

User Instructions

MSA Workman[®] Tripod

**Model Number / Numero de modelo /
Numero de modele**



Doc./Mat.: 10103973/06
Print Spec.: 10000005389 (F)
CR 800000039440



WARNING!

National standards and state, provincial 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 of the product and retained for ready reference by the user. The user must read, and 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.**

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Contents

- 1 Safety Regulations 4**
- 1.1 Correct Use 4
- 1.2 Compliance 4
- 1.3 Training 4
- 1.4 Safety and Precautionary Measures to be Adopted 5
- 1.5 Usage Limitations 6
- 1.6 Liability Information 8
- 1.7 Warranty 8
- 2 Description 9**
- 2.1 System Requirements 9
- 2.2 Dimensions 10
- 2.3 Typical Applications 11
- 2.4 Heads 13
- 2.5 Extension Legs 13
- 2.6 Workman Tripod Optional Accessories 14
- 2.7 Markings and Labels 15
- 3 Use 16**
- 3.1 Planning the Use of Systems 16
- 3.2 Inspection Before Each Use 18
- 3.3 Erecting and Compacting Workman Tripod 18
- 3.4 Installation Sequence 21
- 3.5 Making Proper Connections 24
- 4 Care, Maintenance and Storage 24**
- 4.1 Cleaning Instructions 24
- 4.2 Maintenance and Service 24
- 4.3 Storage 24
- 5 Inspection 25**
- 5.1 Inspection Frequency 25
- 5.2 Formal Inspection 25
- 5.3 Inspection Steps 25
- 5.4 Corrective Action 26
- 5.5 Inspection Log 27



1 Safety Regulations

1.1 Correct Use

The Workman Tripod is primarily an anchorage connector component of a personal fall arrest system. It may also be used for work positioning, ladder climbing, rescue, retrieval, evacuation, confined space entry/exit operations and material lifting and lowering, depending on which attachment elements are included.

Use of the Workman Tripod must comply with these User Instructions and, further, is subject to approval under the user's safety rules and regulations, safety director, supervisor, or a qualified safety engineer. Be certain the selection of the Workman Tripod is suited for the intended use and work environment. If there is any conflict between these User Instructions and other directives or procedures of the user's organization, do not use the Workman Tripod until such conflicts are resolved. Consult all local, state, and federal Occupational Health and Safety Administration (OSHA) requirements for personal safety equipment. Also refer to the latest revision of ANSI Z359.18 standard for more information on anchorages and associated system components. In Canada, refer to provincial and federal regulations and to CSA Z259.10, Z259.11 and Z259.18.

1.2 Compliance

The product may comply with:

- ANSI Z359.18, Type A; EN795 and / or;
- OSHA requirements

See product label for specific compliance notifications.

Anchorage connectors labeled with ANSI Z359.18 have been tested in compliance with the requirements of ANSI/ASSE Z359.7.

NOTICE

ANSI compliance and testing covers only the hardware and does not extend to the anchorage and substrate to which the anchorage connector is attached.

1.3 Training

Users of MSA Products must be familiar with the User Instructions and be trained by a competent person in:

- workplace hazard identification, evaluation and control
- selection, inspection, use, storage and maintenance
- usage planning including calculation of free and total fall distance; maximum arresting force
- compatibility and selection of anchorage/anchorage connectors including connection to help prevent accidental disengagement (rollout)
- proper lanyard/harness connection locations
- evacuation and rescue planning and implementation
- consequences of improper use

For Confined Space applications:

- See OSHA 29 CFR 1910.146 and ANSI Z117.1.

Periodically (at least annually) assess effectiveness of training and determine the need for retraining or additional training. Contact MSA for training information.

1.4 Safety and Precautionary Measures to be Adopted



WARNING!

- ▶ DO NOT exceed the allowable free fall distance or exceed the maximum fall arrest forces as specified by governing standards or subsystem components.
- ▶ The anchorage to which the MSA Workman Tripod is attached must be rated in the direction of intended use. See sections 2.1.4 "Anchorages and Anchorage Connectors" and 3 "Use" for details on anchorage strength and loading details.
- ▶ When installing or removing the MSA Workman Tripod limit exposure to fall hazards. A separate independent fall arrest system may be required.
- ▶ Ensure that fall clearance is sufficient to meet governing standards or subsystem component requirements.
- ▶ Prevent swing falls and impact with objects in or adjacent to the fall path. Always remove obstructions below the work area to ensure a clear fall path. Keep work area free from debris, obstructions, trip hazards, spills or other hazard which could impair the safe operation of the fall protection system. DO NOT use the MSA Workman Tripod unless a qualified person has inspected the workplace and determined that identified hazards can neither be eliminated nor exposures to them prevented.
- ▶ Work directly under the anchorage connector at all times. A full body harness is the only acceptable body holding device that can be used in a fall arrest system.
- ▶ DO NOT rely on feel or sound to verify proper snaphook or carabiner engagement. Ensure that gate and keeper are closed before use.
- ▶ If the MSA Workman Tripod is damaged or is subjected to fall arrest forces or impact forces, it must be immediately removed from service and marked as "UNUSABLE" until it has been destroyed.
- ▶ DO NOT leave the MSA Workman Tripod installed in environments which could cause damage or deterioration to the product. Refer to sections 4 "Care, Maintenance and Storage" and 5 "Inspection" for care and inspection details. Do not leave unattended loads on the MSA Workman Tripod.
- ▶ DO NOT use where lanyard or shock absorber may be exposed to sharp or abrasive edges or sheared, expanded metal, or frame cut steel. Sharp edges may cut a lanyard or shock absorber during a fall. Cover all sharp or abrasive edges with padding or sheathing before working above edge.
- ▶ Chemical hazards, heat and corrosion may damage the MSA Workman Tripod. More frequent inspections are required in these environments.
- ▶ DO NOT use the MSA Workman Tripod adjacent to moving machinery, electrical hazards, or in the presence of excessive heat, open flame or molten metal.
- ▶ DO NOT use fall arrest or rescue equipment in environments with temperatures greater than 130°F (34°C) or temperatures lower than -30°F (-34°C).
- ▶ DO NOT use the MSA Workman Tripod near energized equipment or where contact with high voltage power lines may occur. The metal components may provide a path for electrical current to flow, resulting in an electrical shock or electrocution.
- ▶ Remove any surface contamination such as, but not limited to, concrete, stucco, roofing material, etc that could accelerate cutting or abrading of attached components.
- ▶ MSA Workman Tripods are to be designated and used solely for approved applications.
- ▶ Unauthorized alterations, relocations, or additions to the anchorage connector extension are not permitted.
- ▶ DO NOT alter this equipment or intentionally misuse it. DO NOT use fall protection equipment for purposes other than those for which it was designed.

