

User Instructions

Chain Anchorage Connector

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



Doc./Mat.: 10005255/05
Print Spec.: 10000005389 (F)
CR 800000034252



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.



The Safety Company

1000 Cranberry Woods Drive
Cranberry Township, PA 16066
USA
Phone 1-800-MSA-2222
Fax 1-800-967-0398

For your local MSA contacts please go to our website www.MSAafety.com

1 Safety Regulations

1.1 Correct Use

The chain anchorage connector is primarily a component of a personal fall arrest system, serving as an anchorage connector. It may also be used for work positioning, travel restriction, rescue, retrieval, evacuation and confined space entry/exit operations, depending on the associated system components used together with the chain anchorage connector.

Use of the chain anchorage connector must comply with these User Instructions, and further, is subject to approval under the user's safety rules and regulations and by the user's safety director, supervisor or qualified safety engineer. Be certain the selection of the chain anchorage connector 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 chain anchorage connector 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 standards for more information on anchorage connectors and associated system components. In Canada, refer to provincial and federal regulations.

It is imperative that this manual be read and observed when using the product. In particular, the safety instructions, as well as the information for the use and operation of the product, must be carefully read and observed. Furthermore, the national regulations applicable in the user's country must be taken into account for a safe use.

Alternative use, or use outside this specification will be considered as non-compliance. This also applies especially to unauthorized alterations to the product and to commissioning work that has not been carried out by MSA or authorized persons.

When in doubt of the method of operation, maintenance, or inspection procedures, DO NOT USE.

1.2 Compliance

The product may comply with:

- ANSI Z359.18, Type A 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 Usage Specifications

- The chain anchorage connector has a minimum breaking strength of 5,000 lbf (22.2 kN).
- The chain anchorage connector is constructed of alloy steel, 1/4 in. (6 mm) diameter with protective coated finish. Overall length of the chain anchorage connector is 6 ft (1.8 m).
- The chain anchorage connector is designed for the attachment of a single personal fall arrest system.
- When used as part of a personal fall arrest system, fall arresting forces must not exceed 1,800 lbf (8 kN).

1.4 Usage Limitations

The following applications limitations must be considered and planned for before using the chain anchorage connector.

1.4.1 Physical Limitations

The chain anchorage connector is designed for use by one person. See other subsystem components for limiting weight capacity of the system.

1.4.2 Chemical Hazards

Acidic, alkaline or other environments with harsh substances may damage the hardware elements of the chain anchorage connector. If working in a chemically aggressive environment, consult MSA to determine which anchorage connector material is better for your specific conditions. When working in the presence of chemicals, more frequent inspection of the chain anchorage connector is required.

1.4.3 Corrosion

Do not expose the chain anchorage connector to corrosive environments for prolonged periods. Organic substances and salt water are particularly corrosive to metal parts. When working in corrosive environments, more frequent inspection, cleaning and drying of the chain anchorage connector is required.

1.4.4 Electrical Hazards

Use extreme caution when working near energized electrical sources. Metal hardware will conduct electric current. Maintain a safe working distance (preferably at least 10 feet – 3 m) from electrical hazards.

1.4.5 Impact Forces

Any chain anchorage connector which has been subjected to the forces of arresting a fall must be immediately removed from service and marked as "UNUSABLE" until destroyed.

1.5 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.

1.6 Safety and Precautionary Measures



WARNING!

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

- ▶ 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 chain anchorage connector is attached must be rated in the direction of intended use. See sections 2.2.3 "Anchorages and Anchorage Connectors" and 3 "Use" for details on anchorage strength and loading details.
- ▶ When installing or removing the chain anchorage connector 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.
- ▶ Fall clearance and free fall limits must take into account the additional length that the chain anchorage connector adds to the lanyard length.
- ▶ DO NOT use the chain anchorage connector 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/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 chain anchorage connector 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 chain anchorage connector 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 chain anchorage connector.
 - ▶ 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 chain anchorage connector. More frequent inspections are required in these environments.
 - ▶ DO NOT use the chain anchorage connector 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 chain anchorage connector near energized equipment or where contact with high voltage power lines may occur. The chain 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.
 - ▶ Chain anchorage connectors are to be designated and used solely for approved applications.
 - ▶ Unauthorized alterations, relocations, or additions to the chain anchorage connector 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. DO NOT use fall protection equipment for towing, hoisting or material handling.
 - ▶ 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.
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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).

