

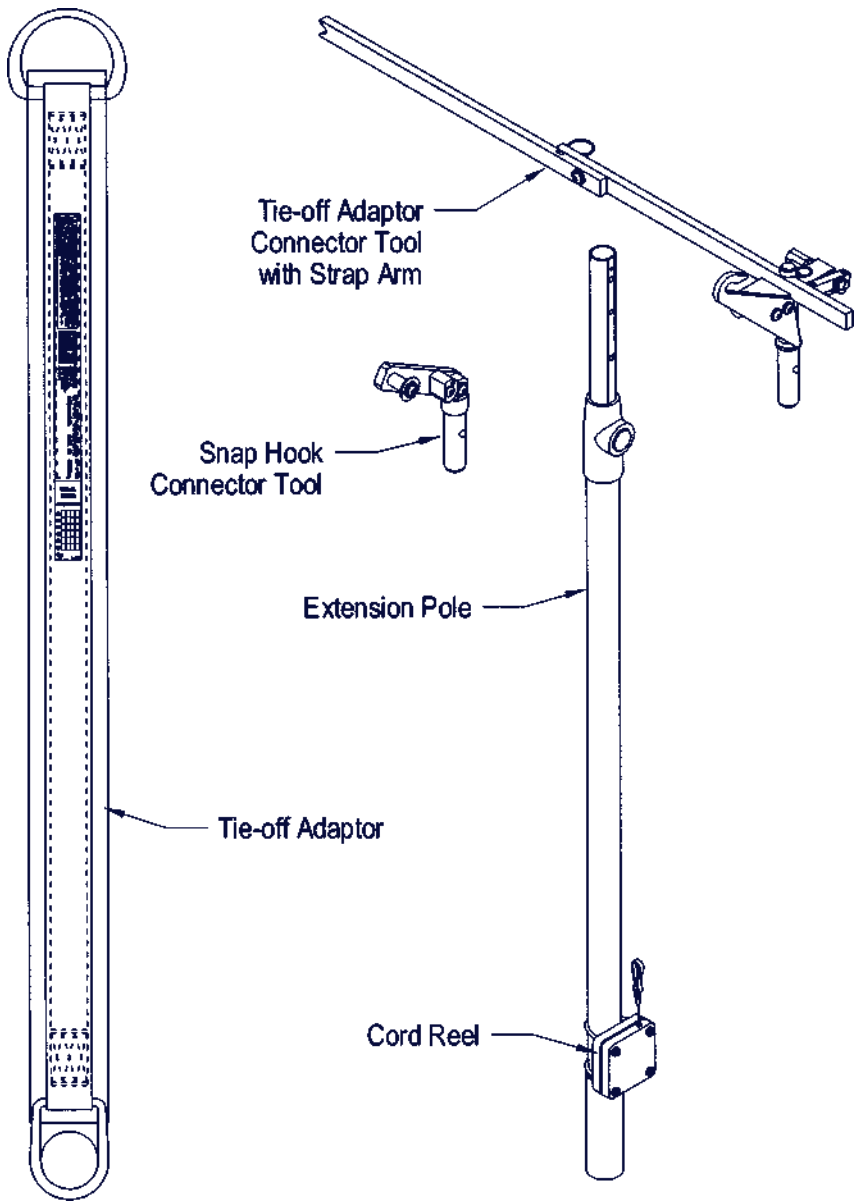


User Instruction Manual
First-Man-Up™ Remote Anchorage
Connector System

This manual is intended to meet the Manufacturer's Instructions as required by ANSI Z359.1-1992 and ANSI A10.14-1991, and should be used as part of an employee training program as required by OSHA.



Figure 1



WARNING: *These instructions must be provided to the user of this equipment. The user must read and understand these instructions before using this equipment. The user must follow the manufacturer's instructions for each component of the system. Manufacturer's instructions must be followed for proper use and maintenance of this equipment. Alterations or misuse of this equipment, or failure to follow instructions, may result in serious injury or death.*

WARNING: *Always wear a hard hat when using the First-Man-Up system.*

IMPORTANT: *If you have questions on the use, care, or suitability of this equipment for your application, contact DBI/SALA.*

DESCRIPTIONS See Figure 1.

2104519: Remote anchorage connector system, six to twelve foot extension pole, tie-off adaptor connector tool, snap hook connector tool, tie-off adaptor anchorage connector, carrying bag, instructional video.

2104520: Remote anchorage connector system, eight to sixteen foot extension pole, tie-off adaptor connector tool, snap hook connector tool, tie-off adaptor anchorage connector, carrying bag, instructional video.

2104521: Tie-off adaptor connector tool only.

2104522: Snap hook connector tool only.

2104523: Six to twelve foot extension pole only.

2104524: Eight to sixteen foot extension pole only.

2102260: Strap arm for three foot tie-off adaptor.

2102408: Strap arm for four foot tie-off adaptor.

2102409: Strap arm for five foot tie-off adaptor.

2102410: Strap arm for six foot tie-off adaptor.

1.0 APPLICATIONS

1.1 PURPOSE: The First-Man-Up system assists in installing and removing a DBI/SALA tie-off adaptor anchorage connector and lifeline in overhead installations. The tie-off adaptor and lifeline (or other device) must be approved for use with the First-Man-Up system by DBI/SALA. The First-Man-Up system may also be used for attaching a lifeline or other device to an overhead anchorage point.

2.0 SYSTEM REQUIREMENTS

2.1 ANCHORAGE STRENGTH: The anchorage to which the tie-off adaptor is installed must meet the following minimum strengths, according to your application:

- A. FALL ARREST:** Anchorages used for personal fall arrest systems (PFAS) must sustain static loads, applied in the directions allowed by the PFAS, of at least; 3,600 lbs. with certification of a qualified person, or 5,000 lbs. without certification. See ANSI Z359.1-1992 for certification definition. When more than one PFAS is attached to an anchorage, the strengths stated above must be multiplied by the number of PFAS attached to the anchorage. From OSHA 1910.66 and 1926.502: Anchorages used for attachment of a PFAS shall be independent of any anchorage being used to support or suspend platforms, and be capable of supporting at least 5,000 lbs. per user attached, or be designed,

installed, and used as part of a complete PFAS which maintains a safety factor of at least two, and is supervised by a qualified person.