- ▶ Only one fall protection system is to be attached to the Workman Tripod. Do not attach more than one user or system to the anchorage.
- ▶ If PPE is resold, it is essential that instructions for use, maintenance, and periodic examination are provided in the language of destination.
- ▶ DO NOT use MSA Fall Protection products if under the influence of drugs or alcohol.
- ▶ MSA or persons or entities authorized in writing by the manufacturer, shall make all repairs to the equipment. No unauthorized repairs and/or modifications are permitted.
- ▶ RESCUE AND EVACUATION: The user must have a rescue plan and the means at hand to implement it. The plan must take into account the equipment and special training necessary to effect prompt rescue under all foreseeable conditions. If the rescue be from a confined space, the provisions of OSHA regulation 1910.146 and ANSI Z 117.1 must be taken into account. Although a rescue plan and the means to implement it must always be in place, it is a good idea to provide means for user evacuation without assistance of others. This will usually reduce the time to get to a safe place and reduce or prevent the risk to rescuers.

Failure to follow these warnings can result in serious personal injury or death.

1.5 Usage Limitations

The following applications limitations must be considered and planned for before using the Workman Tripod.

1.5.1 Physical Limitations

The Workman Tripod is designed for use by one person with a combined total weight no greater than 400 lbs (182 kg), including clothing, tools, and other user-borne objects; or in lifting or lowering materials with a combined total weight of no greater than 620 lbs (280 kg). Persons with muscular, skeletal, or other physical disorders should consult a physician before using a personal fall arrest system that includes a Workman Tripod. Pregnant women and minors must never use these systems. Increasing age and lowered physical fitness may reduce a person's ability to withstand shock loads during fall arrest or prolonged suspension. Consult a physician if there is any question about physical ability to safely use this product to arrest a fall or suspend.

1.5.2 Hazards

Workman Tripod must be installed on a clean and dry surface.

Acidic, alkaline, or other environments with harsh substances may damage the hardware elements of this Workman Tripod. 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 Tripod. More frequent formal inspections are required in environments with chemical hazards, heat and corrosion. Do not use in environments with temperatures greater than 134°F (34°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 10 feet (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.

Chemical	RESISTANCE			
	Nylon	Polyester	Stainless Steel (304)	Galvanized Steel
Strong acid (dilute)	Poor	Good	Fair	Poor
Strong acid (conc.)	Poor	Fair*	Poor	Poor
Weak acid (dilute)	Poor	Good	Good	Poor
Weak acid (conc.)	Poor	Good	Good	Poor
Strong alkali (dilute)	Good	Poor	Good	Poor
Strong alkali (conc.)	Fair	Poor	Fair	Poor
Weak alkali (dilute)	Good	Fair	Good	Fair
Weak alkali (conc.)	Good	Poor	Fair	Poor
Alcohol	Good	Fair	Good	Good
Aldehyde	Good	Poor	Good	Good
Ether	Good	Poor	Good	Good
Halogenated Hydrocarbons	Good	Good	Good	Good
Phenols	Poor	Poor	Good	Good
Bleaching agents	Poor	Good	Fair	Poor
Ketones	Good	Poor	Good	Fair
Lubricating Oils & Greases	Good	Good	Good	Good
Soaps & Detergents	Good	Good	Good	Good
Seawater	Good	Good	Fair	Poor
Aromatic Solvents	Good	Poor	Good	Good

* Concentrated sulfuric acid attacks polyester

1.5.3 Maximum Anchorage Slope



WARNING!

Install on a level surface.

Failure to follow this warning can result in serious injury or death.

The surface (anchorage) where a Workman Tripod is installed should be inclined by no more than 6 in (152 mm) over a distance of 10 ft (3 m). Any incline greater than this amount (2.8°) could allow the Workman Tripod to slide or tip over.

1.5.4 Wear and Deterioration

Any Workman Tripod which shows signs of excessive wear, deterioration or malfunction must be removed from use and marked "UNUSABLE" until repaired.

1.5.5 Impact Forces

It is only permissible for the Workman Tripod to be loaded in the vertical direction, directly underneath the Tripod head.

Any Workman Tripod which has been subjected to the forces of arresting a fall must be immediately removed from service and marked as "UNUSABLE" until submitted to, and released from, the Formal Inspection procedures.

1.5.6 Environment

Chemical hazards, heat and corrosion may damage the Single Point D-Ring Anchorage Connector. More frequent inspections are required in these environments. Do not use in environments with temperatures greater than 134°F (34°C). Use caution when working around electrical hazards, moving machinery and abrasive surfaces.

1.6 Liability Information

MSA accepts no liability in cases where the device has been used inappropriately or not as intended. The selection and use of the device are the exclusive responsibility of the individual operator.

Product liability claims, warranties and guarantees made by MSA with respect to the device are voided, if it is not used, serviced or maintained in accordance with the instructions in this manual.

1.7 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 first use or eighteen (18) months 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 results 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.

For additional information please contact the Customer Service Department at 1-800-MSA-2222 (1-800-672-2222).

2 Description

The Workman Tripod is an anchorage connector intended for both personnel- and material-moving applications.

The following picture shows a typical arrangement of the Workman Tripod and compatible accessories used in assembling a fall arrest system.

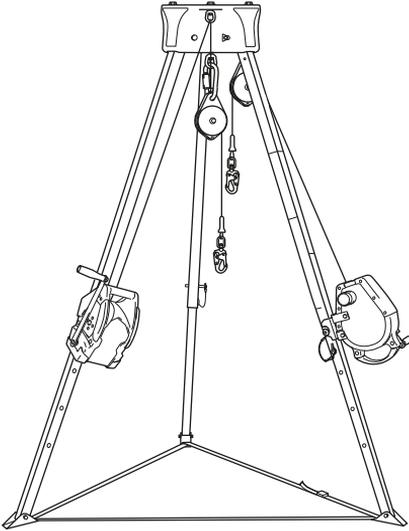


Fig. 1 Typical Arrangement of the Workman Tripod

2.1 System Requirements

2.1.1 Usage Specifications

- Working Height: 91 in (2.3 m)
- Weight: 45 lbs (20 kg)
- Skid Resistant feet
- The Workman Tripod head is aluminum alloy, the Workman Tripod legs are high-tensile, aluminum alloy.
- Capacity for personnel is 400 lbs (182 kg) including weight of the user plus clothing, tools and other user-borne objects.
- Capacity for material is 620 lbs (280 kg).
- When used as part of a personal fall arrest system, fall arresting forces must not exceed 1,800 lbf (8 kN).
- Minimum vertical static strength with legs fully extended, feet tread-down, on a hard, flat, surface is 5000 lbs (22.0 kN).

