

# 3M

DBI  
**SALA**®

OSHA 1926.502  
OSHA 1910.140

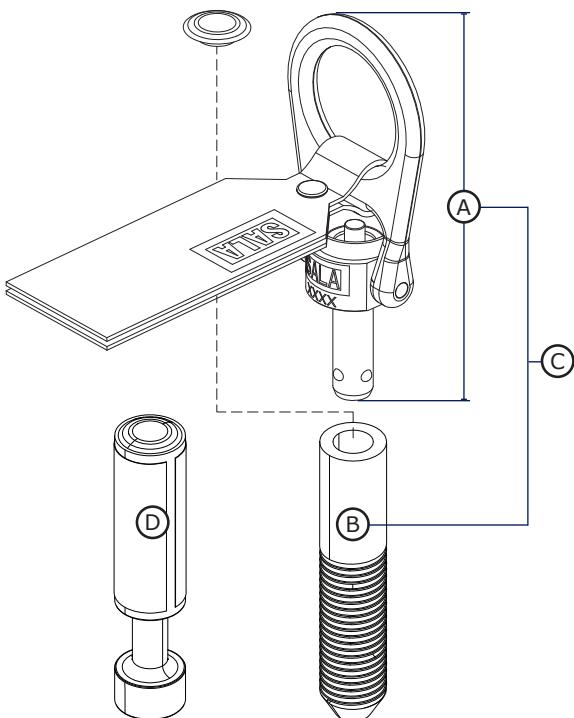
## CONCRETE DETENT

Anchorage Connector

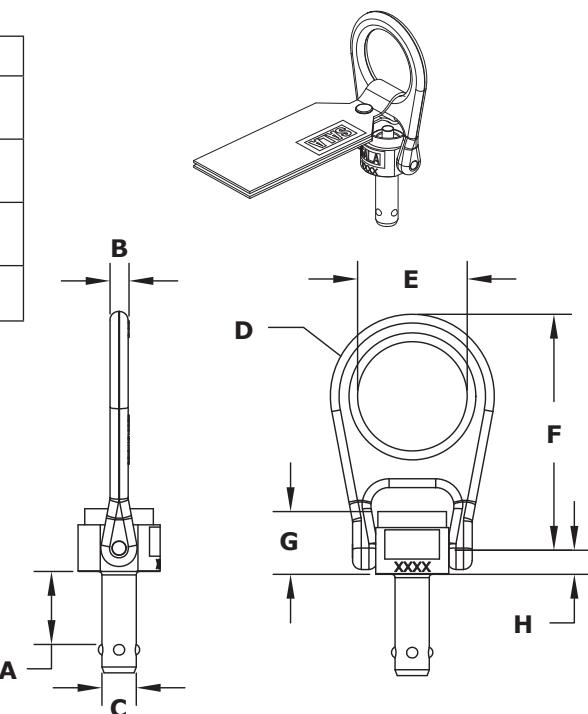
### USER INSTRUCTIONS 5902442 REV. D

Fall Protection