- B. RESTRAINT:** Anchorages used for restraint applications must sustain static loads, applied in the directions allowed by the restraint system, of at least 3,000 lbs. Each tie-off adaptor installation must be independently capable of sustaining these loads.
- C. WORK POSITIONING:** Anchorages used for work positioning applications must sustain static loads, applied in the directions allowed by the work positioning system, of at least 5,000 lbs. Each tie-off adaptor installation must be independently capable of sustaining these loads.
- D. SUSPENSION:** Anchorages used for suspension applications must sustain static loads, applied vertically, of at least 2,500 lbs. Each tie-off adaptor installation must be independently capable of sustaining these loads.
- E. RESCUE:** Anchorages used for rescue applications must sustain static loads, applied in the directions allowed by the rescue system, of at least 2,500 lbs. Each tie-off adaptor installation must be independently capable of sustaining these loads.

3.0 OPERATION AND USE

WARNING: *Maintain a minimum clearance of ten feet between the First-Man-Up system and electrical power lines.*

3.1 USING THE TIE-OFF ADAPTOR CONNECTOR TOOL:

A. ATTACHING THE CORD REEL:

To attach the cord reel onto the extension pole, position the bottom of the cord reel flush with the handle grip on the end of the extension pole as shown in Figure 2. Attach cord reel to extension pole with the two nylon threaded rods and lock nuts. The cord reel must be positioned on the front of the extension pole as shown for proper functioning. Trim excess threaded rod, leaving a minimum of two full threads above the lock nuts.

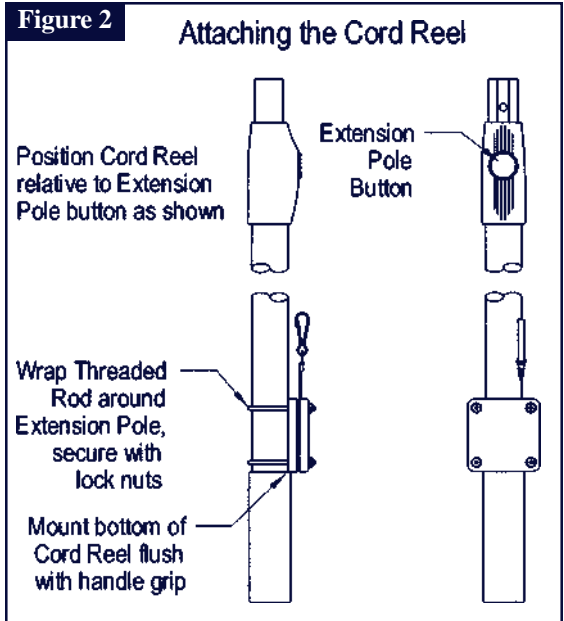
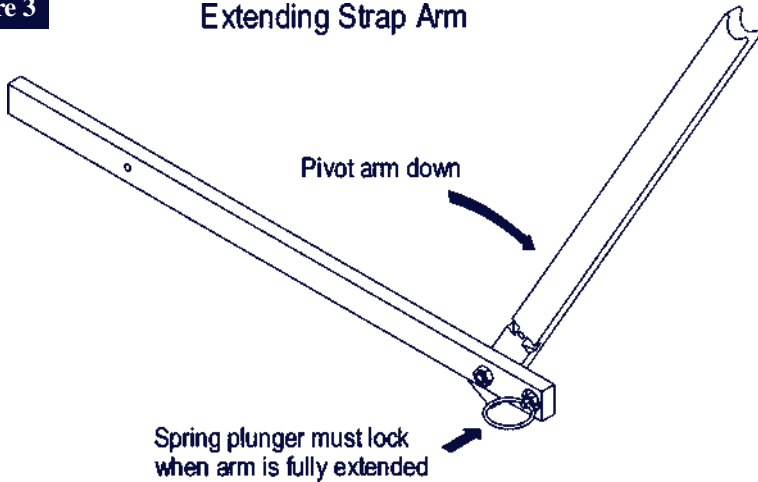


Figure 3

Extending Strap Arm

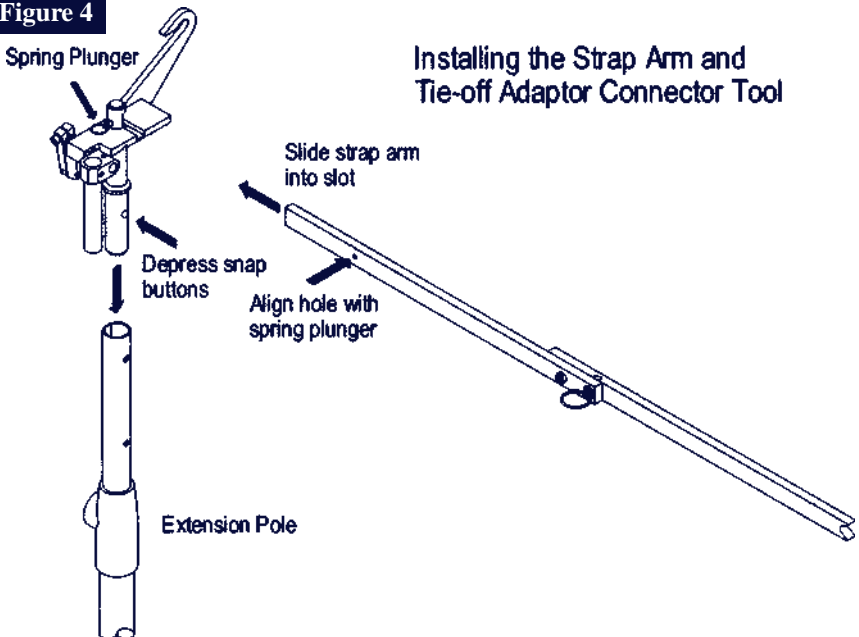


B. ATTACHING THE TIE-OFF ADAPTOR CONNECTOR TOOL:

- Step 1.** Extend the strap arm to its full length by pivoting the strap arm until it locks into place. Ensure spring plunger fully engages and locks strap arm into place. See Figure 3. See Descriptions section above for optional longer length strap arms. NOTE: Optional strap arms are one-piece, non-pivoting strap arms.
- Step 2.** To install the strap arm onto the tie-off adaptor connector tool, pull out the spring plunger on top of the tie-off adaptor connector tool and slide the strap arm into the slot as shown in Figure 4. Align the hole on the strap arm with

