fall arrest system.

A fall arrest system, **MUST ONLY** be connected to the harness back D-ring or front D-ring only with the fall arrest attachment tag "A". These points can also be used for connecting a rescue system. Never use the hip D-ring for fall arrest or climbing protection. The hip D-ring of a harness **MUST ONLY** be used for connecting a work positioning system

(EN 358) and NEVER a fall arrest system or climbing protection.

The MSA Workman Winch MUST be fully inspected before each use to verify that it is in serviceable condition. Examine every inch of the Workman Winch for severe wear, missing or broken elements, corrosion, or other damage. Examine if label is missing or illegible; if there is evidence of improper function, improper fit, or alteration of any component. Do not use MSA Workman Winch until confirmed in writing by a competent person if inspection reveals an unsafe condition. Additionally, the MSA Workman Winch MUST be inspected once every 6 months by a competent person authorized by current legislation in the country of use. See inspection guidelines.

DO NOT modify or attempt repairs on the MSA Workman Winch. Only MSA or parties with written authorization from MSA may repair an MSA Workman Winch. The system shall not be used outside its limitations, or for any purpose other than that for which it is tended.

Snaphooks and carabiners must not connect to each other. Do not tie knots in a lanyard. Do not connect two snaphooks to one D-ring. Do not rely on feel or sound to verify proper snaphook engagement. Always check visually for proper engagement. Ensure that gate and keeper are closed before use.

Prevent denting or deformation of the housing. Never drop the unit from any height. Always set it down carefully. When in use, protect the line from contacting sharp corners and edges. Prevent loops from forming in a slack line and being pulled tight, causing line kinking. Do not allow foreign matter to enter the housing. Do not permit the line to snag or be crushed.

It is essential for the safety of the user that if the MSA Workman Winch is re-sold outside the original country of destination the reseller shall provide instructions and additional relevant information for use, for maintenance, for periodic examination and for repair in the language of the country in which the MSA Workman Winch is to be used.

Failure to follow these warnings or misuse can cause serious personal injuries or death.

MAINTENANCE AND STORAGE

Strictly adhere to the cleaning instructions in this section to prevent adverse effects on the materials used in the product. Periodically use a clean, damp (not wet) cloth to remove dirt or contamination which may cause corrosion or hamper legibility of labels. Never use solvents to clean the housing as they may break down the label adhesive. Use a clean dry cloth to wipe the line dry as it is slowly re-reeled back into the device. If necessary, lubricate the line after this operation.

Lubrication must only be applied to a clean, dry wire line because it is effective only when the dressing comes in contact with metal. If inspection reveals buildup of contaminants, use a densely bristled fiber brush (not wire) to remove the contaminants. Never use gasoline or kerosene as a solvent. Pay particular attention to cleaning the gaps between the line strands so lubricant can penetrate into the line core and fill these gaps to seal out moisture and foreign particles. Use a low viscosity field lubricant having moisture resistant, non-corrosive properties. It may be applied by brush or swabbing with a cloth saturated with the lubricant. Wipe off excess lubrication with a clean dry cloth.

It is impossible to specify the time intervals between lubrications. However, the line should be properly lubricated at all times, and periodic inspections will indicate when it must be done. In corrosive environments, the line should be cleaned and lubricated more frequently. If the winch is taken out of service for an appreciable length of time, the line should be cleaned and lubricated before storage.

Note: Do not lubricate any part of the winch except the wire rope and the snaphook. The winch winding mechanism is virtually maintenance free. All bearings are lubricated for life. The winch contains no user serviceable parts.

Equipment which is damaged or in need of maintenance must be tagged as "UNUSABLE" and removed from service. Corrective maintenance (other than cleaning) and repair, such as replacement of elements, must be performed by MSA. Do not attempt field repairs.

Store the MSA Workman Winch in a cool, dry and clean place out of direct sunlight. Avoid areas where heat, moisture, light, oil, and chemicals or their vapors or other degrading elements may be present. Equipment which is damaged or in need of maintenance should not be stored in the same area as usable equipment. Heavily soiled, wet, or otherwise contaminated equipment should be properly maintained (e.g. dried and cleaned) prior to storage. Prior to using equipment which has been stored for long periods of time, a Formal Inspection should be performed by a competent person.

Transport the MSA Workman Winch in a package to protect it from cuts, moisture, chemicals and their vapors, extreme temperatures, and ultraviolet rays.

