Workman® Harness and Lanyard
User Instructions

⚠ WARNING

National Standards, state and federal laws require the user to 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, 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 (China) Safety company, LTD
Address:No.8, Rui En Lane, Xinpu Road, Suzhou Industrial Park, Jiangsu
Tel: 0512-62898880 **Fax: 0512-62952853**
After sales: 4006-090-888 **Website address: www. MSAsafety. com**

Workman® 沃克曼安全带和安全绳组件

使用说明书

⚠ 警 告

根据国家标准和相关法律规定，使用者须经培训后方可使用本产品。请将本手册纳入针对使用者所从事的职业而设计的安全培训计划。必须在使用者使用本产品之前向其提供本使用说明，并妥善保管本使用说明，以备使用者随时查阅。使用者必须阅读、理解（或能阐明）并遵循本产品及其配套产品附带的所有使用说明、标签、标记和警告，**否则可能会导致重伤或死亡。**

梅思安（中国）安全设备有限公司
地址：江苏省苏州市工业园区兴浦路瑞恩巷8号 **电话：**0512-62898880
传真：0512-62952853 **售后热线：**4006-090-888
公司网址：www.MSAsafety.com

Rev.2 Prnt. Spec. 10000005389(R) Mat. 10107243
Doc. 10107243

HARNESSES AND LANYARD ASSEMBLIES ARE CATEGORISED BY STANDARDS AS FOLLOWS:

FULL BODY HARNESSES

Fall Arrest Harness: A Fall Arrest Harness is to be used in conjunction with a lanyard assembly attached to a suitable anchorage point or static line, in situations where there is risk of a free fall.

A Fall Arrest Harness is a single assembly and must not be separable into two or more parts without damaging the assembly and rendering all parts unusable.

Harnesses need to be capable of adjustment to fit the wearer.

Confined Space Fall Arrest Harness: This harness is to be used for work in confined spaces wherever there is a risk of free fall, which could occur whilst travelling vertically.

LANYARD ASSEMBLIES

A Lanyard Assembly is to be used to connect a fall arrest harness, including a confined space fall arrest harness (if required) to a suitable anchorage point or static line to reduce forces associated in a fall to no greater than 6kN.

The assembly is made up of a lanyard, which may be in the form of synthetic fiber rope or webbing, or steel wire rope, and a personal energy absorber.

The metal parts of harness and lanyard have anti-explosion treatment, which will not have sparking to cause explosion. The webbing of harness and lanyard do not have anti-explosion treatment(This is just suitable for GB Workman EX harness and lanyard and unsuitable for common harness and lanyard.)

安全带和安全绳按GB标准归类如下：

全身式安全带

- **坠落制动安全带：**坠落制动安全带在有坠落风险的场所被用于和安全绳组件组合在一起连接到合适的锚点或静力绳上。

  坠落制动安全带是一个单一的组件并且它不能分割成两个或者更多的部分，分成多个部分会破坏这个组件并且使得所有的零件不可用。

  安全带需要可以调节大小以适用于不同体型的穿戴者。
- **区域限制安全带：**这种安全带是用以限制作业人员的活动范围，避免其到达可能发生坠落区域的安全带。
- **围杆作业安全带：**通过围绕在固定构造物上的绳或带将人体绑定在固定构造物附近，使作业人员的双手可以进行其他操作的安全带。

安全绳组件

用于将一个坠落制动安全带（包括密闭空间坠落保护安全带--如果需要）连接到一个适当的锚点或者静力绳，以降低坠落时所产生的力而不超过6KN。

这个组件由系索和一个吸震包组成，系索可以是合成纤维绳、织带、或者钢缆绳形式的。

安全带和安全绳上面的金属件具有防爆性能，这些金属件在特殊环境下如石油，天然气，不会引起爆炸。安全带和安全绳上面的织带不具有防爆性能。（仅适用于防爆安全带和安全绳，不适用于普通类安全带和安全绳）

The lanyard assembly shall be as short as practicable and the working slack length is not more than 2.0m.

When estimating total, free fall distance and clearance distances required, the anchorage point and extension of the energy absorber needs to be taken into account. It is recommended that structural anchorage points for connection of equipment always be above the user of the equipment.

POLE STRAPS

A Pole Strap is to be used to support a worker on a pole by attachment to the 'D' rings located at the hips and identified as pole strap attachment points on a lineworker's harness. Pole straps are designed so that they constantly remain under tension once in the working position.

CONDITIONS OF USE

If this product is not used or stored correctly, or additions or alterations are made to them, the effectiveness of these devices may be considerably reduced.

⚠ WARNING

Alterations, additions or repairs not preformed by MSA shall negate any warranty. Non anti-explosion product can't be used in explosive atmosphere.

⚠ WARNING

This product must be immediately removed from service and either returned to the manufacturer or authorized manufacturers agent for inspection, if appropriate, or destroyed if a fall has been sustained.

安全绳组件在适用的前提下尽可能的短，并且工作时松弛工作长度不能超过2米。

当计算总的坠落距离，自由坠落距离和安全空间时，锚点长度和吸震包的展开长度需要被计算进去。推荐将锚点一直保持在设备使用者的上方。

围杆带

围杆带是通过连接到架线工穿戴的安全带的臀部D型环上而支撑架线工在柱子上工作。围杆带被设计成一旦进入工作状态时能保持稳定的张力。

使用条件

如果产品使用或者储存不适当，或者其他的附加或改装，产品的效能会大大的减弱。

⚠ 警 告

如有未经MSA允许的改装、附加或者修理将会失去任何产品质保。非防爆产品，不可用于防爆环境。

⚠ 警 告

如果产品经受了一次坠落的冲击，应立即停止使用或者送回制造商或授权的代理商进行检验， 需要时，直接销毁。

任何地方如果表现有过度的磨损或者老化，那么就必须要销毁该产品。每次使用前必须对设备进行检查。不遵守正确的检查和使用程序会造成严重的伤害或者死亡。

TRAINING

This is the responsibility of the purchaser to ensure that product users are made familiar with these User Instructions and trained by a competent person. Training must be conducted without undue exposure of the trainee to hazards. The effectiveness of training should be periodically assessed (at least annually) and the need for more training or retraining determined. MSA offers training programs. Contact MSA for training information.

To be able to rescue a person in case of a fall or another accident as quickly as possible,an emergency plan must exist considering the rescue measures for any emergencies possibly occurring during the rescue.

USER INSTRUCTIONS

⚠ WARNING

You must read and understand, or have the following instructions explained to you. Inspect equipment before using.