Figure 4

Installing the Strap Arm and Tie-off Adaptor Connector Tool

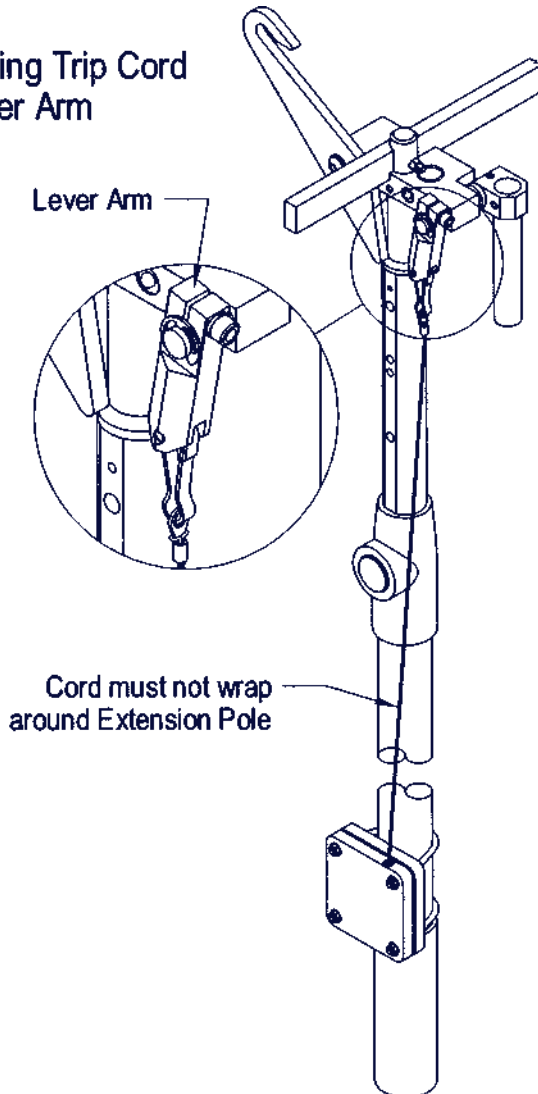


the spring plunger and release spring plunger. Ensure spring plunger locks into place on the strap arm.

- Step 3.** To install the tie-off adaptor connector tool onto the extension pole, depress the snap buttons on each side of the tool insert and slide into the open end of the extension pole as shown in Figure 4. Ensure the snap buttons lock into the holes on the extension pole. **NOTE:** Tie-off adaptor connector tool must be positioned on the extension pole as shown in Figure 4 for proper functioning.
- Step 4.** Extend the trip cord from the cord reel and attach to the pin on the lever arm on the tie-off adaptor connector tool. See Figure 5. The trip cord must pass straight up, without crossing over the pole.

Figure 5

Attaching Trip Cord to Lever Arm



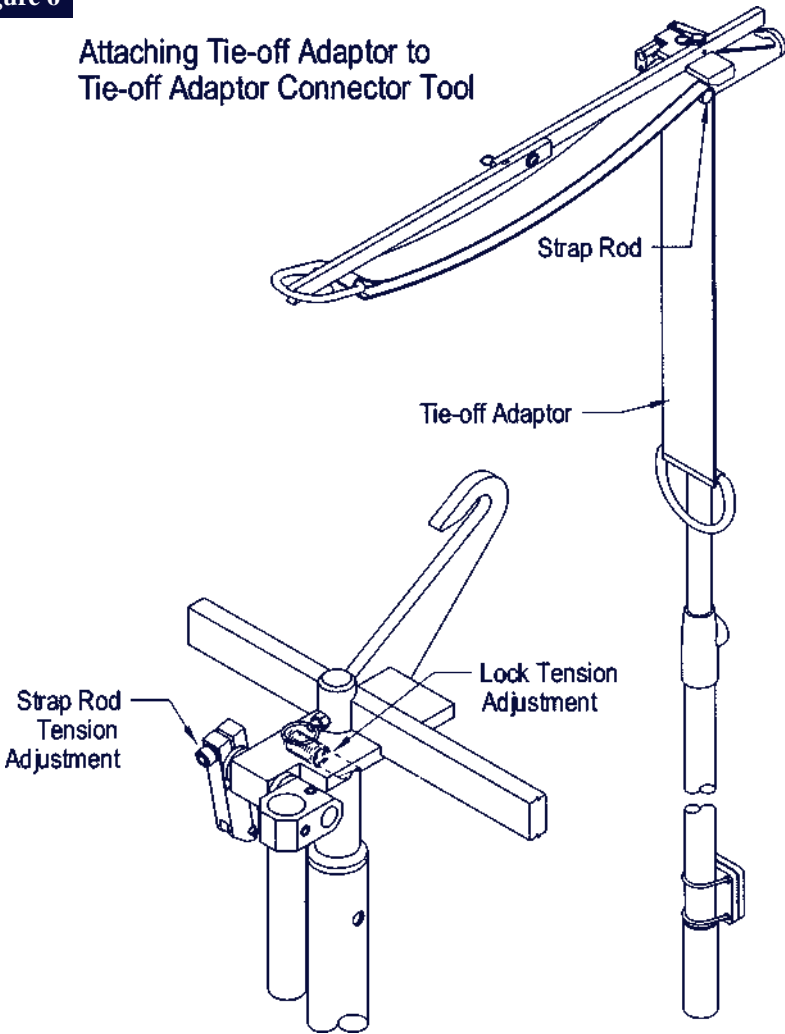
C. ATTACHING THE TIE-OFF ADAPTOR TO THE TIE-OFF ADAPTOR CONNECTOR TOOL:

See Figure 6. With the strap arm fully extended, place the small D-ring into the groove on the end of the strap arm, with the narrow web facing up. Run the tie-off adaptor, with the narrow web against the strap arm, along the bottom of the strap arm and rotate the strap rod up until it locks in place.