2.1.2 Compatibility of Components and Subsystems

MSA Workman Tripods are designed to be used with MSA approved components and connecting subsystems. Use of MSA Workman Tripods with products made by others that are not approved in writing by MSA may adversely affect the functional compatibility between system parts and the safety and reliability of the complete system. Connecting subsystems must be suitable for use in the application (e.g. fall arrest or restraint). MSA produces a complete line of connecting subsystems for each application. Contact MSA for further information. Refer to the manufacturer's instructions supplied with

the component or connecting subsystem to determine suitability. For fall arrest applications using the tripod, the maximum fall arrest force must not exceed 1,800 lbf (8 kN).

Contact MSA with any questions regarding compatibility of equipment used with the tripod.

2.1.3 Compatibility of Connectors

Connectors, such as D-Rings, snaphooks, and carabiners, must be rated at 5,000 lbf (22 kN) minimum breaking strength. MSA connectors meet this requirement. Connecting hardware must be compatible in size, shape, and strength. Non-compatible connectors may accidentally disengage (“rollout”). Always verify compatibility of the connecting snap hook or carabiner with harness D-Ring or anchorage connector. Use only self-closing, self-locking snaphooks and carabiners with the harness.

Use only self-closing, self-locking snaphooks and carabiners to reduce the possibility of rollout. Do not use snaphooks or connectors that will not completely close when attached.

- Do not tie knots in a lanyard.
- Do not connect snaphooks and carabiners to each other.
- Do not connect two (2) snaphooks to one (1) D-ring.

2.1.4 Anchorages and Anchorage Connectors

Personal fall arrest system anchorages and connectors must either:

- a) have a strength capable of supporting and withstanding at least 5,000 pounds (22.2 kN) in the directions permitted by the system without failure
- b) be certified by a professional engineer as having the required strength for fall arrest or travel restraint, as applicable. See ANSI Z359.18 for definition of certification.

When more than one person is attached to an anchor, the minimum anchor strength must be multiplied by the number of personal fall arrest systems attached.

2.2 Dimensions

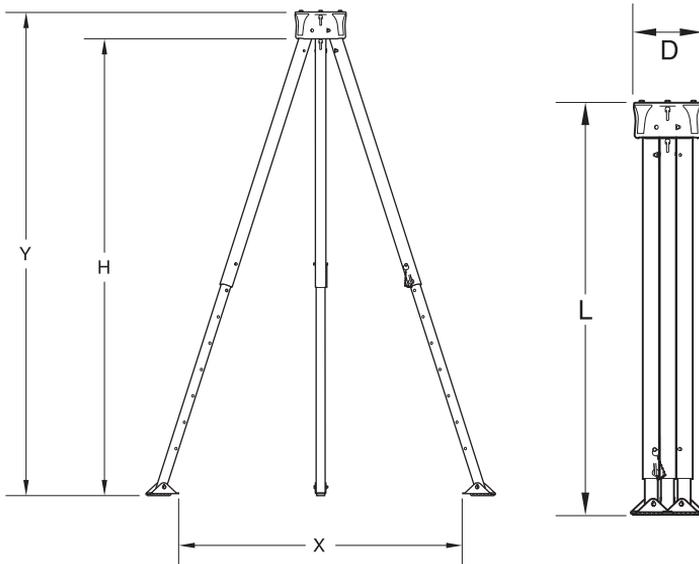


Fig. 2 Dimension references

Size when compacted for transport or storage:	
Length (L):	63 in (1.9 m)
Outside Diameter (D):	10 in (0.3 m)
Interior distance (X) between feet when set up with:	
Legs at maximum extension:	59 in (1.5 m)
Legs at minimum extension:	37 in (0.9 m)
Overall height (Y) to top of head when set up with:	
Legs at maximum extension:	96 in (2.4 m)
Legs at minimum extension:	60 in (1.5 m)
Interior headroom height (H) when set up with:	
Legs at maximum extension:	91 in (2.3 m)
Legs at minimum extension:	55 in (1.4 m)
Notes: Adding equipment at Workman Tripod head reduces headroom.	

2.3 Typical Applications



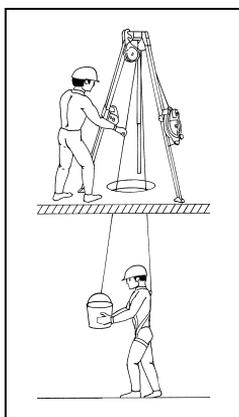
WARNING!

Do not use the Workman Rescuer for material handling.

Do not raise or lower a user with the Workman Rescuer except for in a rescue application.

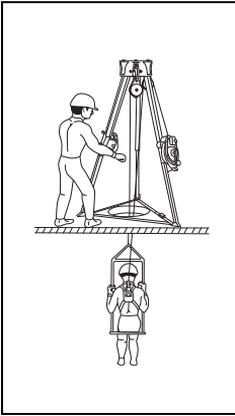
The Workman Winch can be used to raise and lower a user; however, it is not a fall arrest device. When using a Workman Winch to raise and lower a user, the user must also be connected to the Workman Rescuer or other appropriate fall arrest device.

Failure to follow these warnings can result in serious injury or death.

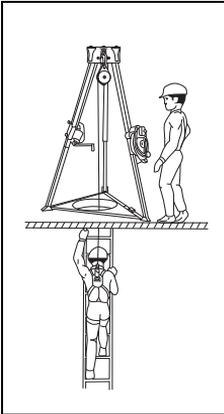


Using Workman Winch to lower material.

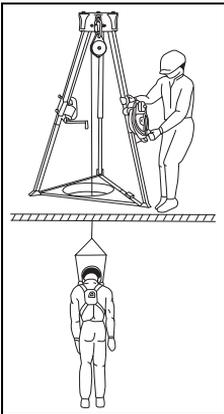
Worker attached to Workman Rescuer for fall arrest and emergency retrieval.



Showing Workman Winch to raise and lower worker on suspension seat. Workman Rescuer for fall arrest and emergency retrieval.