Donning the harness

Step 1. Lift the harness by the back D-ring and straighten twisted straps. (See figure 1)
Step 2. With sub-pelvic straps behind you, hang the harness on your shoulders. (See figure 2)
Step 3. Adjust sliding back D-ring (present on all harness) to center, between shoulder blades. (See figure 3)
Step 4. Buckle the thigh straps. Reach between legs and wrap appropriate strap around each thigh. Ensure that straps are not twisted or crossed. Adjust for a snug comfortable fit and fasten the buckle. (See figure 4, figure 5 and figure 6)
Step 5. Connect chest strap (if present), adjust for a snug comfortable fit. (See figure 7)
Step 6. Connect and fasten the waist belt (if present).

培训

买方需要确保产品的使用者熟悉使用说明书并且经过有资格的相关人员的培训。培训必须让受训者远离危险。培训的效力需要定期进行评估（至少每年进行一次），以决定是否需要进行更多的培训或者再培训。MSA提供培训方案，请联系我们索取培训信息。

为了在发生摔伤或其它事故时能尽快抢救出事的人员,必须制定一份紧急事故计划,其中应考虑并包含所有对在工作中可能发生的紧急事故的营救措施。

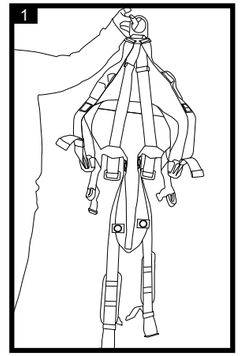
使用说明

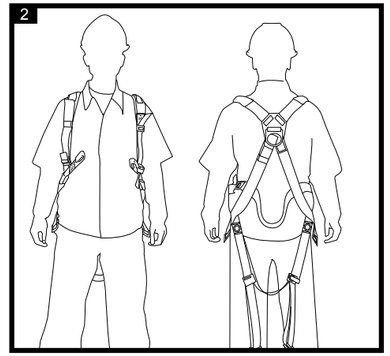
⚠ 警 告

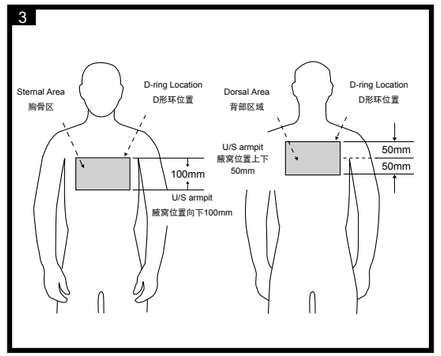
您必须阅读并理解说明书，或者遵循以下说明。使用前必须对设备进行检查。

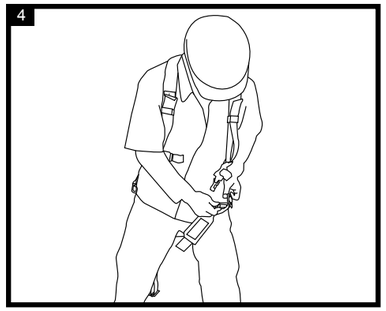
安全带穿戴说明

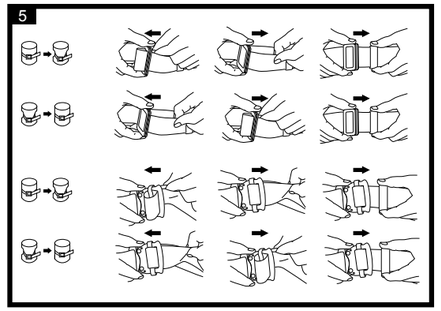
步骤1：抓住D型环提起，并理顺扭曲的带子。（见图1）
步骤2：将包裹下部盆骨的带子放于身后，提起安全带置于肩膀上。（见图2）
步骤3：调节滑动的背部D型环置于背部肩胛骨中间的位置。（见图3）
步骤4：锁扣腿带。将带子从大腿股部以适当的力绕着两大腿,确保带子没有扭曲或交叉。调节到感觉紧贴舒适时锁住扣件。（见图4，图5和图6）
步骤5：连接胸带（如果有），调节至舒适的位置。（见图7）
步骤6：连接扣紧腰带（如果有）。

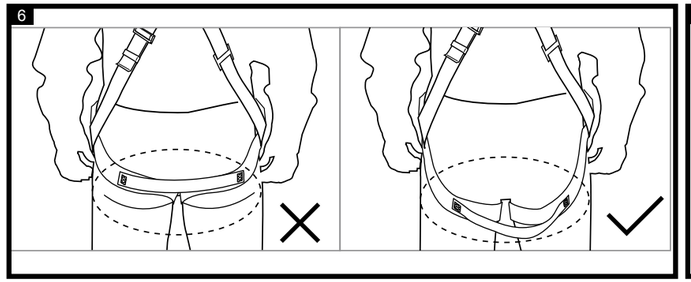


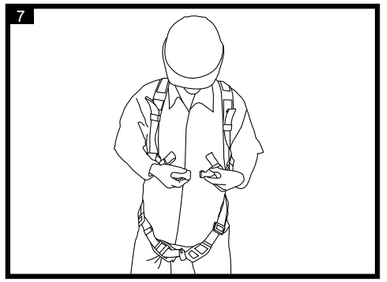






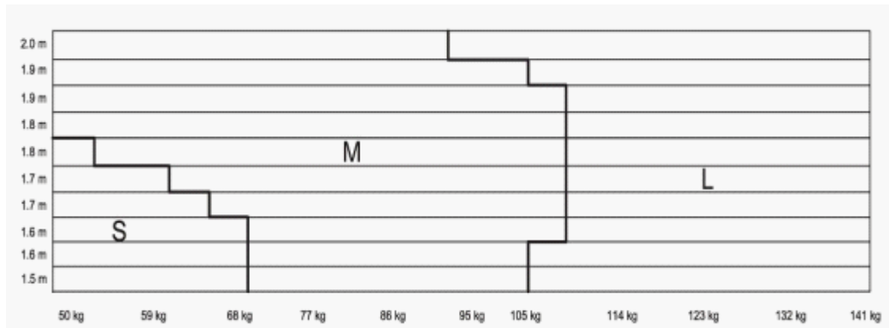






Selection of the size

尺码的选择



These following instructions must be strictly adhered to:

1. Do not attempt to work at heights if you are feeling unwell or are susceptible to giddiness.
2. The harness is designed for one user whose weight, including clothing, tools, and other user-borne objects is less than the capacity shown on product label. Users with muscular, skeletal, or other physical conditions that could reduce the ability to withstand fall-arrest shock loads or prolonged suspension should consult a physician before using. Pregnant women and minors must never use the harness.
3. Before putting on, visually check Harness and Lanyard Assembly for defects. Do not use a harness with broken stitches in the load indicator.
4. Follow donning instructions. Be aware that if your connection point to the harness cannot be visually seen by the wearer then it should be attached prior to donning harness or checked for security by a second person.
5. Having reached your position select a suitable anchorage point (in accordance with EN795) which is capable of withstanding at least 15kN of force without permanent distortion and in the event of a fall. The anchorage point should be as high as possible above you in a vertical plane to reduce the fall distance and the potential to pendulum should you fall. Consideration must also be given to the surrounding area – avoid using an anchorage point that would permit you to strike or swing into obstructions before a fall is safely stopped.