IMPORTANT: *The strap rod must fully capture and hold the tie-off adaptor in place as shown. If the strap rod does not securely lock, adjust the lock tension with a flat head screw driver as shown in Figure 6. If the strap rod is loose, adjust the strap rod tension with a 5/32 inch allen wrench as shown in Figure 6.*

Figure 6

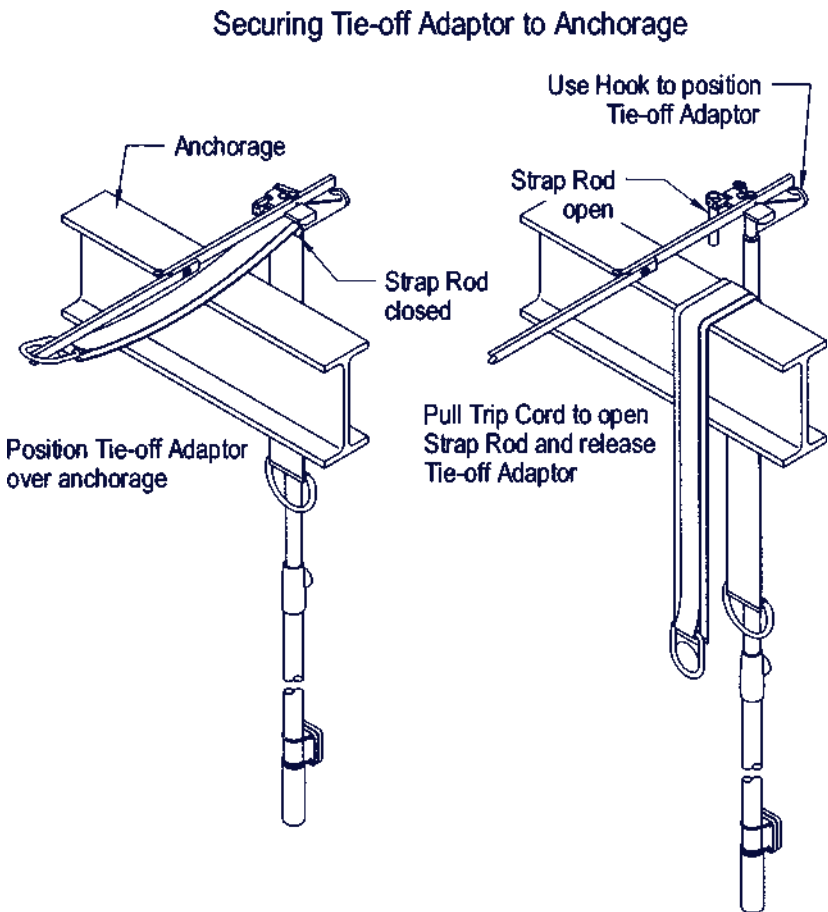
Attaching Tie-off Adaptor to Tie-off Adaptor Connector Tool



D. SECURING THE TIE-OFF ADAPTOR TO THE ANCHORAGE:

- Step 1.** Extend the extension pole to the length required to reach the anchorage. The strap rod must remain in the locked position. Ensure the trip cord remains attached to the pin on the lever arm.
- Step 2.** Rest the strap arm with tie-off adaptor on top of the anchorage. The wider web (which acts as a wear pad) must be against the anchorage, as shown in Figure 7. Ensure the tie-off adaptor web is not twisted. Pull the trip cord to release the strap rod, which will allow the tie-off adaptor to drape over the anchorage with both D-rings hanging below the anchorage. Using the hook on the tie-off adaptor connector tool, position the tie-off adaptor so that it drapes evenly over the anchorage.

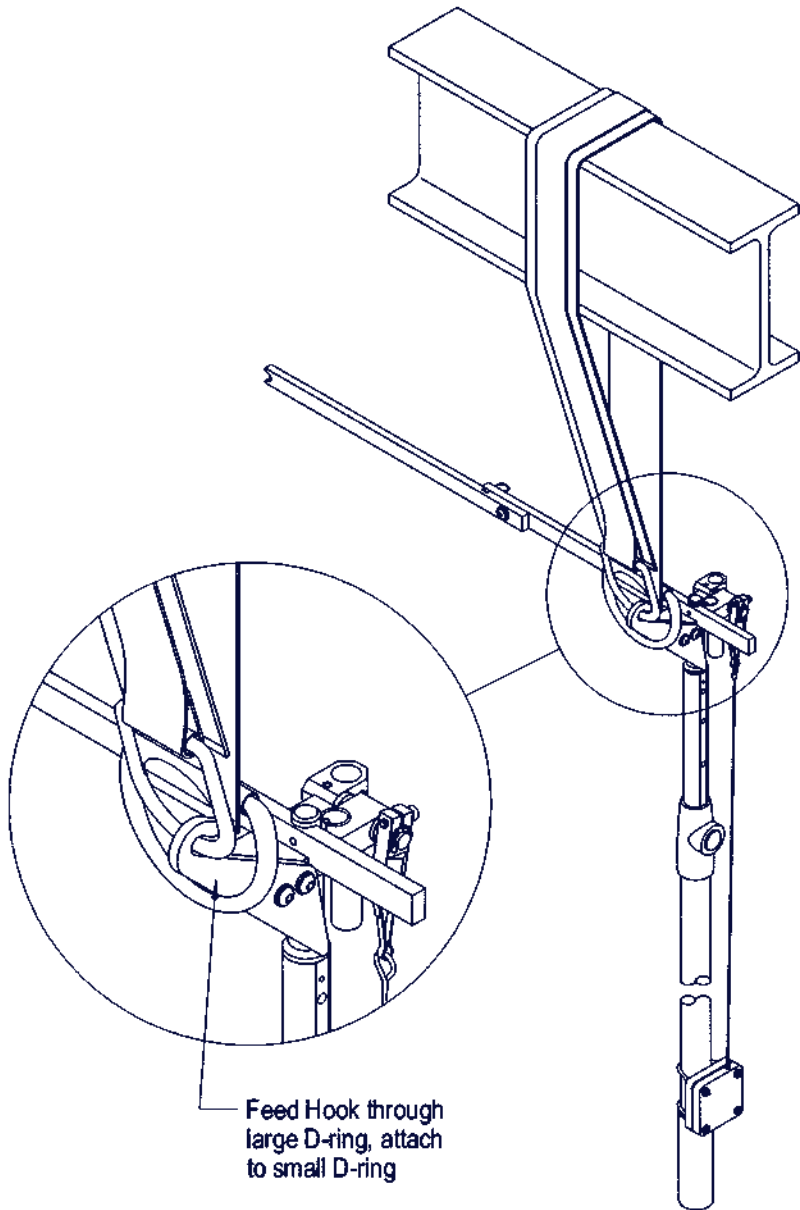
Figure 7



Step 3. Feed the hook on the tie-off adaptor connector tool through the large D-ring on the tie-off adaptor and hook onto the small D-ring as shown in Figure 8.

