

## TIE-OFFS

Employers and employees should at all times be aware that the strength of a personal fall arrest system is based on its being attached to an anchoring system which does not reduce the strength of the system (such as a properly dimensioned eye-bolt/snap-hook anchorage). Therefore, if a means of attachment is used that will reduce the strength of the system, that component should be replaced by a stronger one, but one that will also maintain the appropriate maximum arrest force characteristics. Employers and employees must realize the reduction in strength caused by certain tie-offs (such as using knots, tying around sharp edges, etc.). Tie-offs using a knot in a rope lanyard or lifeline (at any locations) can reduce the lifeline or lanyard strength by 50 percent or more. Tie-off of a rope lanyard or lifeline around an "H" or "I" beam or similar support can reduce its strength as much as 70 percent due to the cutting action on the beam edges. Such tie-offs should be avoided or alternative tie-off rigging should be used. Such alternatives may include use of a snap hook/D-ring connection, wire rope tie-off, an effective padding of the surfaces, or an abrasion-resistance strap around or over the problem surface. Care should be exercised in selecting dimensionally correct anchor points to avoid accidental disengagement of snap hooks not designed to be compatible for the connection.

## INSPECTION

Users should establish their own formal routine inspection according to prevailing conditions with a minimum of two formal inspections per year. Visual inspection is required before each use, for wear, damage and other deterioration, and defective components shall be removed from service.

## HOW TO CLEAN EQUIPMENT

Your rope grab has been carefully manufactured on stainless steel to provide you with a safety device which is as rugged and simple to use as possible. However, it must be realized that this equipment must be carefully used and maintained in order that when it is called upon to act as a safety device, it will operate correctly. It must be cleaned to operate properly. In order to be kept clean, it is necessary that it be washed each day with a liquid which dissolves or washes away all contaminants. Cement dust and fly ash should be washed away with water, possibly with a slight amount of soap added. Paint should be dissolved with a paint thinner suitable for the paint being used.

Epoxies and waterproofing materials should be removed by immersion in a solvent recommended by the company which manufactures the material being used. It is recommended that a can of solvent be kept at the point of usage of the rope grab, and that the rope grab be left in the solvent overnight. By so doing, the rope grab should be completely cleaned by morning, wipe off and put to use.

# OWNER'S MANUAL

## MIO ROPE GRAB – INDUSTRIAL TYPE

Model # RG-5800, Patent # 5,156,240

Meets: OSHA, ANSI Z359.1, A10-32

## Installation, Operation, Inspection and Maintenance Instructions

Best results when used in conjunction with a shock absorber.

**Model # 5800** is to be used with 5/8" diameter 3-strand synthetic rope lifeline with minimum tensile strength of 5800 lb. Polyester type is preferred. Also, the following 5/8" diameter recommended Kernmantle ropes may be used:

- **KM-III Static Kernmantle, Polyester Cover.** White w/blue tracer. **New England Ropes, Inc.** (min. breaking strength 13,000lbs)
- **HTP (High Tenacity Polyester)** Black/white tracer, red w/blue tracer, yellow w/black tracer, pink w/black tracer, blue w/red tracer, white w/blue tracer. **Sterling Rope Co., Inc.** (min. breaking strength 11,959lbs)
- **EZ Bend and Max Wear.** **PMI-Pigeon Mountain Industries.** (min. breaking strength 14,837lbs)
- **3 Strand Multiline II Rope - New England Ropes, Inc.** (min. breaking strength 9,800lbs)

## WARNING!

You must read and fully understand all instructions, or have all instructions explained to you before attempting to use this device. Equipment must not be installed, operated or inspected by anyone who does not understand this Owner's Manual. Failure to observe these instructions could result in serious injury or death. Careless or improper use of this equipment can result in serious injury or death. Training and instruction review should be repeated at regular intervals. If you have any questions regarding these instructions or need additional copies, call **MIO MECHANICAL Corp.** at 215-676-7828.

## MIO MECHANICAL CORP.

2020 Bennett Road, Philadelphia, PA

Tel: 215-676-7828 Fax: 215-676-5199

Email: [contact@msemio.com](mailto:contact@msemio.com) Web: [www.miomechanical.com](http://www.miomechanical.com)

## DESCRIPTION

The model# 5800 is a rope grabbing device that follows a worker's movement up and down a vertical lifeline. If a fall occurs, the rope grab locks on the rope and absorbs much of the force generated during the free fall. MIO Rope Grab is only a part of a complete fall protection system described in this manual. Such system generally includes a lifeline, rope grab, lanyard, full body harness and anchor capable of supporting at least 5,000 lbs. Must be used **ONLY** with compatible hardware and components.