⚠ ANCHORAGE WARNING

Before making your connection to an anchorage point, always ensure that it is perfectly sound and structural of sustaining shock loads of at least 15kN without distortion in the event of a fall.

Pendulum (Swing) Falls: Swing falls can occur when the system is not anchored directly above the user. The force of striking an object in a pendular motion can cause serious injury. Always minimize swing falls by working as directly below the anchorage point as possible. (See figure 8)

以下内容必须遵循：

1. 如果您感觉不适或者易于眩晕请勿尝试高空作业。
2. 安全带设计用于一个使用者，包括衣服、工具以及使用者随身携带的其它物品及使用者体重的总重量不超过产品标签上标识的数值。
   如果使用者有任何肌肉，骨骼或其它身体不适，这些情况会降低一个人在坠落制动承受冲击载荷或者长期悬挂的能力，故有上述情况应当在使用前咨询医生。孕妇和未成年人决不可使用本安全带。
3. 穿戴前先对安全带和安全绳组件进行目检，看是否有瑕疵。不可使用负载指示打开的安全带。
4. 根据穿戴说明，注意如果穿戴者无法看到连接到安全带上的连接点，那么应该在穿戴前先行连接好或者由其他人进行安全检查。
5. 选择合适的锚点(按照EN795标准)，至少能承受15KN的力而没有永久变形并且承受住坠落冲击。锚点必须尽可能高的安装于您的正上方以减少坠落距离和潜在的坠落摆动。必须考虑到周围的环境，避免使用可能导致你在安全坠落过程中会碰到障碍物的锚点。

⚠ 锚点警告

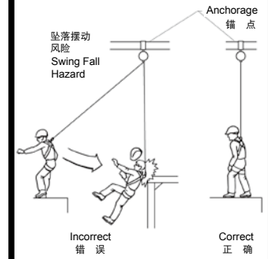
在您连接到一个锚点之前，一定要确保锚点完全能够至少承受15KN的坠落冲击力而没有变形的。

坠落摆动：坠落摆动会发生在锚点不在使用者正上方时。摆动时撞到障碍物会产生很强的冲击力，可能会造成严重的伤害。尽可能的在锚点正下方工作以使得坠落摆动最小化。（见图8）

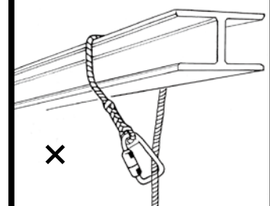
Swing fall hazards must be minimized by anchoring directly above the user's work space.

6. **NEVER MAKE YOUR ANCHORAGE CONNECTION BELOW THE LEVEL OF THE ATTACHMENT POINT ON YOUR HARNESS.**
7. In making your connections to the anchorage point always observe the following:
   a) That the screw ferrule on a screwgate karabiner is fully screwed up into the locked position.
   b) If using an automatic locking karabiner, make sure the revolving ferrule has moved into the locked position.
   c) The latch or gate on either double acting latch snap hooks or karabiners is in a locked and correct position.
8. Where a much larger working area is required from a single anchorage point than that permitted by the normal Lanyard Assembly then Fall Arrest Harness should be used in conjunction with either Retractable Cable Devices or Self-Locking Mobile Fall arrest Devices.
9. When using a Harness in conjunction with a Retractable Cable Device or Inertia Reel Lifeline Block , connect it to a Fall Arrest attachment point via the Swivel Hook at the free end of the Cable. This also ensures that the Cable does not get in your way whilst you are working.
10. For attaching a Self-Locking Mobile Fall Arrest Device use as a minimum a double action snap hook or karabiner to make the connection via the rear 'D' ring, or alternatively, the frontal Fall Arrest attachment point. At no time must the connector between the harness and device exceed 300mm.
11. The following methods must be used to make your connection to the anchorage point.
    a) Not to tie off over sharp edges or snap hook onto the lanyard. See figure 9
    b) Not to tie off where Hook latch will not fully close. See figure 10
    c) Not to knot lanyard in any manner. Avoid sharp edges. See figure 11

8



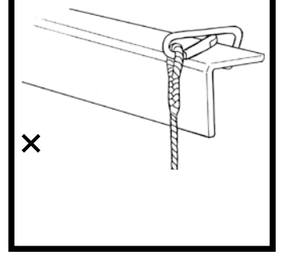
9



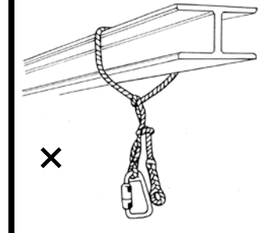
锚点置于使用者工作地点的正上方以使得坠落摆动最小化。

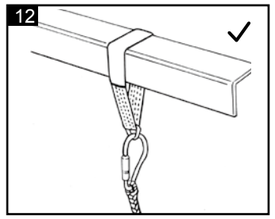
6. **永远不要将你的锚点置于你的安全带连接点的下方。**
7. 确保连接器连接到锚点遵循如下内容：
   a) 螺纹连接锁上的螺丝必须完全拧紧到锁定位置。
   b) 如果使用的是自锁式连接锁需要确保金属锁扣旋转在锁定位置。
   c) 自锁式双保险挂钩或者连接锁上的两块锁片需要确保锁定并且在正确位置。
8. 当需要以单个锚点为中心的工作范围比普通的安全绳组件所允许的范围更大时，坠落制动安全带需要与速降自锁装置或者移动自锁防坠器一起使用。
9. 当安全带和速降自锁装置一起使用时，通过缆绳末端旋转式挂钩连接到坠落制动连接点上。这样也确保了当你在工作的时候缆绳不会阻碍你。
10. 使用至少一个自锁式双保险挂钩或者连接锁经由背部D型环或者前面的坠落制动连接点连接到移动自锁防坠器上。在任何时候安全带和设备之间的连接器不得超过300毫米。
11. 必须采用下列的连接方法连接到锚点上:
    a) 不要直接绕在锋利的边缘上或者挂钩直接钩在安全绳上。见图9
    b) 不要绕在让挂钩的锁扣不能完全到位的任何地方。见图10
    c) 不要有任何形式的打结，并且避开锋利的边缘。见图11