Figure 8

Securing Tie-off Adaptor to Anchorage

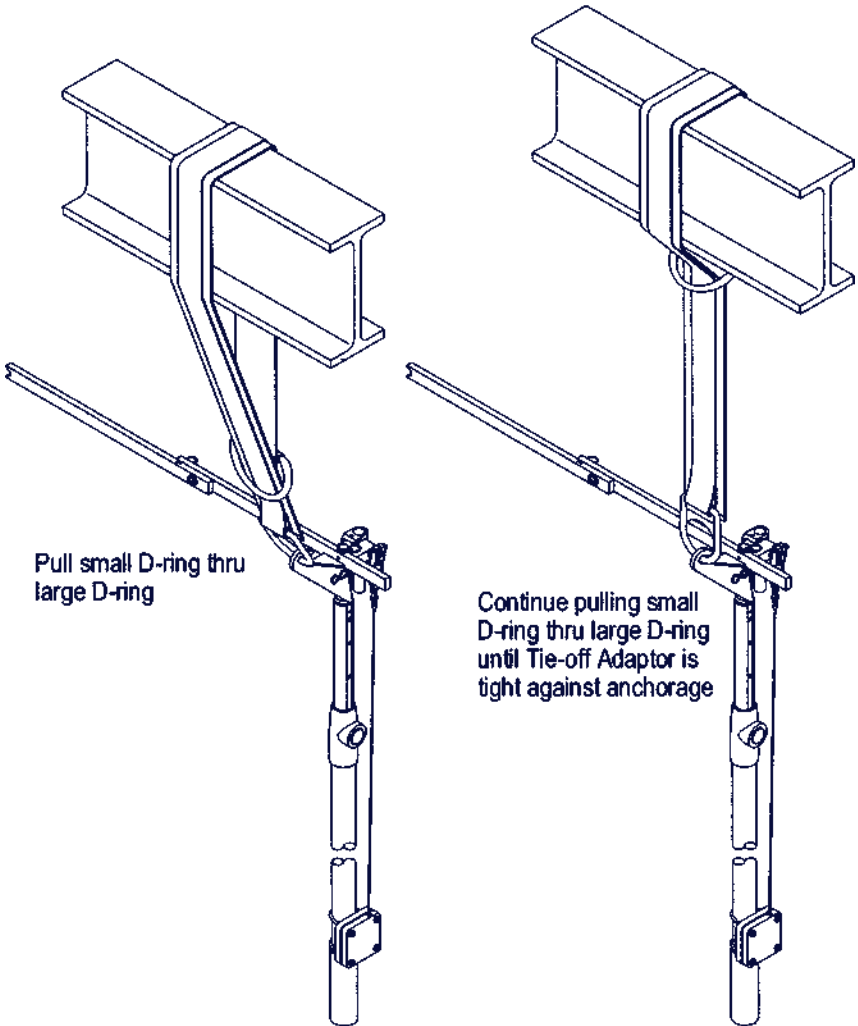


- Step 4.** Pull the small D-ring through the large D-ring until the tie-off adaptor is tight against the anchorage as shown in Figure 9.
- Step 5.** Retract the extension pole to the minimum length. Detach the trip cord from the tie-off adaptor connector tool and allow the trip cord to slowly retract into the cord reel. Remove the tie-off adaptor connector tool from the extension pole. See section 6.0 for cleaning and storage.

WARNING: *The tie-off adaptor must be tight against the anchorage as shown in Figure 9. To prevent increased free fall distance, do not leave slack in the tie-off adaptor.*

Figure 9

Securing Tie-off Adaptor to Anchorage



3.2 USING THE SNAP HOOK CONNECTOR TOOL:

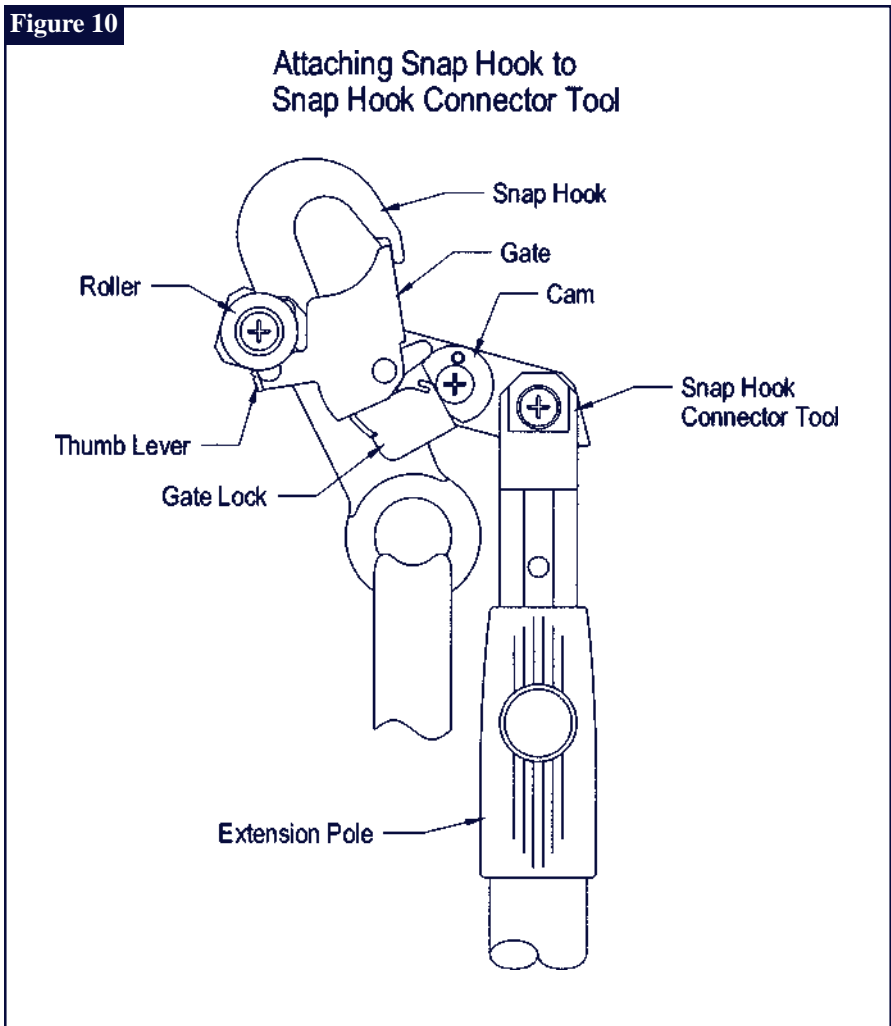
A. ATTACHING THE SNAP HOOK CONNECTOR TOOL:

To install the snap hook connector tool onto the extension pole, depress the snap buttons on each side of the tool insert and slide into the open end of the extension pole. Ensure the snap buttons lock into the holes on the extension pole.