COMPONENTS AND ACCESSORIES LIST

Item number	Part number	Description	Figure number in the manual
1	10102002	MSA Workman Tripod	42
2	506222	Pulley	41
3	SRCC643P	Carabiner	40

中文

使用说明

1. Workman 卷扬机说明

MSA Workman 卷扬机适用于提升、下降和定位人员或物料。不得将其用作防坠装置。卷扬机应与 MSA 锚点连接件、防坠装置和其他组件结合使用，以便组装用于人员乘坐、工作定位、紧急救援和疏散的完整系统。MSA 组件可为所有此类系统提供防坠备用装置。MSA Workman 卷扬机与 MSA Workman 三脚架可在垂直方向上配合使用。

Workman 卷扬机提供的绳索长度分为 15 米和 20 米，如需了解详细信息，请参见下表。

绳索构造			
产品名称	材料	绳索尺寸	长度
Workman 卷扬机	不可转动型不锈钢	直径 5 mm	15 m
			20 m
	镀锌钢	直径 5 mm	15 m
			20 m

(1) 卷扬机说明：卷扬机专门与 Workman 三脚架配合使用（图 17）。此外，还可与经 MSA 认证的其他锚点连接件结合使用。卷扬机是使用三脚架定位设备，方便其进入密闭空间的系统的主要升降装置。卷扬机安装于三脚架腿的一侧。这个位置便于由距离密闭空间进入点较远的地面工作人员操作卷扬机，最大程度增加三脚架的内部可用空间，并通过降低三脚架的重心提高稳定性。

⚠ 注意

将 Workman 卷扬机安装到 MSA Workman 三脚架上时，需要使用滑轮和连接锁将卷扬机绳索扣在三脚架头部中心的锚点上。参见图 17。

注意：使用卷扬机升降工作人员时，需要另外准备独立的防坠系统。建议使用 MSA 速差自控器。也可从 MSA 购买其他防坠系统。

(2) 卷扬机的内部机构由坚固的塑料外壳加以保护。所有零部件均采用镀锌钢或不锈钢材质，因此具有极佳的耐腐蚀性。绳索的负载端装有自锁型旋转钩，需要两种截然不同的操作方能解开锁扣。松开后，锁扣将自动闭合锁紧。

⚠ 注意

用户应防止绳索松散堆积，以避免使用者自由坠落。为防止轮毂上的绳索缠绕松脱，在放出绳索时，应始终向绳索施加至少 6.75 kg 的拉力。

通常，采用标准手动操作摇柄操作卷扬机，如图 1 所示。要抽出绳索或降低负载，应按逆时针方向转动摇柄。要缩回绳索或升高负载，应按顺时针方向转动摇柄。要使负载停住不动，松开摇柄即可。传动装置中的制动器可防止轮毂随意转动。即便在取消手动操作后，制动器仍能起作用。

2. 规格：所有 Workman 卷扬机均具有以下标准特点：(1) 针对人员和材料的额定工作负载分别为 140 kg 和 225 kg。

(2) 开口轮毂外缠绕有 5 mm 粗的钢丝绳。(3) 内置有减震器。(4) 类似离合器的传动装置可防止卷扬机过载，从而减小在提升过程中被结构组件阻碍而造成人身伤害的可能性。(5) 双制动系统。(6) 坚固的外壳和安装支架。(7) 自锁型旋转钩。(8) 折叠式摇柄。(9) 防止绳索绕乱的压线机构。(10) 内置电子标签。

3. 培训：购买 MSA Workman 卷扬机的客户负责确保产品用户熟悉相关使用说明，并安排安全检查员为其提供培训。用户应确保自己接受过 MSA Workman 卷扬机使用方面的充分培训，并确保对卷扬机的运用方法了解透彻。

4. 锚点要求：用于暂停卷扬机以吊起人员的锚点装置必须足够结实，为支撑负载提供较高的安全系数。人员和物料提升 / 下降所需的安全系数分别为 10:1 和 6:1。要吊起工作人员，锚点装置的强度至少应为 10 kN。必须配备防坠备用系统。

5. 救援计划：用户必须制定救援计划并准备好用以实施救援计划的工具；救援计划必须将在所有可以预见的情况下迅速施以救援所需的设备和特殊培训考虑在内。救援过程中，应始终保持与被救人员间的直接或间接视觉接触或者以其他方式与之沟通。