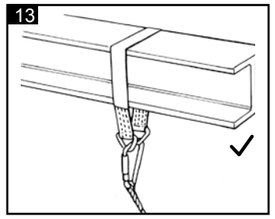
10

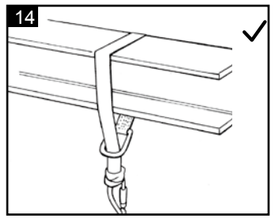


11

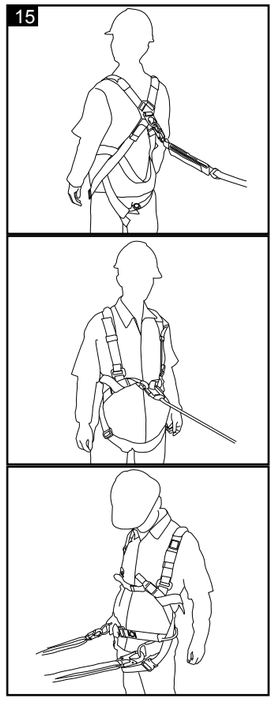








12. Figures 12, 13 and 14 illustrate the correct method to follow in making your connection to a structural anchor point when the gate opening of your safety hook is of insufficient size to allow direct connect around the structure.
13. The connection between the harness and the devices, please refer to figure 15. A full body harness is the only acceptable body holding device that can be used in a fall arrest system. A fall arrest system (EN353-1,EN353-2,EN355, EN360), must only be connected to the harness back D-ring or front attachment loops only with the fall arrest attachment tag ”A” or “A/2”(must use together as pair).These points can also be used for connecting a rescue system(EN1496).
    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).
    Always use both hip D-rings together,for work positioning applications. And a separate fall arrest system must be used. Adjust work position lanyard so that the anchorage point is maintained at or above waist level. Ensure the lanyard is kept taut and movement is restrained to a maximum distance of 0.6 meters.
14. When using a Harness in conjunction with a self adjusting Pole Strap (for work on poles or structures where the harness is continuously loaded) it should be noted that they are not intended for situations permitting a drop of more than 600mm.
    At working position, pass Pole Strap around pole and connect back to harness by connecting Snap Hooks at end of Pole Strap to the harness side ‘D’ rings.
    To adjust to a comfortable working position use adjuster to either slacken off or draw up on the Pole Strap.



12. 图12、13、14阐明了当您的安全挂钩不足以直接绕在构件上时而连接到额外的构件锚点上的正确的方法。
13. 安全带与挂点装置的连接方法请参考图15。全身式安全带是用于坠落制动系统中唯一可被接受的支撑身体的装置. 坠落制动系统必须连接到安全带的背部D型环或标有”A”或”A/2”(必须成对使用)的前部连接吊环。这些连接点可用于连接救援系统。臀部D型环不能用于坠落制动和攀爬保护，只能用于连接工作定位系统(EN 358)。工作定位应用中，D型环要总是成对使用。调整工作定位安全绳以使锚点位于或高于腰部水平面。确保工作定位安全绳保持张紧，并且移动范围限制在0.6m以内。
14. 当将安全带和一个可调式围杆带（使用围杆带是由于要在柱子或者架构上工作，且安全带要受到持续不断的负载）结合使用时，它将不允许有超过600mm的跌落距离。
    在工作地点，将围杆带绕在柱子上并且将围杆带两端的挂钩连接到安全带的侧面D型环上去。
    使用围杆带上的调节扣进行松紧调节，以调节到一个舒适的工作状态。

15. CONFINED SPACE FALL ARREST HARNESSES

Confined Space Fall Arrest Harnesses are intended for use by persons working in confined spaces where there is a risk, however slight, of potential free fall and or being overcome by gases, fumes or vapours. Confined Space Fall Arrest Harnesses come complete with a Spreader Bar as a system of safety. The Spreader Bar is attached via the snap hooks to the nominated and labelled Retrieval attachment points on the shoulder straps of the harness.

The anchorage (rescue line) attaches to the ‘D’ ring on the spreader bar.

When work is required to be carried out in vats, tanks, sewers or other confined spaces, before entry is made pre-entry checks for gases, fumes, or explosive vapours and equipment requirements should be carried out. Confined Space Fall Arrest Harnesses are also intended for workers in coal bunkers, slack hoppers, grain silos and the like where there is the danger of suffocating by engulfment in the material on which they are standing.

⚠ CHEMICAL ATTACK WARNING

If any part of an assembly is to be exposed to chemicals, e.g. cleaning materials or hazardous atmospheres, consult the manufacturer to determine whether the part is suitable for continued use.

15. 密闭空间坠落制动安全带

密闭空间坠落制动安全带是被用于存在危险的密闭空间里的安全设备，无论这些危险多轻微，只要存在潜在的自由坠落或者被气体、烟雾和蒸汽熏倒的风险。密闭空间坠落制动安全带与舒展杆配套使用组成一个安全的系统。舒展杆通过挂钩连接到安全带的肩带上标签标明“Retrieval”的连接点上。

锚点（救生绳）连接到舒展杆上的D型环上。

如果所要做的工作是要在大型容器、槽罐、污水管或者其他密闭空间进行时，在进入之前需要预先检查是否存在气体、烟雾或者爆炸性蒸汽，按照设备的要求执行。

密闭空间坠落制动安全带同时用于煤矿井、仓库等场所，使用者在这些场所有被储存物吞没引起窒息的危险。

⚠ 化学侵蚀警告

如果组件中的任何零件暴露在化学物质，如清洁原料或者有害环境中，请咨询制造商判定该零件是否可继续使用。

16. LANYARD ASSEMBLIES

Lanyard Assemblies are intended for use by persons that are exposed to potential free fall.
The working slack length on Lanyard assemblies must never exceed 2.0m.
Lanyard Assemblies and Personal Energy Absorbers are designed to reduce shock loads in Fall Arrest situations.
The Personal Energy Absorber will extend in length due to webbing or stitching tearing and will permanently deform once subject to impact loads, as would be the case in arresting a fall. Should any sign of deformation or webbing tear out from the Personal Energy Absorber occur the device shall be immediately removed from service and marked as 'UNUSABLE' until destroyed.