B. ATTACHING THE SNAP HOOK TO THE SNAP HOOK CONNECTOR TOOL:

Attach the snap hook to the snap hook connector tool between the roller and cam as shown in Figure 10. The thumb lever must be in contact with and below the roller, and the gate lock must be in contact with the cam.

Figure 10



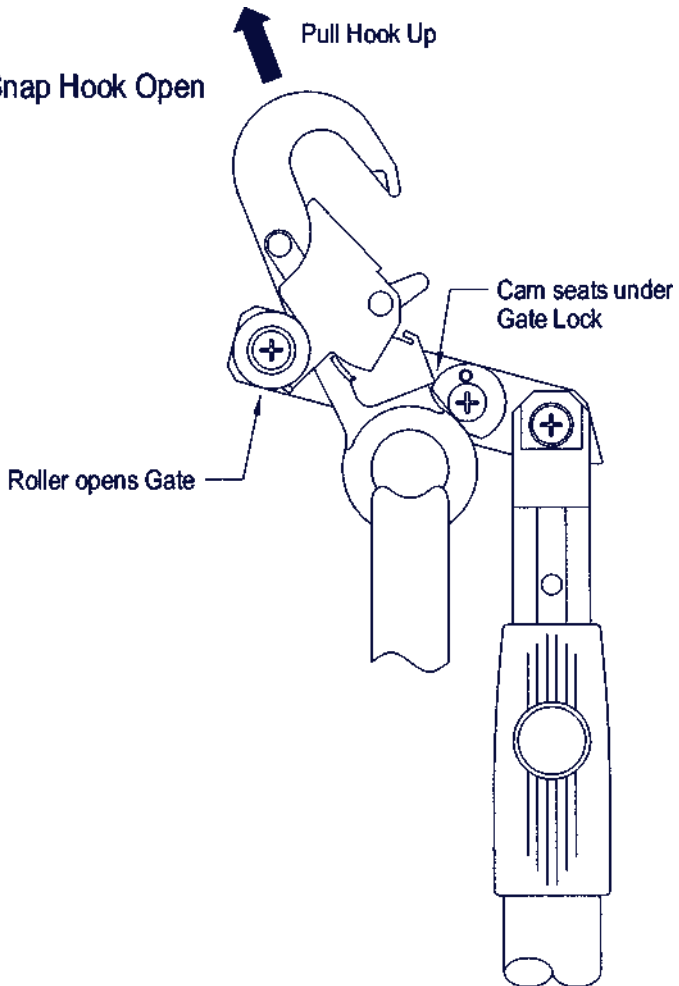
C. CONNECTING THE SNAP HOOK TO THE TIE-OFF ADAPTOR:

- Step 1.** See Figure 11. To lock the snap hook open, pull the snap hook up, which causes the cam to push back the gate lock and the roller to open the gate. Continue pulling up until the cam rotates and seats under the gate lock, which locks the gate open. The snap hook must be locked open before attaching to the tie-off adaptor.
- Step 2.** To connect the snap hook to the tie-off adaptor, extend the pole to the required length. Place the snap hook onto the small D-ring on the tie-off adaptor. See Figure 12.

WARNING: Hold the lifeline against the extension pole, with a small amount of tension, so that the snap hook does not unintentionally detach and fall.

Figure 11

Locking Snap Hook Open

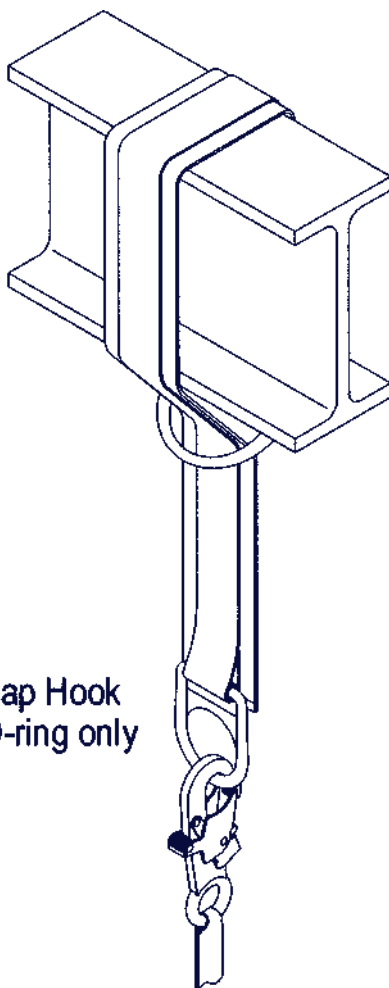


Step 3. To close the snap hook around the D-ring, release the snap hook from the connector tool, pull down slightly on the lifeline, twist the extension pole counter-clockwise while pushing up slightly. The snap hook should close over the D-ring and release from the connector tool. Do not pull down on the extension pole. Tug on the lifeline to ensure the snap hook is securely attached to the D-ring.

WARNING: *The snap hook must only be attached to the small D-ring on the tie-off adaptor as shown in Figure 12. Do not attach the snap hook to both D-rings.*

Step 4. Retract the extension pole to the minimum length. Remove the snap hook connector tool from the extension pole. See section 6.0 for cleaning and storage.

Figure 12



**Attach Snap Hook
to small D-ring only**

3.3 USING THE SNAP HOOK CONNECTOR TOOL WITH A HARNESS MOUNTED SELF RETRACTING LIFELINE:

When attaching a lifeline from a harness mounted self retracting lifeline, follow the steps listed in section 3.2, but, because there is significant tension on the lifeline (which may cause the snap hook to unintentionally disengage), wrap the lifeline two wraps around the extension pole to relieve the lifeline tension before attempting to attach the snap hook to the tie-off adaptor D-ring.