6. 系统部件兼容性：连接到此 MSA Workman 卷扬机的所有组件（如：全身式安全带、速差自控器、连接锁、挂钩等）必须相互兼容。MSA Workman 卷扬机应与经 MSA 认证的组件和连接子系统配合使用。将 MSA Workman 卷

扬机组件与未经 MSA 书面批准的其他制造商的产品一起使用，可能会对系统组件间的功能和整个系统的可靠性造成不利影响。如有任何疑问或欲了解更多信息，请联系 MSA。

7. 身体限制：工人必须保持良好的身体状况才能执行高空作业。某些身体状况会在用户正常使用 MSA Workman 卷扬机的过程中以及紧急情况下威胁用户的安全（如服用药物、心血管有问题等）。如有任何疑问，请在使用前咨询您的医生。孕妇及未成年人不得使用 MSA Workman 卷扬机。

8. 卷扬机操作

(1) 使用卷扬机提升 / 下降 / 放置的人员必须准备好防坠备用系统，如 MSA 救援装置或 MSA RTFA（速差自控器），还需准备符合 EN 361 的全身式安全带。在使用卷扬机载人时，在卷扬机上作业的人员不得超过一人。切勿同时搭载人员和物料。

⚠ 注意

(1) 请勿在无人看管的情况下在卷扬机上悬挂负载。(2) 始终确保绳索从卷扬机轮毂上笔直拉出，而不要呈一定角度。(3) 请勿超出卷扬机规范标签上列出的最大额定人员载重。(4) 请勿更改卷扬机的运作方式。(5) 请勿同时使用多台卷扬机升举或下降人员。承载人员移动可能会将所有负载加在一架卷扬机上，进而导致两台设备相继发生故障。(6) 每次升起负载时，先将负载提升几英寸对卷扬机进行测试。(7) 操作过程中，双手应远离承重绳索、滑轮和轮毂周围的易被夹到的点。(8) 抽拉或缩回绳索时，应引导绳索，确保其缠绕均匀。引导绳索时，应佩戴手套，以避免割伤。操作过程中，应不断检查绳索缠绕是否均匀。(9) 卷扬机操作员应保持一定的安全距离，远离任何坠落危险或承载人员，以避免在操作员失去平衡或承载人员坠落时给其造成人身伤害。在有坠落危险的区域操作卷扬机时，操作员必须配备适当的防坠设备，并将其连接到独立的锚固装置上。(10) 所有标签必须清晰可见，操作员不得站立于卷扬机外壳与绳索之间。卷扬机操作员必须通过操作员与承载人员间的外壳和摇柄操作卷扬机。(11) 不得在工作团队的任何成员与另外拉紧的卷扬机绳索所在直线上安装卷扬机。如绳索松脱，积聚的能量将以巨大的力缩回绳索，这样会给操作员造成严重或致命的伤害。

(2) 降低人员：要降下处于悬吊状态的人员，应按逆时针方向旋转摇柄。要在没有悬吊负载的情况下从卷扬机抽出绳索，应在以至少 6.75 kg 的力拉住绳索的同时，按逆时针方向转动摇柄。要恢复举升操作，按顺时针方向转动摇柄。

(3) 暂停人员：要使人员停住不动，应慢慢松开摇柄。

(4) 举升人员：要举升人员，应按顺时针方向转动摇柄。在绳索卷起时，会听到咔哒声。卷起绳索时，应确保绳索均匀、紧致地缠绕在轮毂上。

⚠ 注意

如发生坠落，应先升后降以解除辅助制动爪。下降前，应至少先转动轮毂半圈。坠落后，如不解除辅助制动爪，卷扬机将一直无法将绳索放出。

(5) 酸性、碱性或其他存在粗糙物体的环境都可能损坏 Workman 卷扬机的金属组件。如在化学腐蚀性较强的环境中作业，请向 MSA 进行咨询，确定与您的特定条件相适应的系统组件。化学危险品、高温和腐蚀性物质可能会损坏 Workman 卷扬机。对于存在化学危险品、高温和腐蚀性物质的环境，应进行更加频繁的正规检查。请勿在低于 -40 °C 和高于 54 °C 的环境下使用本产品。请勿将本产品长时间暴露在腐蚀性环境中。在靠近通电电源的区域作业时，应格外当心。请与电源间保持安全的作业距离（最好不低于 3 m），以防止发生触电危险。在移动性机械部件（如输送机、旋转轴、压力机等）附近作业时，应确保系统任何部位的组件均未松动。