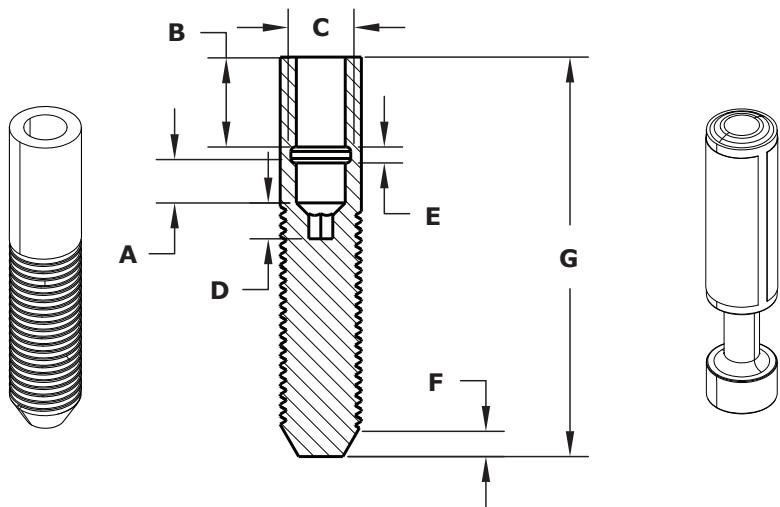
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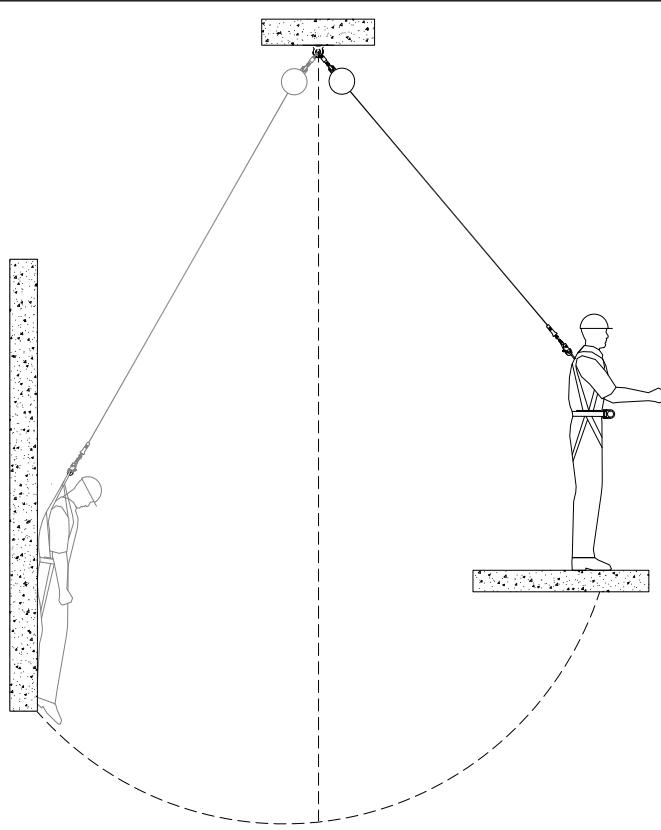
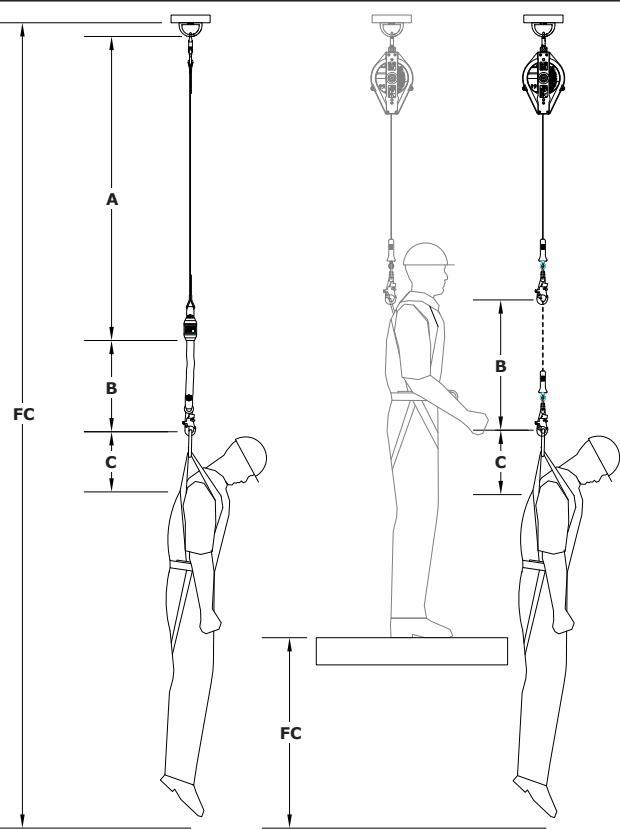
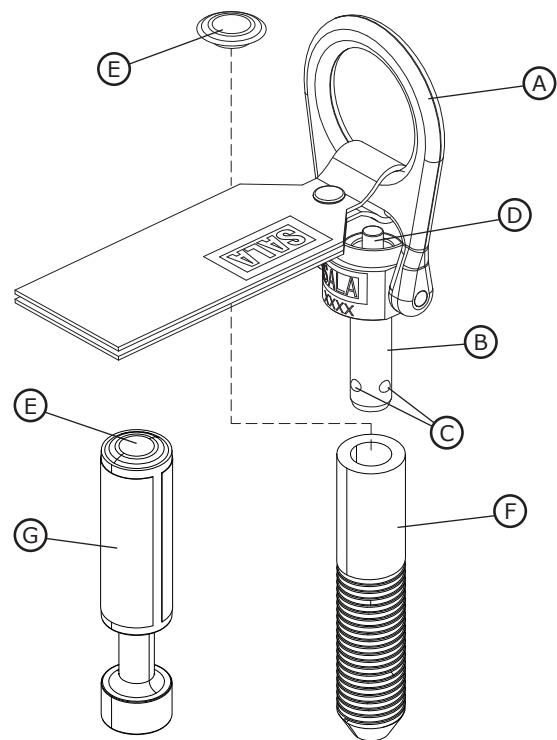