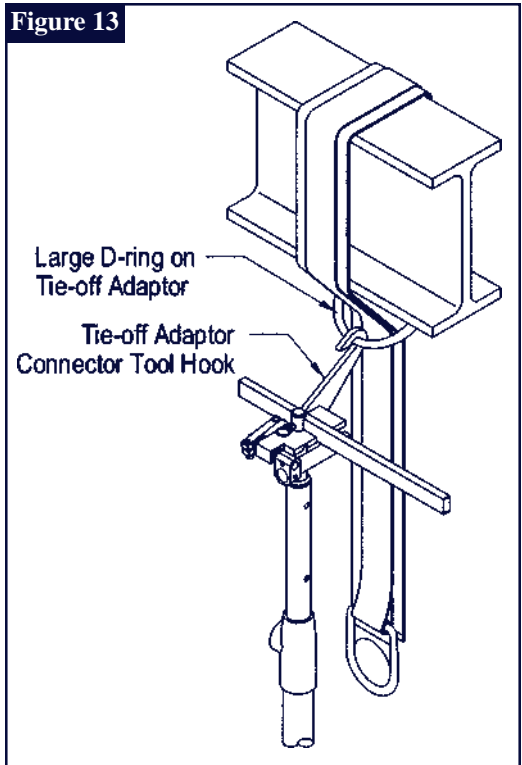
3.4 REMOVING THE SNAP HOOK FROM THE TIE-OFF ADAPTOR:

Step 1. To remove the snap hook from the tie-off adaptor, use the snap hook connector tool. See section 3.2 for attaching the snap hook connector tool to the extension pole. Extend the extension pole up to the snap hook. With one hand, hold the lifeline under tension. With the other hand, maneuver the extension pole to attach the snap hook to the snap hook connector tool, with the thumb lever in contact with and below the roller, and the gate must be in contact with the cam. See Figure 10.

Step 2. To lock the snap hook open, pull down on the extension pole, which causes the cam to push back the gate lock and the roller to open the gate. Continue pulling the extension pole until the cam rotates and seats under the gate lock, which locks the gate open. See Figure 11. When the gate is locked open, remove the snap hook from the tie-off adaptor D-ring.

3.5 REMOVING THE TIE-OFF ADAPTOR FROM THE ANCHORAGE:

To remove the tie-off adaptor from the anchorage, use the tie-off adaptor connector tool. See section 3.1 for attaching the tie-off adaptor connector tool to the extension pole. Extend the extension pole up to the large D-ring on the tie-off adaptor. Using the tie-off adaptor connector tool hook, hook the large D-ring on the tie-off adaptor as shown in Figure 13. Pull down while moving away from the anchorage until the tie-off adaptor is dragged off the anchorage. The tie-off adaptor should remain on the connector tool hook once removed from the anchorage, but use caution to ensure the tie-off adaptor does not fall.



4.0 TRAINING

- 4.1** It is the responsibility of the user and purchaser of this equipment to be familiar with these instructions, and are trained in the correct care and use, and are aware of the operating characteristics, application limits, and the consequences of improper use of this equipment.

5.0 INSPECTION

- 5.1 BEFORE EACH USE** inspect your First-Man-Up system according to sections 5.2 and 5.3 of this manual. A competent person, other than the user, must inspect this system at least annually. Record the results of each inspection in the inspection and maintenance log in section 9.0.

WARNING: *If subsystem components (tie-off adaptor, lifeline) have been subjected to the forces of a fall arrest, remove from service and destroy.*

5.2 INSPECTION STEPS:

- Step 1.** Inspect the tie-off adaptor according to manufacturer's instructions. All hardware must be present and undamaged, and webbing must be free of frayed, cut, or broken fibers.
- Step 2.** Inspect tie-off adaptor connector tool. The strap arm must lock into place and hold the tie-off adaptor securely. Inspect the strap rod and lock tension adjustments. If adjustments are required, see section 3.1.B and 3.1.C for instructions. Inspect the trip cord. The cord must be free of frayed, cut, or broken fibers.
- Step 3.** Inspect the snap hook connector tool. Roller and cam must turn freely.
- Step 4.** Inspect the extension pole. The pole must extend and retract freely. The fiberglass pole must be free of broken or splintered parts.
- Step 5.** Inspect all system components and subsystems according to manufacturer's instructions.
- Step 6.** Inspect labels. All labels must be present and fully legible. See section 8.0.
- Step 7.** Record the inspection results in the inspection and maintenance log in section 9.0 of this manual.
- 5.3** If inspection reveals an unsafe or defective condition, remove unit from service and contact an authorized service center for repair.

IMPORTANT: *Only DBI/SALA or parties authorized in writing may make repairs to this equipment.*

6.0 MAINTENANCE, SERVICING, STORAGE

- 6.1** Clean the First-Man-Up system components with water and a mild detergent solution. Wipe off hardware with a clean, dry cloth and hang to air dry. Do not force dry with

TIE-OFF ADAPTOR
INSTALLATION INSTRUCTIONS

- 1) INSTALL TIE-OFF ADAPTOR TOOL INTO EXTENSION POLE END AND CONNECT TRIP CORD HOOK TO LEVER ARM PIN.
- 2) WITH STRAP ARM EXTENDED, SEAT SMALL D-RING OF TIE-OFF ADAPTOR IN V-GROOVE AT STRAP ARM END. GUIDE STRAP (NARROW STRAP UP) ALONG LOWER EDGE OF STRAP ARM TO MOUNTING BLOCK. LATCH STRAP AGAINST MOUNTING BLOCK WITH STRAP ROD.
- 3) EXTEND POLE (SEE "WARNING" NOTE) TO ALLOW TOOL TO REACH OVER ANCHORAGE MEMBER.
- 4) POSITION TIE-OFF ADAPTOR TO ALLOW IT TO DRAPE OVER ANCHORAGE. PULL LEVER ARM TRIP CORD TO RELEASE TIE-OFF ADAPTOR.
- 5) FEED TOOL HOOK THROUGH LARGE D-RING AND CONNECT INTO LOWER EDGE OF SMALLER D-RING. PULL FIRMLY UNTIL TIE-OFF ADAPTOR IS SNUG AROUND ANCHORAGE.