9. 检验规范：出厂发货前，所有 MSA 产品均在受控条件下进行检验和测试。如将设备应用于恶劣的环境和工作条件中，则用户对设备的检查、维护和存储更加重要。

每次使用前，用户应按照说明和标签上的提示仔细检查设备。根据本节说明检查设备的运作是否正常，并查看设备有无存在过度磨损、损坏、变更或丢失零部件的情况。定期检查的频率取决于环境条件的恶劣程度及设备的使用频率，但至少每 6 个月应由安全检查员检查一次。检查结果必须记录在此用户说明尾页提供的检查表中。产品检查表上的相应月份和年份也必须用钢印永久标记，请勿损坏卷扬机外壳。

⚠ 注意

在需要借助测试负载检查任何卷扬机功能时，不得使用人员作为负载。确保卷扬机下方不存在任何障碍物。每次使用前，均应检查卷扬机功能。

(1) 检查绳索的放出和收回：将卷扬机安装到适当的锚点连接件（如 Workman 三脚架）上，以便使用摇柄进行

操作。拉住卷扬机绳索的同时，逆时针转动摇柄，将绳索放出。然后，顺时针转动摇柄，检查绳索收回是否正常。如出现咔哒声则表明绳索收回功能正常。如未发出咔哒声，请勿使用产品并将其退回 MSA。在绳索放出和收回的过程中，检查绕线导向机构能否将绳索紧紧地缠绕在轮毂上。

(2) 检查手柄：检查手柄上是否有裂缝、弯折和腐蚀。如出现上述任一情况，请勿使用产品，并联系 MSA 更换手柄。

(3) 检查标记：检查所有标签是否均存在。确保所有标签字迹是否清晰（未损坏）可辨。检查检验表日期是否在过去 6 个月内。如距上一次检验已超过 6 个月，请勿使用产品，应将其交给安全检查员，由检查员根据本用户说明中的指导进行检验。

(4) 检查螺栓和螺母：用手指检查外壳上的所有螺栓和螺母，确保其已拧紧。如有松脱，请将其拧紧。检查是否有任何螺栓、螺母或其他零部件丢失，或者以任何方式被不当替换或改动。

(5) 检查安装支架、外壳和轮毂：仔细检查外壳、轮毂和安装支架上是否存在裂缝、凹痕、变形或破裂现象。对功能没有影响的细微凹痕无需用户处理。如发现明显裂缝，请返厂修理。如不慎将设备掉落在地，可能会导致内部组件出现一定变形。检查压板和轮毂有无磨擦现象。如有磨擦，会表现为轮毂法兰处磨损，用户在转动摇柄时也会感到不均匀的阻力。如出现有碍于卷扬机正常操作的任何损坏迹象，请立即停用设备。对功能没有影响的细微凹痕或变形无需用户处理。

(6) 检查挂钩：检查旋转钩的所有零部件是否存在改变、变形、裂缝、深划痕、凹痕或切口。另外，检查挂钩是否受到高温炙烤，高温可能会影响挂钩的强度。检查是否存在腐蚀或过度磨损现象，如对检查到的磨损和 / 或腐蚀会否影响强度或功能存有任何疑问，请停止使用产品。检查钩体能否绕着用于将其与钩眼连接的螺栓自由转动。

(7) 检查配件：检查两个套圈和套管。如在用户设备上存在用于连接挂钩的接合处，接合处必须连接紧密，不得存在任何打圈或松动的端头。

(8) 检查滑轮：检查滑轮的所有零部件是否存在改变、变形、裂缝、深划痕、凹痕或切口。检查是否存在腐蚀或过度磨损现象，如对检查到的磨损和 / 或腐蚀会否影响强度或功能存有任何疑问，请停止使用产品。

(9) 检查连接锁：检查连接锁的所有零部件是否存在改变、变形、裂缝、深划痕、凹痕或切口。检查是否存在腐蚀或过度磨损现象，如对检查到的磨损和 / 或腐蚀会否影响强度或功能存有任何疑问，请停止使用产品。

警告

全身式安全带是唯一一种可用于防坠系统的身体固定装置。

防坠系统只能通过防坠附件标签“A”连接到安全带的后侧 D 形环和前侧 D 形环。这些连接点也可用于连接救援系统。请勿使用臀部 D 形环进行防坠或攀爬保护。安全带的臀部 D 形环只能用于连接作业定位系统 (EN 358)，不得用于连接防坠系统或用于攀爬保护。