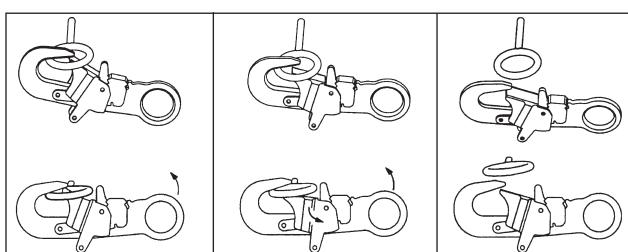
	Model
(A)	2101000
(B)	2101002
(C)	2101004
(D)	2100152



Model	A	B	C	D	E	F	G	H	lb. (kg)
2101000	1.0 in. (25.4 mm)	0.25 in. (6.4 mm)	0.47 in. (11.94 mm)	2.25 in. (57 mm)	1.5 in. (38 mm)	3.25 in. (82.5 mm)	0.86 in. (21.8 mm)	0.32 in. (8.0 mm)	0.53 lb. (0.24 kg)
2101002	0.394 in. (10 mm)	0.886 in. (22.5 mm)	0.63 in. (16 mm)	0.354 in. (8.99 mm)	0.157 in. (3.99 mm)	0.315 in. (8.0 mm)	3.937 in. (100 mm)	---	0.69 lb. (0.31 kg)
2100152	1.44 in. (36.6 mm)	0.886 in. (22.5 mm)	0.63 in. (16 mm)	0.50 in. (12.7 mm)	0.157 in. (3.99 mm)	1.00 in. (25.4 mm)	4.0 in. (101.6 mm)	---	0.60 lb. (0.27 kg)



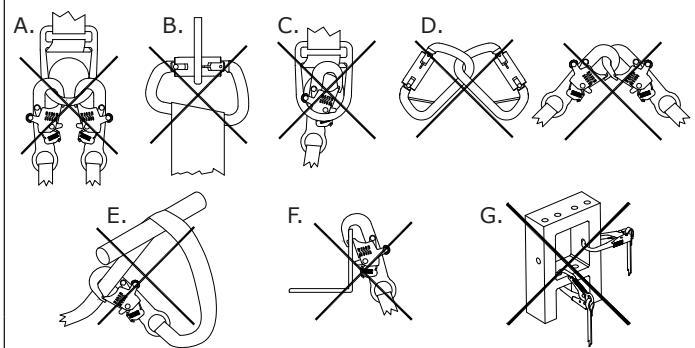
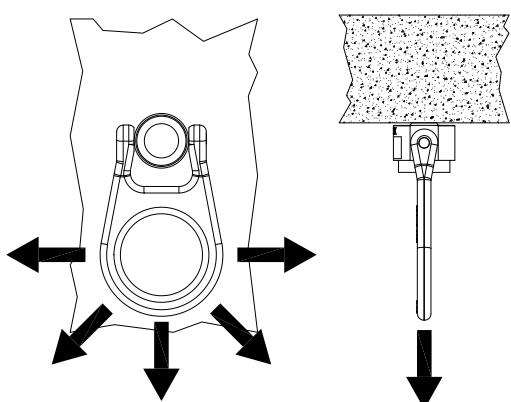
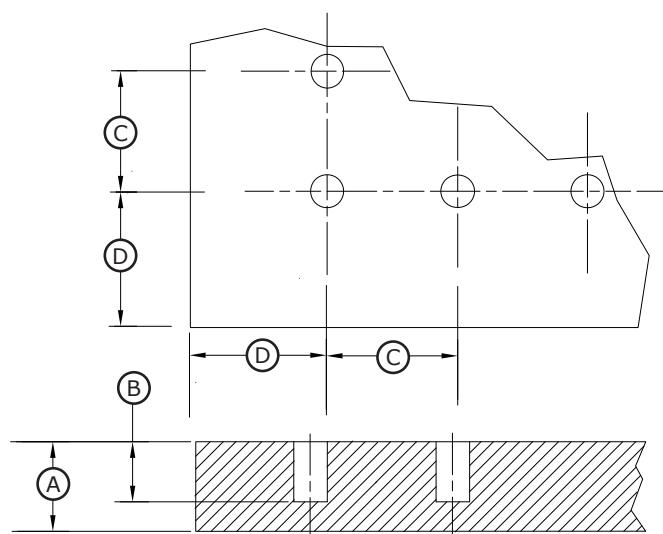