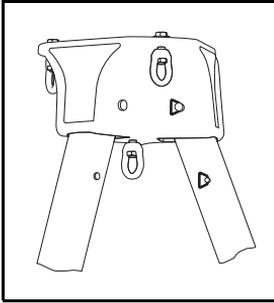
Using Workman Rescuer for fall arrest and emergency retrieval.



Showing Workman Rescuer and Y-retrieval Lanyard used for emergency retrieval.

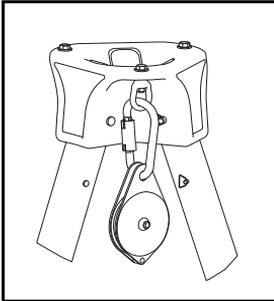
US

2.4 Heads



Central Swivel Eye

The central swivel eye is to be used for personal fall arrest systems, such as vertical lifelines or the MSA Self-Retracting lanyard. Refer to the separate User Instructions included with these products for installation and use of each of these optional components.

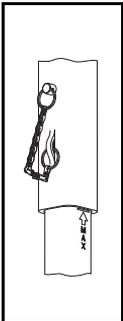


Side-Mount Swivel Eyes

The side-mount swivel eyes are used to attach accessories such as the MSA Split-Mount Pulley, P/N 506222.

2.5 Extension Legs

2.5.1 Detent Pins, Leg (3)



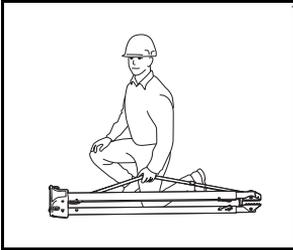
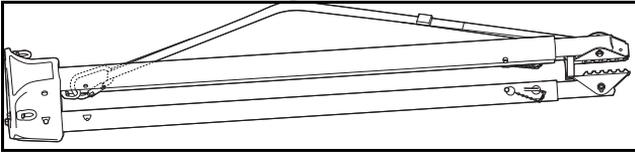
There is one Detent Pin in each extension leg. Each pin is inserted through the selected holes in the upper and lower legs when the desired leg extension is achieved.

2.5.2 Strap (1)

The leg base strap is necessary to maintain the position of the Workman Tripod legs and to distribute the applied loads during system use. Workman Tripods have attachments at the base of each lower leg, through which the leg base strap is threaded. It is fully assembled when the end is passed through all three attachments, connected through the cam buckle, and tightened.

2.5.3 Carrying Strap conversion

The leg strap may also be connected to the head of the tripod using carabiner, P/N 10089207, and used as a carrying strap.



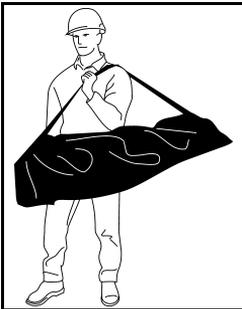
2.6 Workman Tripod Optional Accessories

Refer to the individual User Instructions for each of the optional accessories for information regarding integration with the Workman Tripod or other system components. Contact MSA for information on these optional accessories and their use in integrated systems.

2.6.1 Mounting Hardware for optional Workman Tripod Accessories

The MSA Workman Winch and Workman Rescuer is mounted to the Workman Tripod in conjunction with the MSA Split-Mount Pulley, P/N 506222, and carabiner, P/N 10089207. Refer to Fig. 1 .

2.6.2 Nylon Tote Bag



The Nylon tote bag is used to protect the Workman Tripod during transport and storage.

2.7 Markings and Labels



WORKMAN® TRIPOD

POUR DÉPOSER: Pour chaque patin, insérer légèrement le téglon, l'écrou et le pas de vis dans le trou correspondant et pousser à la main les vis finies.

SPECIFICATIONS: Charge de service maximum: personnel: 185 kg (400 lb)
 Hauteur maximale: 2,3 m (7 pi) | Hauteur: 2,4 m (8 pi)

⚠ AVERTISSEMENT

Lire et l'avis de la notice de l'inspection approfondie dans le Manuel de l'utilisateur. Utiliser le téglon uniquement avec l'équipement approuvé par le fabricant. Ne pas utiliser de téglon avec des accessoires non compatibles.

Retirer le téglon de service et les vis à la fin de chaque séance de travail. Ne pas laisser le téglon, l'écrou ou le pas de vis en contact avec le sol.

L'utilisateur doit inspecter le produit avant chaque utilisation. Retirer du service tout produit qui présente des dommages, des pièces manquantes ou des bris. Une inspection formelle doit être effectuée par une personne qualifiée avant l'utilisation du produit. Une inspection formelle peut être effectuée par le fabricant ou un fournisseur agréé.

Negligence de suivre cet avertissement peut entraîner des blessures graves ou la mort.

NE PAS ENLEVER CETTE ÉTIQUETTE

1 0 0 0 MSA Corporate Center D / J / v e
 1 5 0 0 0 C r a m b e r y P a r k C r a m b e r y T e m p., P a., 1 6 0 6 6 - 5 2 0 7 U.S.A.
 www.msa.com | Tél. : 1-800-833-2322
 10100025



WORKMAN® TRIPOD

TO TAKE DOWN: For each leg, tilt the tripod slightly off down on the leg and hinge inward.

SPECIFICATIONS: Maximum working load: 400 lbs (181 kg) personnel
 Maximum height: 23 ft (7 m) | Maximum height: 24 ft (7.3 m)
 Maximum weight: 230 lbs (104 kg) | Maximum weight: 240 lbs (109 kg)

⚠ WARNING

Read and strictly follow applicable detailed instructions in User Manual.

Use Tripod only with manufacturer approved equipment and as instructed. Make only complete connections.

Remove the Tripod from service if it has been subjected to a fall arrest and if you are unsure of its condition. Do not use Tripod if any parts that could come into contact with the Tripod.

Users must inspect before each use. Remove from use if excessive wear, damage, or missing or altered parts are detected. A formal inspection must be performed by a qualified person before the Tripod is inspected. Failure to follow this warning can result in serious injury or death.