⚠ WARNING

If the Shock Absorbing Lanyard has been subjected to fall arrest, impact forces, shows signs of deformation or webbing tear out it must be immediately removed from service and marked as 'UNUSABLE' until destroyed.

⚠ SHOCK ABSORBING LANYARD WARNING

If the red 'REMOVE FROM SERVICE' label has been exposed, immediately remove from service and mark as un-usable until destroyed.

The Workman Shock Absorbing Twin Lanyard range is supplied with a velcro attach Lanyard Stowage Point. The Lanyard Stowage Point attaches to either the left or right shoulder strap of the users harness and is the only place on the harness that the unanchored lanyard tail shall be stowed when not in use.

⚠ TWIN-TAIL LANYARDS WARNING

Do not under any circumstance attach the free Lanyard tail to any other part of the harness other than the Lanyard Stowage Point. .Back-hooking of the free tail to any point on the wearer, the wearer's equipment or the lanyard below the bifurcation other than the Lanyard Stowage Point is prohibited.

16. 安全绳组件

安全绳组件是给那些暴露在有潜在自由坠落危险的人使用的。
安全绳组件的有效长度必须不能超过2米。
安全绳组件和个人吸震包是设计用于减少坠落制动时产生的冲击载荷的。个人吸震包打开一段长度是因为织带或者针脚的撕裂，一旦受到冲击载荷后将会形成这样的永久变形，这些会发生在坠落制动的时候。如果个人吸震包产生任何变形标记或者织带撕裂就必须马上停止使用并且标上"不可用"直到销毁。

⚠ 警 告

如果安全绳已经经受过一次坠落制动力的冲击，表现为变形或者织带撕裂，请立即停止使用并且标明"不可用"直至销毁。

⚠ 安全绳警告

如果有红色的"停止使用"的标签，请立即停止使用并做不可用标记直至销毁。

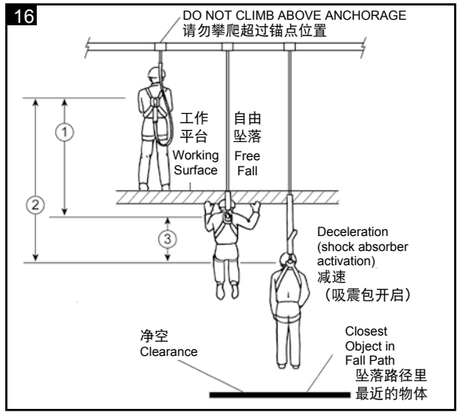
Be aware that when securing a harness via a lanyard to an anchorage point, the connection should be at a level which will result in the minimum free-fall and the least total fall distance consistent with the wearer's ability to carry out work tasks.

Consideration needs to be given to the following when using Lanyard Assemblies (See figure 16)：

1. Free fall distance.
2. Total fall distance. The sum of the free fall distance and deceleration distance.
3. Total and Free fall distance including extension of personal energy absorber.
   Consideration must be given to the necessary minimum clearance (Clearance=2L+1.75m+1m, L=maximum lanyard length) below the user to prevent a collision with the structure or the ground.

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

16



当将安全带通过安全绳连接到锚点上时，连接水平高度应该保证最低的自由坠落和最小的总坠落距离，同时需要考虑到能满足穿戴者可执行工作任务。

当使用安全绳组件时，需要考虑以下因素（见图16）：

1. 自由坠落距离。
2. 总的坠落距离，自由坠落距离与减速距离的总和。
3. 总的坠落距离和自由坠落距离包含吸震包的展开长度。
   为防止使用者与物体或地面发生碰撞，应考虑其下方必要的净空(净空=2L+1.75m+1m, L=安全绳的最大长度)。

17. 如果产品在原来的目的地国家以外的地方被再出售，转销商应用产品将被使用的国家的语言提供说明书，更多的相关使用信息，保养和定期检查，这对用户的安全是极为重要的。

INSPECTION OF HARNESSES AND LANYARD ASSEMBLIES

All MSA Harnesses and Lanyard Assemblies are made to comply with the exacting strength requirement of GB6095, EN354, EN355, EN358, EN361, and only the highest quality materials are used in manufacture, whilst the whole process of manufacture is conducted under an ISO 9001 Quality System.

To ensure these products are maintained in safe working order, the following procedures must be adhered to.

Thoroughly inspect each item of equipment before and after each use for wear, deterioration or damage. As per AS/NZS 1891.4, the equipment shall be examined by a competent person, other than the user, and a record kept of this examination on an appropriate Inspection Record Card. See Inspection / Record Card at rear of this manual.

Equipment found to be damaged or suspect shall not be returned to service until the necessary repairs have been effected, if such can be carried out.

WHAT TO LOOK FOR WHEN INSPECTING MAN-MADE FIBRE WEBBINGS

The following information details the principal causes of deterioration in man-made fibre webbings and indicates the signs by which they can be recognised.

GENERAL SURFACE ABRASION

This occurs due to contact with abrasive surfaces and is easily recognisable as the webbing fluffs up along the surface. This often occurs in normal use and is harmless if not too extensive. Man-made fibre webbings have very good abrasion resistance.

安全带及安全绳组件的检验

所有的MSA的安全带及安全绳组件是严格按照GB6095、EN354、EN355、EN358、EN361标准中的强度要求制作的，采用了最高质量的材料制作，同时整个的制造工艺按照ISO 9001质量体系进行。

为了确保这些产品始终保持安全的工作状态，以下步骤需要严格执行。

在使用前和使用后，均彻底的检查设备的每个零部件，确认是否有磨损、劣化或者损坏。设备需要由具备资格的人来进行仔细检查，而不是使用者。同时检验记录需要被记录在一个恰当的检验卡片上。见该说明书后面的检验记录卡片。

发现设备有损坏或有可疑，应停止使用，如可修理，采取必要的修理后方可投入使用。

当检验人造纤维织带时，需要查看的事项：

以下信息列举了人造纤维织带的劣化原因，同时说明了辨识方法。

一般的表面磨损

这是由于与粗糙表面接触产生的，并因为织带表面的绒毛会竖起而很容易识别。这在正常使用时经常发生，且如果不是大面积的话是无害的。人造纤维织带有很好的耐磨性。

ABRASION

Usually caused as a result of the webbing being passed over a sharp edge whilst under tension. Any reduction in the width and thickness or severe damage to the weave pattern shall be cause for rejection. Slight surface damage and the occasional torn yarn may be considered acceptable.

CUTS, NICKS, BURNS ETC.

These, if found anywhere on a Harness or Lanyard Assembly, are to be considered as potentially dangerous and must lead to immediate tagging out of service and destruction of equipment.