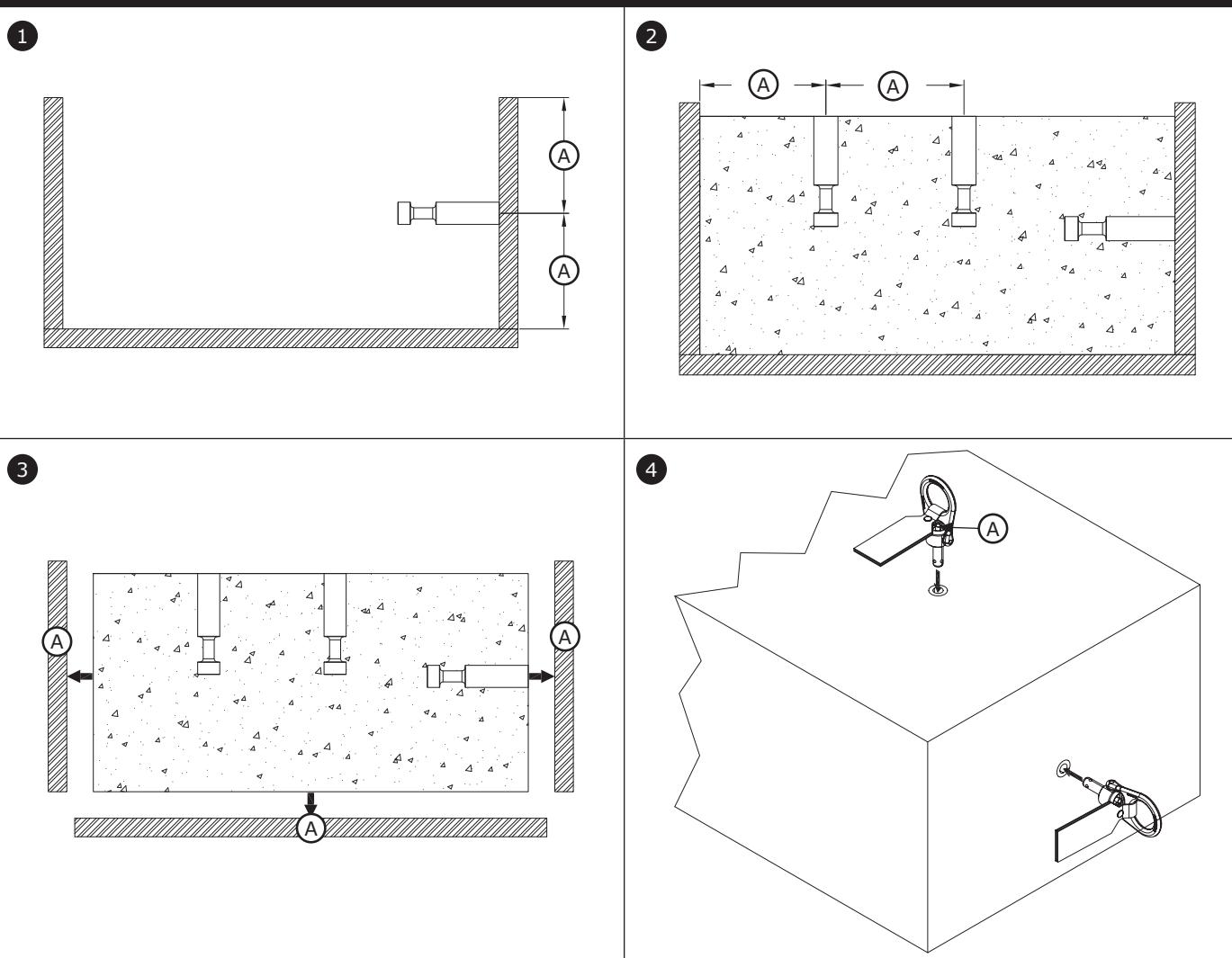
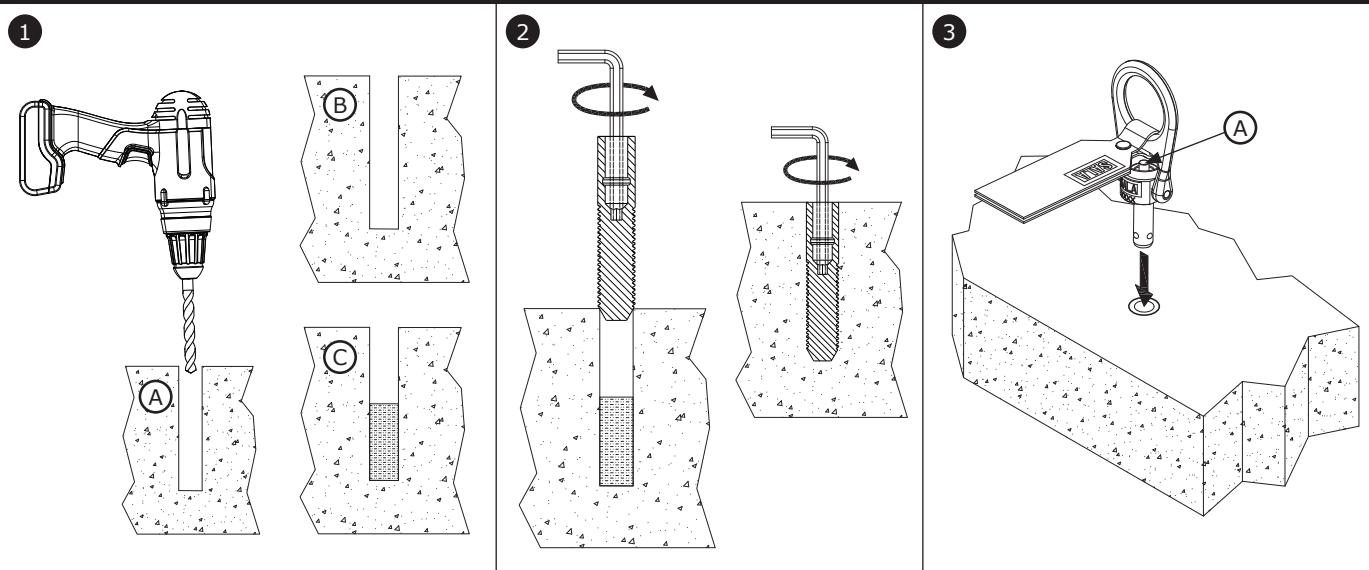
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A