DO NOT REMOVE THIS LABEL

1 0 0 0 MSA Corporate Center D / J / v e
 1 5 0 0 0 C r a m b e r y P a r k C r a m b e r y T e m p., P a., 1 6 0 6 6 - 5 2 0 7 U.S.A.
 www.msa.com | Tél. : 1-800-833-2322
 10100025

Model
Modelo
Modelo

Serial Number
Número de serie
No de série

Date Made
Fecha de
Fabricación Date
de Fabrication

Meets Standards
Cumple las normas
Satisfait aux normes

MODEL #

SERIAL #

DATE MADE

LAST INSPECTION

Product of
Produit des

**U.S.A.
EE.UU.
E-UU**

WORKMAN® TRIPOD

**FORMAL INSPECTION GRID
 CARTILLA DE INSPECCIÓN FORMAL
 GRILLE D'INSPECTION FORMELLE**

YR	J	F	M	A	M	J	J	A	S	O	N	D
1 st												
2 nd												
3 rd												
4 th												
5 th												

**PUNCH GRID ON MONTH OF FIRST USE
 PERFORE LA CARTILLA EN EL PRIMER MES DE USO
 PONCIONNER LA GRILLE LE PREMIER MOIS D'UTILISATION**

907 Rev. 0
10105544



WORKMAN® TRIPOD

PAR DÉMONTAGE: Pour chaque patin, inclinez légèrement le produit, le pas de vis dans le trou correspondant et pousser à la main les vis finies.

SPECIFICATIONS: Charge de service maximum: personnel: 185 kg (400 lb)
 Hauteur maximale: 2,3 m (7 pi) | Hauteur: 2,4 m (8 pi)

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Retirer le téglon de service et les vis à la fin de chaque séance de travail. Ne pas laisser le téglon, l'écrou ou le pas de vis en contact avec le sol.

L'utilisateur doit inspecter le produit avant chaque utilisation. Retirer du service tout produit qui présente des dommages, des pièces manquantes ou des bris. Une inspection formelle doit être effectuée par une personne qualifiée avant l'utilisation du produit. Une inspection formelle peut être effectuée par le fabricant ou un fournisseur agréé.

Negligence de suivre cet avertissement peut entraîner des blessures graves ou la mort.

NO QUITE ESTA ETIQUETA

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3 Use

3.1 Planning the Use of Systems

3.1.1 Rescue and Evacuation

The user must have a rescue plan and the means at hand to implement it. The plan must take into account the equipment and special training necessary to effect prompt rescue under all foreseeable conditions. If the rescue is from a confined space, the provisions of OSHA regulation 1910.146 and ANSI Z117.1 must be taken into account. Although a rescue plan and the means to implement it must always be in place, it is a good idea to provide means for user evacuation without assistance of others. This will usually reduce the time to get to a safe place and reduce or prevent the risk to rescuers. If the Workman Tripod is to be included as part of rescue or evacuation systems, the optional system components required, the time required to erect the Workman Tripod and attach any optional components, and the anchorage requirements should be considered when planning these systems.

3.1.2 Free Fall Distance

Do not exceed free fall distance specified by applicable regulations and standards. When using a shock absorbing lanyard, keep the amount of slack between the anchorage/anchorage connector and the harness/waist belt at a minimum to reduce the free fall distance and the impact force to the user.

3.1.3 Leg Base Clearance (inside and outside)

Clearance between the position of the Workman Tripod feet when erected and in working position and the access through which the worker will be lowered shall be such that none of the Workman Tripod legs will be positioned above the access or be allowed to fall into the opening. Clearance between the working position of each of the Workman Tripod feet and the outside of the anchorage shall be a minimum of 3 ft (0.9 m) and shall allow unrestricted movement of support personnel above, under, and around the tripod during erection, use and compaction.

Care must be taken to avoid tripping over the tripod, or otherwise creating an event that could dislodge the tripod from its intended location.

Maintain sufficient clearance between the tripod legs and the opening to ensure any unintended shifting of the tripod does not cause the tripod leg to fall into the opening.

A minimum distance of 18 inches (0.5 m) between the legs and opening is recommended.

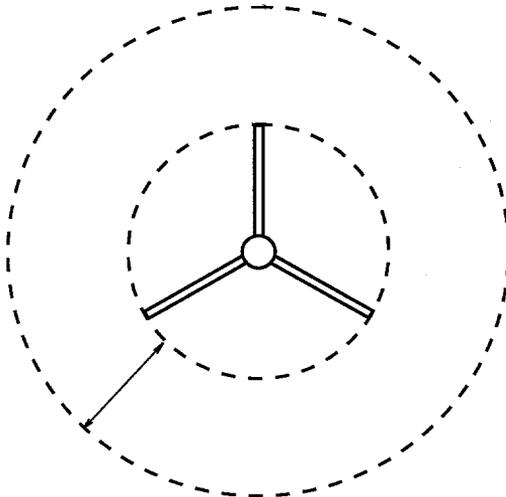


Fig. 3 Required clearance around the outside of the Workman Tripod

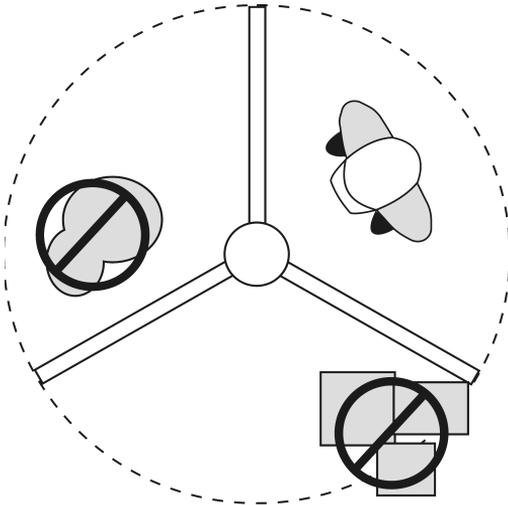
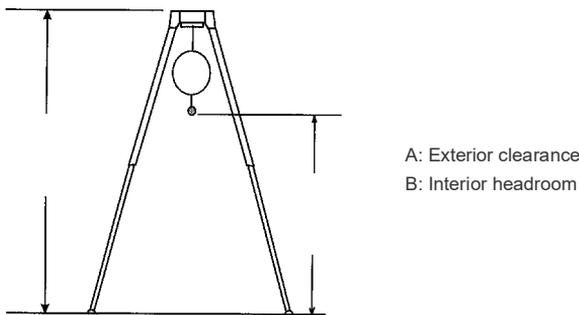


Fig. 4 Leg base clearance

3.1.4 Exterior Clearance and Interior Headroom

There must be sufficient exterior clearance above the anchorage to fully erect the Workman Tripod. This clearance is given in section 2.1.1. Interior headroom depends upon the system components (optional accessories) that may be attached to the Workman Tripod head. Refer to the User Instructions supplied with each system component to determine the effect on overhead clearance due to such installation.