1.8 Training

Purchasers of MSA chain anchorage connectors must ensure that users are familiar with the User Instructions and are 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

2 Description

The chain anchorage connector is a component designed specifically for coupling a single personal fall arrest system to an anchorage. The chain anchorage connector is a temporary overhead anchorage connector intended for use on such anchorages as pipes or beams.

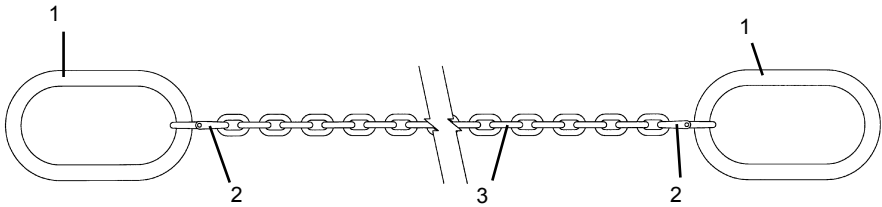


Fig. 1 Model 10003206 – chain anchorage connector

- 1 OVAL RINGS (2) connect one to personal fall arrest subsystem
- 2 COUPLING LINKS (2)
- 3 CHAIN LINKS

2.1 Markings and Labels

The labels must be present, legible and securely attached to the chain anchorage connector.

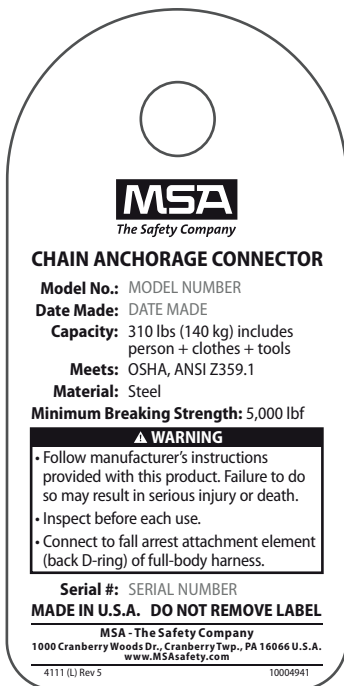


Fig. 2 Label

2.2 System Requirements

2.2.1 Compatibility of Components and Subsystems

Chain anchorage connectors are designed to be used with MSA approved components and connecting subsystems. Use of the chain anchorage connector with products made by other manufacturers 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, climbing protection, restraint, rescue or evacuation). 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 chain anchorage connectors, 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 chain anchorage connectors.

2.2.2 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 that the connecting carabiner and the D-ring on the harness or anchorage connector are compatible. Use only self-closing, self-locking carabiners (as defined and required by ANSI Z359.1).

2.2.3 Anchorages and Anchorage Connectors

Anchorages for personal fall arrest systems 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, or (b), must 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 personal fall arrest system is attached to an anchorage, the anchorage strengths set forth in (a) and (b) must be multiplied by the number of systems attached to the anchorage. This requirement is consistent with OSHA requirements under 20 CFR 1910, Subpart F, Section 1910.66, Appendix C. Do not proceed with installation and use of the anchorage connector if an assessment of strength cannot be made.

3 Use

3.1 Installation of the Chain Anchorage Connector



CAUTION!

Do not leave the chain anchorage connector installed in environments which could cause damage or deterioration to the product. Refer to sections 4 and 5 for care and inspection details. Do not leave unattended loads on the chain anchorage connector.

Wrap the chain anchorage connector around a suitable anchorage. Pass the oval ring on one end of the chain anchorage connector through the oval ring on the other end of the chain anchorage connector. Connect the attachment element of a compatible personal fall arrest system (locking snaphook or carabiner) to the free oval ring. Refer to Fig. 3 below.