CHEMICAL ATTACK

Usually indicated by discolouration and local weakening or softening of the webbing. The surface fibres, in extreme circumstances, can be rubbed off as a powder. If found, tag out of service and destroy.

HEAT

Webbings affected by heat become brown and brittle and in extreme cases, break when flexed. If found, tag out of service and destroy.

INSPECTION OF WEBBINGS SHOULD BE CARRIED OUT AS FOLLOWS

Lay out product on work bench – major damage or wear will immediately be apparent. For detailed inspection, take a section of the webbing and form an arch of approximately 100mm between your hands. With the outside of the webbing being raised, the resulting surface tension will highlight any broken fibres, stitches, cuts, etc. Pass the webbing through your hands until the whole of the product has been visually inspected, It is a good idea to mark off the separate straps with chalk to indicate those inspected and to avoid the possibility of missing one out.

磨伤

通常是由于织带绕过锋利的边角并受到张力作用。任何宽度和厚度的减少或者编织花样的严重损坏都要被弃用。轻微的表面损坏和很小的纱的撕裂可以考虑被接受。

切割口、裂口、烧伤等

如果安全带或安全绳组件上任何地方发现有这些缺陷，将视为潜在的危险，必须马上停止使用，并进行设备销毁。

化学腐蚀

通常表现为织带褪色、局部变弱或变软。在极端的环境下，纤维的表面能够擦出粉状物。如果发现有这个现象，马上停止使用，并进行销毁。

烫伤

织带在受到烫伤后会变成褐色且变脆，在极端情况下，弯曲时会断裂。如果发现有这个现象，马上停止使用，并进行销毁。

织带检验时需要执行下列步骤

在工作台上展开产品，较大的损坏或者磨损将会立即显现。当详细进行检查时，挑一段织带拿在手上让其成拱形，长度约为100mm。突起织带的外侧以产生表面张力，让纤维、针线的断裂、割伤等更加的明显。继续检查其他部分的织带直到目检了整个产品。建议对不同的带子做记号以避免可能的遗漏。

INSPECTION OF MAN-MADE FIBRE ROPES

The following information details the principal causes of deterioration in man-made fibre ropes and indicates the signs by which they can be recognised.

ABRASION WARNING

Attachment lines, Lanyards etc., can be damaged and weakened by contact with sharp edges or abrasive surfaces. Always exercise care when working in situations where ropes could be maltreated.

EXTERNAL WEAR

Usually follows from the rope being dragged over rough surfaces and results in a general reduction of the cross section of the strands. In extreme cases, the strands become so worn that the yarns are severed on the outer side. In normal use, minor disarrangement or breakage of the outer fibres along the length of the rope is unavoidable; provided it is not too extensive, this may be considered acceptable.

ABRASION

Generally arises as a result of the rope being passed over a sharp edge whilst under tension. Usually damage manifests itself as broken fibres, yarns or strands. Any significant damage should be cause for the rope to be taken out of service and destroyed.

HOCKLING

Generally indicated by unravelling of the strands of rope. Usually caused by anchoring the loose end of the rope and/or frequent turning by the user in a direction opposite the natural lay of the rope. The end user should inspect the rope before and after each use to see if there are any indications of hockling. If so, the user should twist the rope in the direction of manufactured twist to work the loops back into the natural lay of the rope.

CUTS, NICKS, ETC.

Ropes found to have cuts, nicks, etc., are to be considered as potentially dangerous and are to be taken out of service immediately and destroyed.

人造纤维绳的检查

以下信息列举了人造纤维织绳的劣化原因，同时说明了辨识方法。

磨伤警告

连接绳、安全绳等会被锋利的边角或者研磨面破坏或者磨损。当有上述的工况时，使用须保持特别小心、谨慎。

外部磨损

通常随着绳子在粗糙表面上拖拽，导致绳股的截面减小。在极端情况下，绳股被磨损的厉害产生纱线严重外露。正常使用状态下，沿着绳子长度方向上的外部纤维呈现为少量杂乱或者少量破损是不可避免的，假如不是大面积的，这也许可以接受。

磨损

一般因为绳子绕过锋利的边角同时受到张力作用。绳子的损坏通常体现为纤维、纱线或者绳股的断裂。发现绳子有任何明显的损坏，应立刻停止使用并进行销毁。

松散

一般显现为绳子一股一股松散开来。通常是由于使用者把绳子的一端固定，另一端频繁地沿着绳子自然拧着的反方向扭转。最终用户每次使用前需要检查绳子是否有松散现象。如果有松散现象，用户需要拧这个绳子使得其恢复到以往扭紧的状态。

切割口、裂口等

绳子上如果发现有切割口、裂口等，将视为潜在的危险，并且马上停止使用，并进行设备销毁。

CHEMICAL ATTACK

Usually indicated by a change in colour and local weakening or softening of the section affected so that surface fibres can be rubbed off as powder in extreme cases. If contamination is suspected, the rope must be taken out of service and destroyed.

HEAT

The following are signs that a rope has been subjected to extreme heat – charring, singeing or fusing of the fibres. If any of these are apparent, the rope must be taken out of service and destroyed.

INTER-STRAND WEAR

This occurs following repeated flexing of the rope, more so if wet, and by the ingress of particles of grit. Displays itself by looseness of the strands and the presence of powdered fibre. In extreme cases, the rope must be taken out of service and destroyed.

SUNLIGHT DAMAGE

If belts and harnesses are exposed to intense sunlight they will be affected by ultra violet light. This is detectable by a pronounced fading of the dye colour. In extreme cases items affected must be taken out of service and destroyed.

OVERLOADING

Ropes which have been subjected to heavy loads display the following characteristics: reduction in rope diameter, or, after severe loading, the rope will be unusually rigid. A sure indication that the rope has been overloaded is to check the splice – if it is pulled tight and the thimble is excessively loose, then overloading has most probably occurred in which case, the rope should be taken out of service and destroyed.

Inspection of ropes for the foregoing causes of deterioration should be carried out as follows:

1. Lay out Lanyard Assembly along workbench.
2. Start at one end, working along to the opposite end, rotate the Lanyard Assembly slowly, checking the circumference for defects.
3. Check that splices are sound and that ends are protected with a rubber or plastic sleeve.
4. Ensure thimbles are correctly seated and a tight fit.