## BEFORE USE

- ❑ Inspect the rope grab for any damage, dirt, oil, grit, paint, etc. Refer to "How To Clean Equipment" section on page 4 if necessary.
- ❑ Make sure the lifeline is **5/8" recommended diameter 3-strand synthetic rope lifeline or Kernmantle Rope**. See page 1.
- ❑ Tie off the bottom end of the lifeline vertically below the anchorage point to eliminate excess slack.

## INSTRUCTIONS

The fixed anchorage to which a lifeline, lanyard, or decelerating device is attached, **shall be capable of supporting at least 5,000 lbs per worker**.

**To minimize the free fall distance the lanyard length should not exceed 3 feet. Free fall distance shall not exceed 6 ft.**

When working location is reached, the worker should raise the rope grab as high as the lanyard allows and push downward on the handle to lock the rope grab on the lifeline.

**WARNING: Never attach more than one worker to the rope grab as required by OSHA, each employee must have a separate lifeline.**

## CAUTIONS

Items subjected to **FALL ARREST or IMPACT FORCES** must be immediately removed from service and destroyed. Any item showing **EXCESSIVE WEAR OR DETERIORATION** should be destroyed. Inspect all equipment before each use. Failure to observe proper inspection and usage procedures could result in **INJURY OR DEATH**.

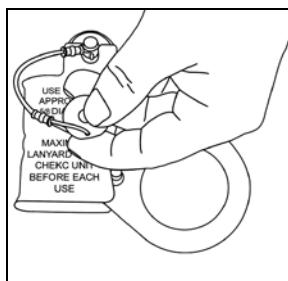
**ENVIRONMENTAL HAZARDS** must be considered in selecting the appropriate lifeline, harness and lanyard. Recommendations where chemicals, high temperature or other unusual conditions exist may be addressed to **MIO Mechanical Corp. at 215-676-7828**.

## FREE FALL CONSIDERATIONS

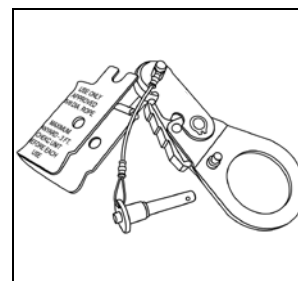
Free fall distance should be kept to a minimum, and as required by OSHA, in no case shall be greater than 6 feet. To help assure this, the tie-off attachment point to the lifeline or anchor should be located at or above the connection point of the fall arrest equipment to the harness.

## INSTALLATION OF LIFELINE

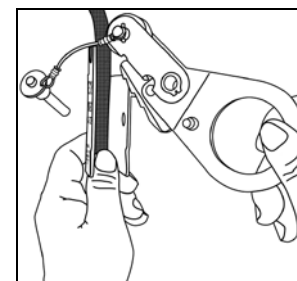
Use only 5/8" diameter recommended rope.



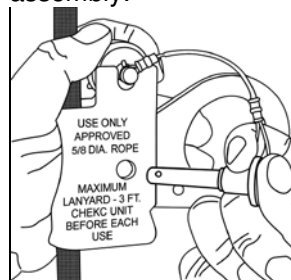
1. Depress the button on the safety locking pin and remove from main assembly.



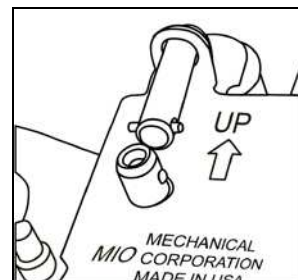
2. Swing cam and lever assembly up and open.



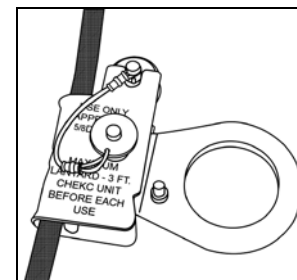
3. Place rope grab on rope with plastic roller pointing up.



4. Close assembly, align holes and reinsert safety locking pin.



5. Make sure that locking pin balls appear on outside of main assembly and the direction arrow on the housing is pointing up.



6. Check locking action by pulling down on rope grab handle.

## EMPLOYEE TRAINING CONSIDERATIONS

Thorough employee training in the selection and use of personal fall arrest systems is imperative. Before the equipment is used, employees must be trained in the safe use of the system. This shall include; application limits; proper anchoring and tie-off techniques; estimation of free fall distance, and including determination of deceleration distance, and total fall distance to prevent striking a lower level; methods of use; and inspection and storage of the system. Safety lines, Lanyards, Safety Belts and Harnesses must be utilized in strict accordance with the manufacturer's recommendations.

Determination of suitability of any fall protection device for specific use is the responsibility of the user. Questions concerning suitability may be addressed to **MIO Mechanical Corp. at 215-676-7828**.

**CARELESS OR IMPROPER USE OF THE EQUIPMENT CAN RESULT IN SERIOUS INJURY OR DEATH.**