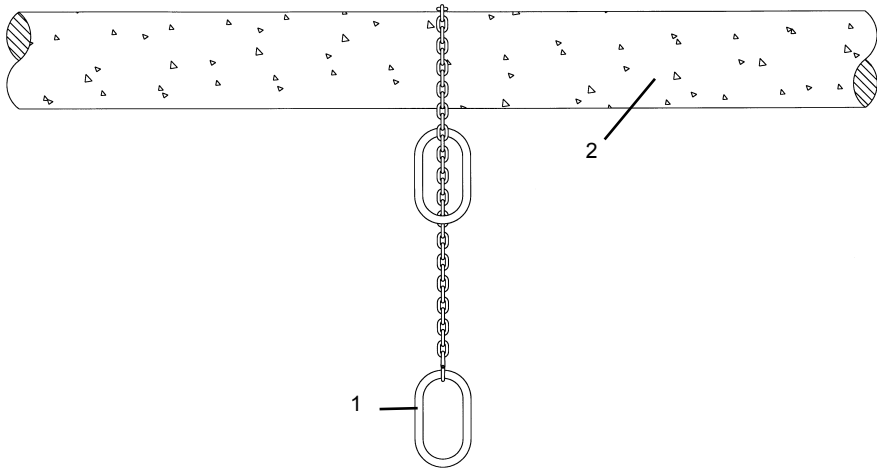


Fig. 3 Model No. 10003206

1 Oval Ring (for attachment to personal fall arrest system)

2 Anchorage

3.1.1 Making Connections

When using a snaphook or carabiner 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 or carabiner and the mating connector causes the carabiner’s gate or keeper to accidentally open and release. Rollout occurs when a snaphook or carabiner is snapped into an undersized ring such as an eye bolt or other non-compatibly shaped connector. Only self-closing, self-locking snaphooks or 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 the chain anchorage connector. Do not hook a lanyard back onto itself. Snaphooks and carabiners must not be connected to each other. Do not attach two snaphooks or carabiners into one chain anchorage connector. Fall clearance and free fall limits must take into account the additional length that the chain anchorage connector adds to the lanyard length. Always follow the manufacturer’s instructions supplied with each system component.

3.1.2 Removal of the Chain Anchorage Connector

Before attempting removal of the chain anchorage connector, disconnect all loads and attachment elements from the chain anchorage connector. Return the chain anchorage connector to the appropriate person in the user’s organization for cleaning, inspection and storage.

4 Care, Maintenance and Storage

4.1 Cleaning Instructions

Clean the chain anchorage connector with a solution of water and mild laundry detergent.

Dry hardware with a clean cloth and hang to air dry. Do not speed dry with heat. Excessive accumulation of dirt, paint or other foreign matter may prevent proper function of the chain anchorage connector. Questions concerning chain anchorage connector conditions and cleaning should be directed to MSA.

4.2 Maintenance and Service

Equipment which is damaged or in need of scheduled 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 repairs.

4.3 Storage

Store the chain anchorage connector 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 scheduled 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



CAUTION!

If the chain anchorage connector has been subjected to fall arrest or impact forces, it must be immediately removed from service and marked as "UNUSABLE" until destroyed.

- (1) The chain anchorage connector shall be inspected by the user before each use and additionally by a competent person other than the user at intervals of no more than one year.
Detailed inspections must be recorded in the inspection log (See 5.2 "Inspection Grid").
- (2) 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.
- (3) 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.
- (4) When inspection reveals damage or inadequate maintenance of the chain anchorage connector, the chain anchorage connector shall be permanently removed from service and replaced or undergo adequate corrective maintenance before returning to service.
- (5) Remove chain anchorage connector from service immediately if:
 - the product has been subjected to the forces of a fall.
 - label is missing or illegible.
 - there is evidence of improper function or alterations of any portion.
 - if inspection of chain links, master links, and oval rings reveals evidence of damage including fractures, cracks, deep pitting, deep nicks, abrasions, undue stretching, mildew/mold, dents, sharp edges, deformation, kinks, corrosion, chemical attack, excessive heating, excessive aging, or excessive wear.

5.1 Corrective Action



CAUTION!

Only MSA or parties authorized in writing may make repairs to this equipment.

When inspection in accordance with section 5 "Inspection" reveals any of the identified conditions, the chain anchorage connector must be immediately removed from service and marked as "UNUSABLE" until destroyed or subjected to corrective maintenance by the user's organization in accordance with this user instruction. Damage, excessive wear, malfunction, and aging are generally not repairable. If detected, immediately remove the chain anchorage connector from use and mark it as "UNUSABLE" until destroyed. For final disposition, submit the chain anchorage connector to a competent person who is authorized to perform Formal Inspection. If there is any question as to repairability, contact MSA or a service center authorized in writing by MSA before further use of the product.

5.2 Inspection Grid

Punch date of first use.

	J	F	M	A	M	J	J	A	S	O	N	D
1st												
2nd												
3rd												
4th												
5th												
6th												



For local MSA contacts, please visit us at [MSAafety.com](https://www.MSAafety.com)

Because every life has a **purpose...**