每次使用前，均需对 MSA Workman 卷扬机进行全面检查，以确定设备是否仍然可用。对 Workman 卷扬机进行全方位检查，查验是否存在严重磨损、元件丢失或破损、腐蚀或者其他损坏现象。检查标签是否缺失或字迹模糊；是否有任何组件功能异常、安装不当或改动。如在检查过程中发现不安全因素，则需得到安全检查员的书面确认后方可使用 MSA Workman 卷扬机。此外，每 6 个月就需要由经使用国现行法律授权的安全检查员对 MSA 工具卷扬机做一次检查。请参阅检查规则。

请勿更改或尝试修理 MSA Workman 卷扬机。只有 MSA 或取得 MSA 书面授权的相关方才能修理 MSA Workman 卷扬机。系统使用不应超出其限制范围，亦不得将其用于原设计目的以外的任何用途。

挂钩和连接锁不得连在一起。切勿将绳索打结。请勿将两个挂钩连接到一个 D 形环上。请勿凭感觉或声音验证挂钩的连接是否正确。应始终目视检查连接正确与否。确保在使用前闭合锁扣和挂钩。

防止外壳凹陷或变形。请勿使设备从高处掉落。应妥善放置。使用时，请保护绳索，不要使其碰到尖角和锐利的边缘。防止绕线松垮以及拉得过紧，造成绳索扭结。请勿使异物进入外壳。请勿使绳索勾住或挤压过度。

为保护用户安全，如 MSA Workman 卷扬机系在原目的地以外转售，则经销商必须以 MSA Workman 卷扬机使用国的本国语言，提供使用说明及其他相关信息，为产品的使用、维护、定期检查和修理提供便利。

如不遵守这些警告或使用不当，可能会造成严重的人身伤害或死亡。

维护和存储

请严格遵守本节介绍的清洁说明，以防止对产品所用材料造成不利影响。

定期用干净、微湿而非潮湿的布擦拭灰尘或污垢，以防止造成污染或模糊标签上的字迹。请勿使用溶剂清洗

外壳，因为溶剂可能会降低标签的粘性。在将绳索慢慢卷回设备上时，用干净的干布将绳索擦干。如有必要，在此操作后对绳索进行润滑。

只能对整洁、干燥的绳索进行润滑，因为润滑剂只有接触到金属后才会产生效果。如检查发现有污物堆积，应使用刷毛致密的纤维刷（非钢丝刷）刷去污物。请勿使用汽油或煤油溶剂。特别要注意清洁绳索钩绳股间的缝隙，以方便润滑剂渗入绳芯并将缝隙填满，从而将湿气和杂质颗粒阻挡在外。使用防潮性能好、耐腐蚀的低粘度现场润滑剂。可用刷子刷或用浸有润滑剂的布擦拭。用干净的干布将多余的润滑剂擦掉。

无法指定进行润滑的时间间隔。不过，绳索应始终保持良好的润滑状态，通过定期检查可确定需要加以润滑的时间。在腐蚀性环境中，绳索的清洁和润滑应更加频繁。如卷扬机将长时间停用，在存放卷扬机之前，应对卷扬机进行清洁和润滑。

注意：卷扬机的润滑范围仅限钢丝绳和挂钩。卷扬机的缠绕机构几乎无需维护。所有轴承均为永久润滑。卷扬机中不含可由用户修理的零部件。

损坏或需要维修的设备必须标记为“不可用”，并且立即停止使用。纠正性维护（清洁除外）和维修（如更换元件）必须由 MSA 执行。请勿尝试进行现场维修。

MSA Workman 卷扬机应存放在阴凉、干燥、清洁的地方，同时避免阳光直射。避免存放在高温、潮湿、阳光直射、多油和存在化学品（或蒸汽）或者其他有腐蚀性元素的环境中。损坏或需要维护的设备不应与可用设备储存在同一区域内。在储存之前，应对严重脏污、潮湿或受污染的设备进行适当维护（例如干燥和清洁）。在使用已存放了很长时间的设备之前，应该由具备资质的合格人员进行正式检查。

运输 MSA Workman 卷扬机时，请妥善包装，以防止其出现切口、受潮、受到化学品及其蒸汽污染、遭遇极端温度和紫外线照射。

组件和附件清单

项目号	零件号	描述	手册中的图号
1	10102002	MSA Workman 三脚架	42
2	506222	滑轮	41
3	SRCC643P	连接锁	40