化学腐蚀

通常表现为颜色的变化，有一段局部变弱或变软。在极端的环境下，纤维的表面能够擦出粉状物。如果发现有这个现象，马上停止使用，并进行销毁。

烫伤

绳子烫伤通常表现为下述现象-纤维的碳化、轻微烧焦或者融化。如果任何一种情况出现，绳子必须马上停止使用，并进行销毁。

内部磨损

这个现象是由于反复的屈曲绳子，更多的在潮湿和绳子中进入细小的沙粒时发生。呈现为绳股的松开和出现纤维的粉末化。极端情况下，绳子必须马上停止使用并且销毁。

光照损伤

如果带子和安全带是暴露在强烈的阳光下的，他们将会受到紫外线的影响。表现为明显的褪色现象。极端情况下，必须停止使用并且销毁。

过载

已遭受过载的绳子显现为下列特点：绳子直径减小，或者绳子受过重的负载后变得异常的硬。绳子受到过载的确切特征可以通过检查绳子与套圈的接合度来发现，如果绳子拉紧但与套圈贴合却过分的宽松，那么过载很有可能已经发生了。那么绳子需要停止使用并且销毁。

对上述原因导致劣化的绳子， 要按如下措施执行检查:

1. 在工作台上展开纤维绳安全绳组件。
2. 从安全绳组件一端开始，一直到另外一端，慢慢翻转检查是否有缺陷。
3. 检查接合处是否完好，并且末端被一个橡胶或者塑料套管保护着。
4. 确保套圈是在正确的位置并紧密贴合。

WHAT TO LOOK FOR WHEN INSPECTING A HARNESS.

INSPECT WEBBING AS ADVISED

Inspect all machine sewings for broken stitches or worn threads – special attention should be given to the sewings which retain load bearing components, e.g. hooks, 'D'rings, buckles, etc.

Inspect all labels ensuring that they are perfectly legible and adequately secured.

Inspect all metal components

Buckles – check for distortion, sharp edges, burrs, cracks or worn parts. If applicable, ensure moving parts function satisfactorily.

'D' Rings – check for distortion, sharp edges, burrs, cracks or worn parts.

Snap Hooks – check snap action, ensuring the return spring is functioning correctly and that there is no sideways play on the latch in the closed position. Check for distortion, sharp edges, burrs, cracks or worn parts.

Automatic Locking Hooks and Karabiners - check that the trigger opens fully and that it returns itself and automatically revolves the ferrule into the locked position. Check for distortion, sharp edges, burrs, cracks or worn parts. The automatic locking action can become impaired by the ingress of sand, boiler dust, etc. Cleanse by soaking in paraffin. If the automatic locking action is clogged with mud soak in hot water to restore action to normal.

Screwgate Karabiners – check snap action and that screw ferrule functions satisfactorily. Check for distortion, sharp edges, burrs, cracks or worn parts.

FOR PLATED COMPONENTS, CHECK FOR BREAKDOWN IN PROTECTION AND SIGNS OF CORROSION. ANY HARNESS, OR LANYARD ASSEMBLY WITH SUSPECTED FAULTS SHALL BE IMMEDIATELY WITHDRAWN FROM SERVICE AND, IF THE FAULT CANNOT BE RECTIFIED, MUST BE DESTROYED.

当检查安全绳时需要查看些什么

按建议检查织带

对所有的缝纫点的针线断裂或者磨损进行检查，特别注意那些连接会承受冲击力的零件的缝纫点，例如挂钩、D型环、搭扣等。检查所有的标签以确保他们是牢固并且清晰的。

检查所有的金属元件

搭扣 –检查零件的变形、锋利棱角、毛刺、裂纹或者磨损。如果有活动的零件，确保活动的零件功能正常。

D型环 –检查零件的变形、锋利棱角、毛刺、裂纹或者磨损。

安全挂钩 –检查按压的动作，确保回复弹簧的功能正常，不能在锁合的位置时锁片发生侧偏。检查零件的变形、锋利棱角、毛刺、裂纹或者磨损。

自锁挂钩和连接锁 –检查锁扣能够打开完全并且能够自动回复到锁闭位置。检查零件的变形、锋利棱角、毛刺、裂纹或者磨损。自动锁闭功能可能会被进入内部的沙粒、锅炉灰尘等所削弱。浸泡到煤油里进行清洁。如果自动锁闭功能被泥土所阻碍，那么将其浸泡到热水中使其恢复正常。

螺纹连接锁 –检查按压动作和螺纹功能是否正常。检查零件的变形、锋利棱角、毛刺、裂纹或者磨损。

对于有镀层的元件，检查防护层的损坏及腐蚀现象。任何安全带或者安全绳组件存在可疑缺陷时需要立即停止使用，且如缺陷无法进行矫正，须予以销毁。

CLEANING

Harnesses and Lanyard Assemblies made from man-made fibres should be regularly cleaned. The frequency of cleaning depends upon the conditions in which they are being used but in any event, the period between cleanings should not exceed 3 months.

INSTRUCTIONS FOR CLEANING

First wipe off all surface dirt, mud, dust, etc., with a damp sponge. Rinse out the sponge then, using a mild solution of water and household detergent, thoroughly lather. Finish off by rinsing with clean water and wiping as dry as possible with a clean cloth.

To remove heavy deposits of grease or creosote, use a diluted solution of heavy-duty detergent cleaner and water. Work the diluted liquid into the webbing fabric with a brush. Rinse off with clean water and wipe as dry as possible with a clean cloth.

Following cleaning, the equipment should be left to dry thoroughly hanging freely in a position where it will not be exposed to excessive heat or steam.

The metal parts should be cleaned with mild cleaning agents, no solvents or aggressive industrial cleaning agents must be used.

MAINTENANCE AND STORAGE

During transport, keep the harness and the lanyard away from any source of heat,damp,corrosive atmosphere,ultraviolet rays, etc…

Harnesses and Lanyard Assemblies need to be stored in a clean, cool, dry area free of chemical fumes or corrosive elements.

Never store in areas where there is direct sunlight. Preferably, equipment should, when not required for use, be kept in properly designed cabinets which permit ventilation.

清洁

由人造纤维制成的安全带和安全绳组件需要做定期清洁。清洁频率取决于工况，但在任何情况下，两次检查的间隔不应该超过3个月。

清洁说明

首先用湿海绵擦去所有的表面污垢、泥、灰尘等。然后将海绵冲洗干净，使用水和家用清洁剂制成中性清洁液，用海绵蘸取清洁液涂上整个产品。最后用清水将泡沫清除并且用干净的布尽可能的擦干。

使用重污清洁剂和水的稀释溶液去除重度的油污污染。用一个刷子将稀释的液体涂到织带上清洁。最后用清水冲洗并且用干净的布尽可能的擦干。

清洁后，设备应放在非高温或蒸汽环境中自由悬挂晾干。

金属部件用温和的清洁剂进行清洁，不允许适用溶剂或腐蚀性工业用清洁剂。

保养和存储

在产品运输途中，安全带和安全绳要远离热源，潮湿，腐蚀性环境，紫外线等。

安全带和安全绳组件需要储存在清洁、凉爽、干燥的没有化学气体或者腐蚀性元素的地方。

不要储存在阳光直射的地方。当设备不使用时，适宜将设备保存在通风的柜子里。

In making provision for storage, it should be kept in mind that no part of the equipment be subjected to unnecessary strain, pressure, excessive heat or humidity. During storage, it should not be possible for the equipment to come into contact with sharp implements, corrosives or other likely causes of damage.