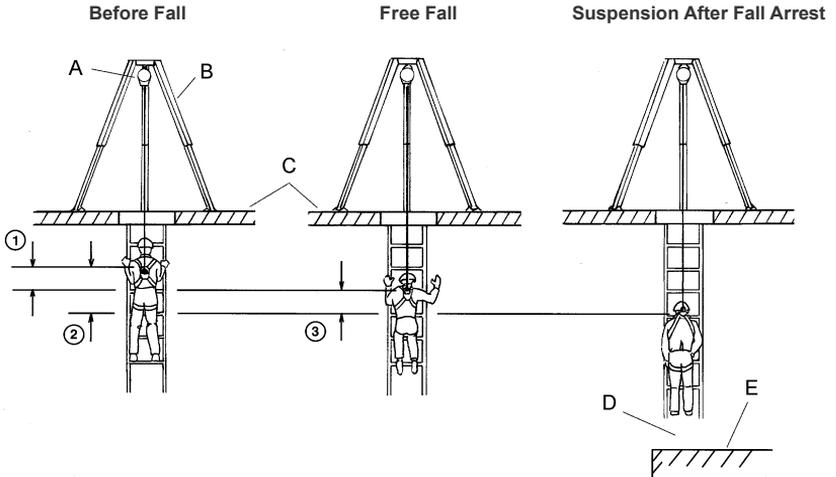


3.1.5 Requirements for additional Anchorages and Anchorage Connectors

The Workman Tripod is intended for use by a single person. Other personnel working in this immediate area as part of a support team will require **separate and independent** safety systems depending on their purpose and work function. Each person working in a given area must have systems provided to suit the hazards that may be present. This determination must be made by a qualified safety engineer in accordance with sections 2 and 3.1 of these instructions, or corresponding sections of User Instructions from any optional components.

3.1.6 Clear Space in Fall Path

Make certain that enough clearance is available in all potential fall paths to prevent striking an object. The amount of clearance needed depends upon the type of connecting subsystem used, and the location of the anchorage or anchorage connector. Consult the manufacturer's instructions for the particular connecting subsystem or component for clearance needed.



A	Fall arrester	1
B	Tripod anchorage connector	2
C	Anchorage surface	3
D	Clearance	
E	Closest object in fall path	

3.2 Inspection Before Each Use

Inspect the Workman Tripod to verify that it is in serviceable condition. Examine every inch of the Workman Tripod for severe wear, missing or broken elements, corrosion, or other damage. Do not use the Workman Tripod if inspection reveals an unsafe condition.

3.3 Erecting and Compacting Workman Tripod

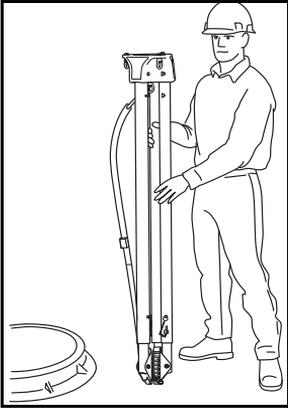


WARNING!

Do not open the confined space access cover before completing installation of the Workman Tripod and all other system components.

Failure to follow this warning can result in serious injury or death.

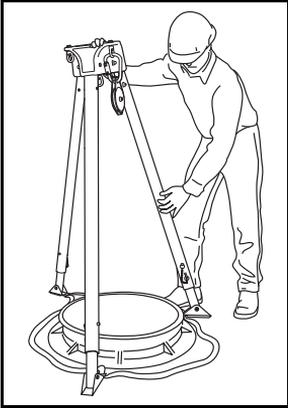
3.3.1 Erecting and Adjusting the Tripod



- (1) Tilt the Workman Tripod into an upright, feet-down position.

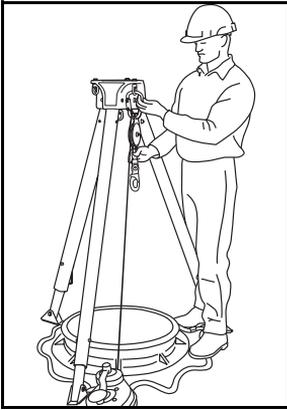


- (2) Hinge each leg, one at a time, into the outward and locked position. Note that each leg automatically snaps upward when the hinge locks. Check to be certain of hinge locking.

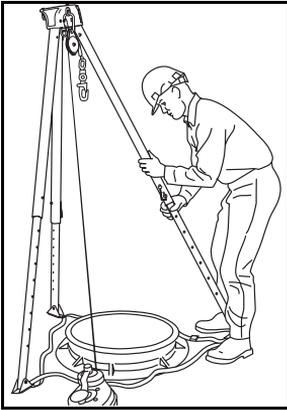


- (3) Position the feet about the hatch cover in accordance with work area geometry and surface conditions.

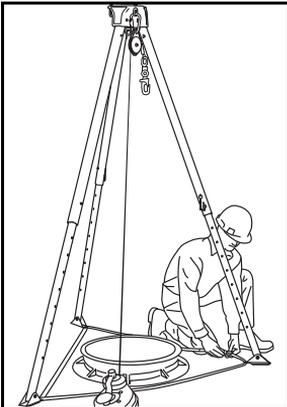
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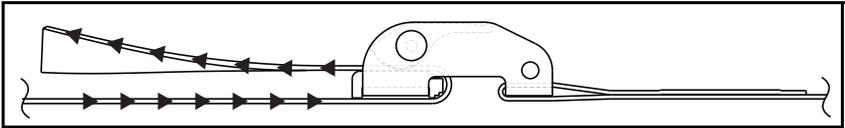
- (4) Optional components to be attached to the Workman Tripod Head, such as the Split-Mount Pulley, should be assembled to the Workman Tripod Head at this time. Follow the appropriate user instructions for each optional component that is to be connected to the Workman Tripod.



- (5) Raise the Workman Tripod one leg at a time by pulling the pin (attached to the upper leg section), incrementally sliding out the lower leg section, and repinning. Repeat for each leg until the Workman Tripod head is at the desired height. The Workman Tripod head should be level when installation is complete. Be careful not to extend each leg too far in each increment so as to cause the Workman Tripod to topple.



- (6) Once at the proper height, check to be sure the Workman Tripod is stabilized and plumb.



- (7) Feed the leg base strap through the feet at the bottom of the Workman Tripod legs. Check all leg pins to assure secure fastening and set the feet in the tread-down position. Tighten the strap through all connectors by pulling the loose end of the web through the cam buckle
- (8) When all equipment is in place on the Workman Tripod, make a last check for plumbness and stability. Make final adjustments. Then, remove the hatch and manhole cover.