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DBI/SALA; 3965 PEPIN AVE.
RED WING, MN 55066. (800) 328-6146

MODEL 2104521 TIE-OFF ADAPTOR TOOL
MATERIAL: ALUMINUM OR STEEL

▲ WARNING

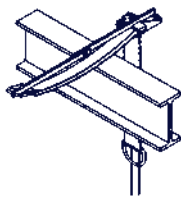
MANUFACTURER'S INSTRUCTIONS SUPPLIED WITH THIS PRODUCT AT TIME OF PURCHASE MUST BE FOLLOWED FOR PROPER USE, INSPECTION AND MAINTENANCE. ALTERATION, MISUSE, OR FAILURE TO FOLLOW INSTRUCTIONS, MAY RESULT IN SERIOUS INJURY OR DEATH. INSPECT PRODUCT BEFORE EACH USE IN ACCORDANCE WITH USER INSTRUCTION MANUAL. FOR USE WITH DBI 1967 STYLE TIE-OFF ADAPTORS ONLY. ANCHORAGE MUST HAVE 5000 LB. STRENGTH PER SYSTEM ATTACHED, OR BE ENGINEERED BY A QUALIFIED PERSON. CLEAR AREA IS CLEAR IN POTENTIAL FALL ZONE UNDER ANCHORAGE. UTILIZE PERSONAL PROTECTIVE EQUIPMENT WHERE HAZARDS EXIST. CAUTION MUST BE TAKEN WHEN INSTALLING OR REMOVING TIE-OFF ADAPTOR. TIE-OFF ADAPTOR MAY BECOME DISLODGED OR LATCHING ENGAGEMENT MAY NOT BE SUFFICIENTLY SECURED. WHEN TIE-OFF ADAPTOR IS PULLED FREE OF SUPPORT MEMBER, D-RING MAY DISLODGE FROM TOOL HOOK, WHICH WILL ALLOW TIE-OFF ADAPTOR TO FALL.

TIE-OFF ADAPTOR
REMOVAL INSTRUCTIONS

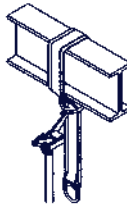
- 1) INSTALL TIE-OFF ADAPTOR TOOL INTO EXTENSION POLE END (WITH OR WITHOUT STRAP ARM ATTACHED).
- 2) EXTEND POLE TO ALLOW TOOL HOOK ENGAGEMENT OF LARGE D-RING.
- 3) SLIDE FLAT SIDE OF TOOL HOOK BETWEEN OUTSIDE OF STRAP AND D-RING UNTIL HOOK ENGAGES D-RING. TURN POLE TO ENGAGE HOOK FULLY, THEN PULL STRAIGHT ALONG POLE AXIS. THE LARGE D-RING WILL PULL OVER SMALLER D-RING TO FREE TIE-OFF ADAPTOR. POSITION TOOL HOOK DIRECTLY UNDER ANCHORAGE MEMBER AND CONTINUE PULLING UNTIL STRAP IS FREE. THE LOOSE END OF STRAP WILL FALL WHILE THE OTHER END SHOULD REMAIN ON TOOL HOOK TO RETAIN TIE-OFF ADAPTOR (SEE "WARNING" NOTE 1).

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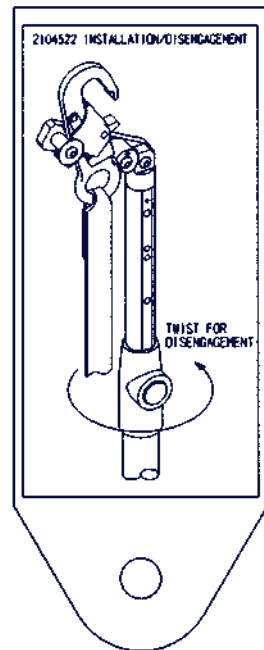
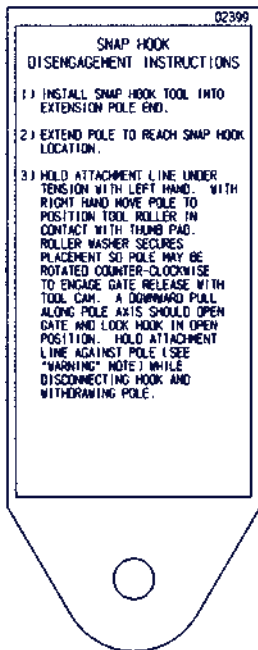
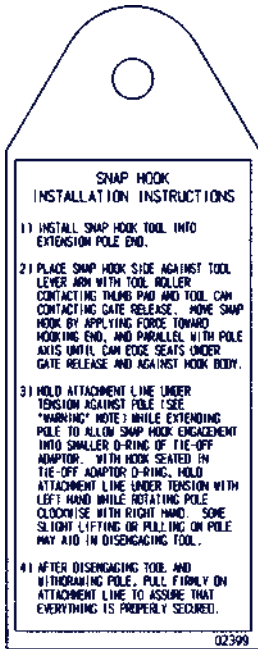
2104521 INSTALLATION



2104521 REMOVAL



Tie-off Adaptor Connector Tool Labels



Snap Hook Connector Tool Labels

9.0 INSPECTION AND MAINTENANCE LOG

SERIAL NUMBER: _____

MODEL NUMBER: _____

DATE PURCHASED: _____

INSPECTION DATE	INSPECTION ITEMS NOTED	CORRECTIVE ACTION TAKEN	MAINTENANCE PERFORMED
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			
Approved By:			

WARRANTY

Equipment offered by DB Industries, Inc. is warranted against factory defects in workmanship and materials for a period of one year from the date of installation or use by the owner, provided that this period shall not exceed two years from the date of shipment. Upon notice in writing, DB Industries, Inc. will promptly repair or replace all defective items. DB Industries, Inc. reserves the right to elect to have any defective item returned to its plant for inspection before making a repair or replacement. Warranty does not cover equipment damages resulting from abuse, damage in transit, or other damage beyond the control of DB Industries, Inc. This warranty applies only to the original purchaser and is the only one applicable to our products and is in lieu of all other warranties, expressed or implied.



USA

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Certificate No. FM 39709

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Rev: A