MARKING

(A) Manufacturer logo, **(B)**Product designation, **(C)**Part number, **(D)**Material, **(E)**Size, **(F)**Style, **(G)**Date of manufacture, **(H)**Serial number, **(I)**Class, **(J)**Standard(s) and year, **(K)**Warning, **(L)**Capacity, **(M)**Free fall limit, **(N)**Pictogram informing the user to read the instructions, **(O)**The attachment points marked with “A” can accept a fall arrest system, **(P)** The attachment points marked with “A/2” must be connected together to be linked to a fall arrest system, **(Q)** The attachment points marked with “POLE STRAP” must be connected together to be linked to a work positioning system, **(R)** The attachment points marked with “RETRIEVAL” must be connected together to be linked to a rescue system.

当为储存做准备时，一定要注意任何元件都不要让其承受一个不必要的拉力、压力、过高的温度和湿度。储存期间，不要让设备碰到锋利工具、腐蚀物质或者其他可能会造成设备损害的物质。

标记

(A)制造商标志, **(B)**产品名称, **(C)**型号, **(D)**材料, **(E)**尺寸, **(F)**类型, **(G)**制造日期, **(H)**序列号, **(I)**等级, **(J)**标准和年份, **(K)**警告, **(L)**承载能力, **(M)**自由跌落距离限度, **(N)** 使用前请仔细阅读说明书, **(O)**标有”A”标志的扣环可以连接到防坠系统上, **(P)**标有”A/2”标志的扣环必须成对使用，连接到防坠系统上, **(Q)**标有” POLE STRAP”标志的扣环必须成对使用，连接到工作定位系统上，**(R)** 标有” RETRIEVAL”标志的扣环必须成对使用,连接到救援系统上。

INSPECTION RECORD CARD

A competent person must examine all Harnesses, Lanyard Assemblies and Pole Straps at least once every 6 months as instructed and record below. Fall Arrest Devices (SRL’s) require a competent person to check at minimum every 3 months.

Owners Name:
Product Serial No.:
Date of Manufacture:
Remove from Service Date:

Visual Examination Date	Signature of Authorised Examiner	Visual Examination Date	Signature of Authorised Examiner

检验记录卡

至少每6个月，具资质的相关人员需要对所有的安全带、安全绳组件和围杆带进行检查并进行如下说明及记录。坠落制动器（速降自锁装置）要求由具资质的人最少每3个月检查一次。

持有人姓名:
产品序列号:
制造日期:
停用日期:

目检日期	授权检验者签名	目检日期	授权检验者签名

WARRANTY

Express Warranty – MSA warrants that the product furnished is free from mechanical defects or faulty workmanship for a period of one (1) year from date of shipment, whichever occurs first, provided it is maintained and used in accordance with MSA's Instructions and/or recommendations. Replacement parts and repairs are warranted for ninety (90) days from the date of repair of the product or sale of the replacement part, whichever occurs first. MSA shall be released from all obligations under this warranty in the event repairs or modifications are made by persons other than its own authorized service personnel or if the warranty claim result from misuse of the product, No agent, employee or representative of MSA may bind MSA to any affirmation, representation or modification of the warranty concerning the goods sold under this contract. MSA makes no warranty concerning components or accessories not manufactured by MSA, but will pass on to the Purchaser all warranties of manufacturers of such components. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AND IS STRICTLY LIMITED TO THE TERMS HEREOF. MSA SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Exclusive Remedy – It is expressly agreed that the Purchaser's sole and exclusive remedy for breach of the above warranty, for any tortious conduct of MSA, or for any other cause of action, shall be the repair and/or replacement, at MSA's option, of any equipment or parts thereof , that after examination by MSA are proven to be defective. Replacement equipment and/or parts will be provided at no cost to the Purchaser, F.O.B. Purchaser's named place of destination. Failure of MSA to successfully repair any nonconforming product shall not cause the remedy established hereby to fail of its essential purpose.

Exclusion of Consequential Damages – Purchaser specifically understands and agrees that under no circumstances will MSA be liable to Purchaser for economic, special, incidental, or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of the non-operation of the goods. This exclusion is applicable to claims for breach of warranty, tortious conduct or any other cause of action against MSA.

质量保证条款

质量保证： 在使用者按照MSA的指示和/或建议使用和保养的前提下, MSA的质保期为从开票之日起一年，易耗品除外，无机械故障或制造缺陷。部件的调换和修复从产品修理日期或调换部件的售出之日起保用90天，两者取其先。如本产品已经被未经制造厂商授权的维修人员进行过修理或改装，亦或由于产品的错误使用而提出的保用赔偿，MSA将不承担本保用书中所陈述的责任。MSA的任何代理商，雇员或代表都无权迫使MSA对在此合同下的已售产品的保用进行确认，展示或修改。MSA对非MSA制造的组件或附件不提供保证书，但会将这些组件制造商提供的所有质保书转交给购买者。本保证书代替了其他所有明确，默认或法定的保证书，并严格限定在此表述的条款之内。MSA对用于特殊目的的销售许可和适用程度的质保不予支持。

例外赔偿： 在此明确同意，由于MSA未履行上述保证，或其任何民事侵权行为，亦或由于任何其他原因的行为，购买者所能获得的例外赔偿为: 修理和/或调换经MSA确认为有缺陷的任何设备或部件，由MSA任选。调换的设备或部件以离岸价免费提供给购买者，发往购买者指定的目的地。MSA未能成功修复的任何非配套产品将不构成由于未完成基本目标而导致的补偿。

免责申明： 购买者明确理解并同意任何情况下MSA都不承担由于商品的不能操作而带来的购买者经济的，特定的，偶发的，相应产生的任何类型的损坏或损失，包括但不限于预期盈利的丧失以及任何其他损失。此排除条款也适用于针对MSA的关于违反保用条款，民事侵权行为或针对MSA的其他任何原因的行为导致的索赔。