3.3.2 Compacting the Workman Tripod

To compact the Workman Tripod for transport or storage, reverse the setup procedure. To disengage the leg hinge locks, pull down on the leg and hinge it inward. Attach Workman Tripod legs together securely with lower strap as shown. After use, return the Workman Tripod to the proper person and place for cleaning and storage.

3.4 Installation Sequence

3.4.1 Installation of Workman Rescuer and Workman Winch to Workman Tripod

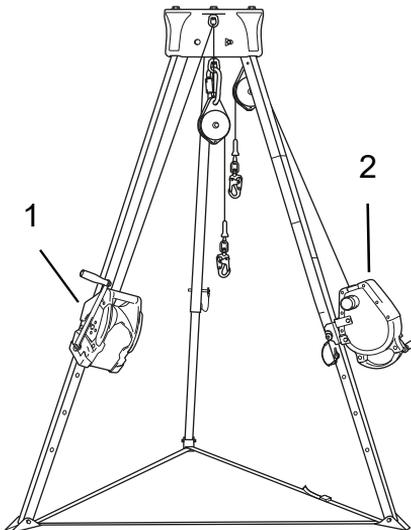


Fig. 5 Placement

1 Workman winch

2 Workman rescuer

To install the Workman Winch, follow the instructions below and refer to Fig. 8 .

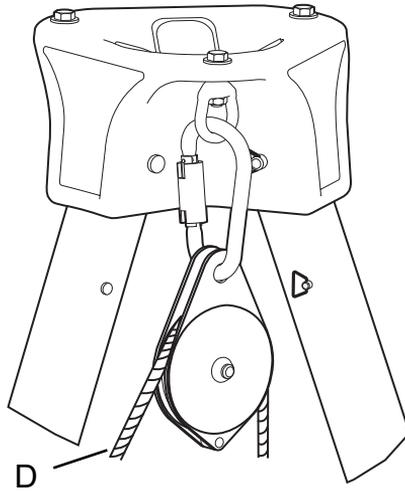


Fig. 6

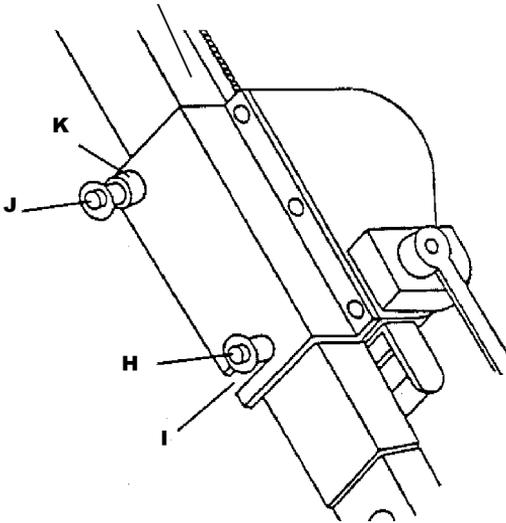


Fig. 7 Outside Face of Tripod Leg

D	Winch or fall arrester	J	Ball lock pin
H	Pin	K	Holes
I	Slot		

- (1) In accordance with the tripod instructions, raise the tripod only to a height where the tripod head is easily reachable by the installer.
- (2) Lay the winch on the ground to the right side (when facing the leg) of any leg and extract approximately 9 ft (2.7 m) of line (D).

- (3) Reeve the cable over the split-mount pulley and, using carabiner, PN 10089207, mount the pulley to the tripod head to the RIGHT of the leg to which the winch is to be mounted.
Note: The winch snaphook must hang to the interior of the tripod.
- (4) If using a leg-mounted fall arrester, such as the Workman Rescuer, lay the fall arrester to the right of any other tripod leg and extract enough line to reeve the cable over a split-mount pulley and attach to the tripod head to the right of the leg to which the fall arrester is to be mounted.
- (5) Raise the tripod to the desired working height.
- (6) Insert the winch positive locking pin (H) partially through the tripod leg to which the winch is to be mounted, starting from the left side of the outside face of the leg. See Fig. 8 .
- (7) Mount the winch on the tripod leg placing the slot (I) in the winch mounting bracket over the pin (H) from the previous step.

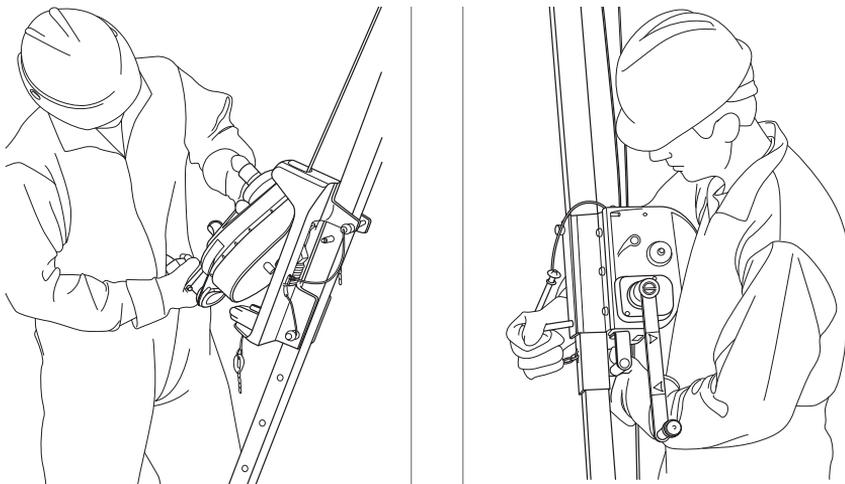


Fig. 8 Installation of Anchorage Hook at Tripod Head



CAUTION!

Be sure to insert the tripod leg pin (H) completely through the tripod leg and winch housing.

- (8) Insert the ball lock pin (J) through the holes (K) at the top of the hoist mounting bracket and behind the tripod leg.
- (9) If using a leg-mounted fall arrester, mount that product to the previously chosen tripod leg using mounting bracket, P/N 506216 and 506232. Pin the bottom pin of the bracket through one of the holes in the lower leg of the tripod. The upper pin of the bracket pins on the inside face of the upper Tripod leg. For most applications, it is ergonomically preferable to mount the fall arrester at waist level.
- (10) Install the tripod leg base strap and check to be sure the tripod is stabilized and plumb. Check all leg pins to ensure secure fastening.
- (11) With all equipment now in place on the tripod, make final adjustments and last check for plumbness, foot traction, leg base strap tautness and stability.

3.5 Making Proper Connections

3.5.1 Use of Head Attachments

Carabiner, P/N 10089207, is used to mount the optional MSA Split-Mount Pulley P/N 506222 to the side attachment points on the Workman Tripod Head. The Split-Mount Pulley is designed to work in conjunction with a Workman Rescuer or Workman Winch, where the cable of the Workman Rescuer or Hoist would pass through the Side-Mount Pulley and descend into the center of the work access. The optional Lynx Boom Hoist may be attached to the central attachment point on the Workman Tripod Head. Contact MSA for information about connection of optional components to the Workman Tripod or refer to the separate User Instructions provided with each component.

3.5.2 Making Connections

When using a snaphook to connect to an anchorage or when coupling components of the system together, be certain accidental disengagement ("rollout") cannot occur. Rollout is possible when interference between a snaphook and the mating connector causes the snaphook's gate or keeper to accidentally open and release. Rollout occurs when a snaphook is snapped into an undersized ring such as an eye bolt or other non-compatibly shaped connector. Only self-closing, self-locking snaphooks and carabiners should be used to reduce the possibility of rollout when making connections. Do not use snaphooks or connectors that will not completely close over the attachment object. Do not make knots in a lanyard. Do not hook the lanyard back onto itself. Snaphooks and carabiners must not be connected to each other. Do not attach two snaphooks into one D-ring. Always follow the manufacturer's instructions supplied with each system component.

4 Care, Maintenance and Storage

4.1 Cleaning Instructions

Clean the Workman Tripod with a solution of water and mild laundry detergent. Dry hardware with a clean cloth. Do not speed drying with heat. Excessive accumulation of dirt, paint, or other foreign matter may prevent proper function of the Workman Tripod and, in severe cases, weaken the material and joints. Questions concerning Workman Tripod conditions and cleaning should be directed to MSA.

4.2 Maintenance and Service

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 the MSA factory. Do not attempt field repairs.

4.3 Storage

Store the Workman Tripod in a cool, dry and clean place. Avoid areas where heat, moisture, 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.

5 Inspection

5.1 Inspection Frequency

Inspect the Workman Tripod before each use. Remove the Workman Tripod from service if the product has been subjected to the forces of a fall.

5.2 Formal Inspection

The program administrator shall maintain documentation of equipment inspections. This documentation shall include, at a minimum, the identity of the equipment, inspection date, name of the competent or qualified person conducting the inspection and the result of that inspection.

The program administrator shall set inspection criteria for the equipment. Such criteria shall equal or exceed the most restrictive of the criteria established by the ANSI Z359.18 standard or the manufacturer's user instructions. Keep inspection criteria current in relationship to changing patterns or conditions of use.

MSA requires that all Workman Tripods be inspected by a competent person other than the user at intervals of no more than six months per applicable standard or as specified by a formal fall protection program. Record formal inspections in the provided Inspection Log. Punch or indelibly mark the Inspection grid attached to the Workman Tripod. Do not use a Workman Tripod with a formal inspection date older than six (6) months. Tag Workman Tripods with formal inspection dates older than six (6) months "UNUSABLE" and remove from service until after formal inspection.

5.3 Inspection Steps

- (1) Inspect the Workman Tripod labels to verify that they are present and legible. Check the Formal Inspection Grid to be sure a Formal Inspection has been performed within the last six months. If the Grid does not indicate that a Formal Inspection has been performed within the last six months (by being punched), or if any labels are missing or illegible, remove the Workman Tripod from use and mark it as "UNUSABLE" until a Formal Inspection is performed by a competent person.
- (2) Inspect head assembly for corrosion, cracks, deformation, fractures, altered or missing elements, burns, and heat and chemical exposures. See Fig. 9 .
- (3) Inspect all metallic parts (i.e. head, legs, leg pins, attachment pins, feet) for deformation, fractures, cracks, corrosion, deep pitting, burrs, sharp edges, cuts, deep nicks, missing or loose parts, improper function, and evidence of excessive heat or chemical exposures.
- (4) Inspect all non-metallic parts (i.e. skid-resistant foot pads, labels, and leg base strap) for cut, broken, excessively worn, missing and loose parts. (Labels are to be additionally checked in accordance with Step 1 above.) Inspect for evidence of burns and excessive heat and chemical exposures.
- (5) Check the function of the Workman Tripod legs. Legs should move smoothly in the leg pockets and should seat firmly when moved to the fully open position. The lower legs should slide smoothly within the upper legs along their entire length. Workman Tripod feet should pivot easily and remain flat on the ground when the Workman Tripod is erected.
- (6) Inspect each component and subsystem of the complete system in accordance with the associated manufacturer's instructions.
- (7) Inspect for any sign of damage, inadequate maintenance of equipment, alteration, excessive wear, and any condition that calls to question the suitability of the equipment for its intended purpose.

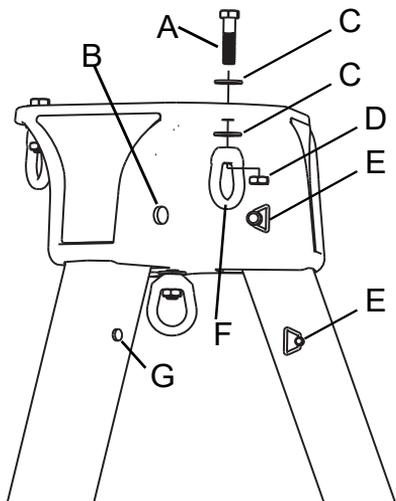


Fig. 9 Inspection locations

A	Bolt (quantity 4)	E	Hog ring (quantity 6)
B	Large clevis pin (quantity 3)	F	Eye nut (quantity 4)
C	Washer (quantity 8)	G	Small clevis pin (quantity 3)
D	Jam nut (quantity 4)		

5.4 Corrective Action

When inspection reveals any of the identified conditions, the Workman Tripod must be immediately removed from service and marked as "UNUSABLE" until destroyed or subjected to maintenance by the user's organization. Damage, excessive wear and/or aging are generally repairable by the factory. If detected, immediately remove the Workman Tripod from use and mark it as "UNUSABLE" until repaired. For final disposition, submit the Workman Tripod to a competent person who is authorized to perform Formal Inspection. If there is any question as to reparability, contact MSA or a service center authorized in writing by MSA before further use of the Workman Tripod.