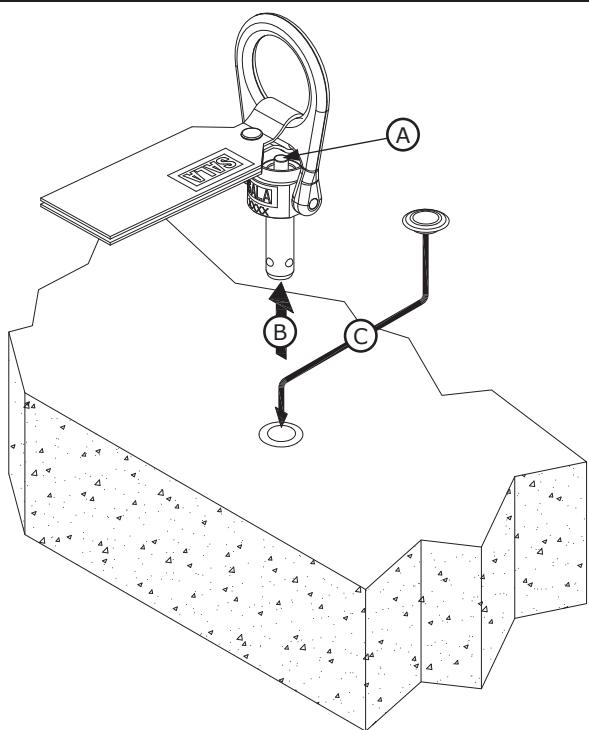
B

C

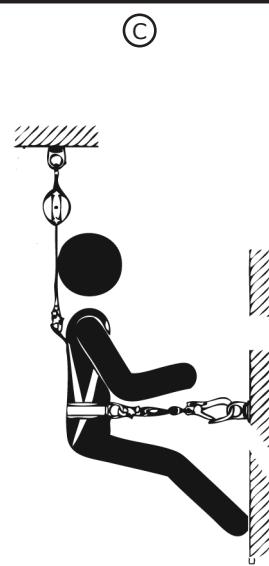
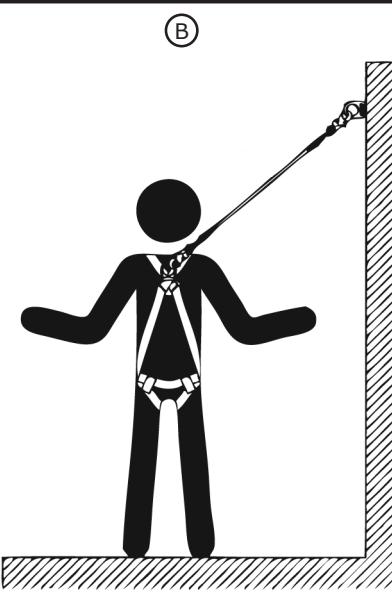
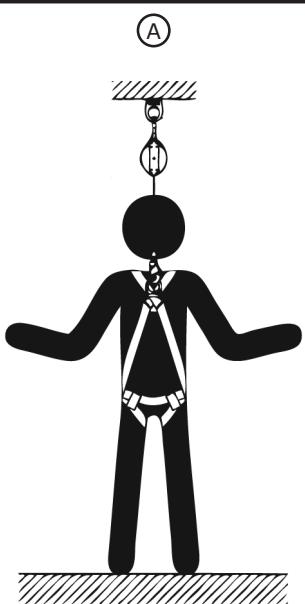
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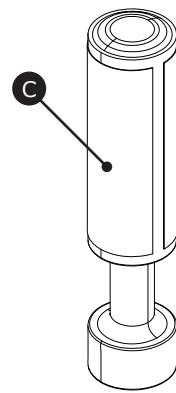
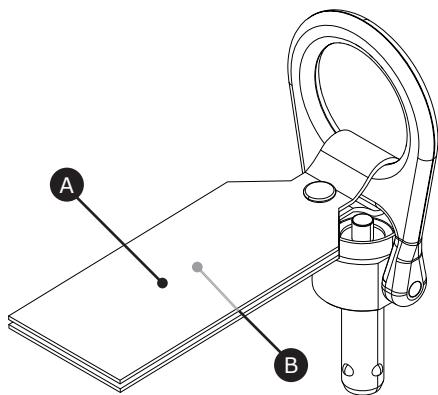


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**A** **WARNING**  
Manufacturer's instructions supplied with this product at time of shipment must be followed for proper use, maintenance and inspection. Alteration or misuse of this product, or failure to follow instructions, may result in serious injury or death. Inspect anchor before each use. Do not use if inspection reveals an unsafe condition. Fall arrest systems must limit maximum arresting forces to 1800 lbs. Do not allow fall arrest system to abrade against sharp edges. Connecting hardware must be compatible, and be a carabiner or a 3600 lb self-locking snap hook. Do not exceed capacity of this or other system components. Refer to User Manual. Items subjected to fall arrest impact forces must be immediately removed from service and destroyed. This anchor must only be used with DBI/SALA sockets and approved adhesives. Do not remove label.

9508259 Rev. C



Detent Anchor

Capacity:  
One person,  
310 lbs

(B)

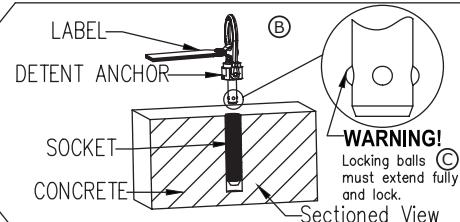
3M.com/FallProtection

© This product meets OSHA 1910.140 & 1926.502 requirements.  
Materials: Stainless steel socket, detent, and shackle.

D DATE(Y/M): E LOT NO: F MODEL NO:

Do not remove this label

**A** **SOCKET INSTALLATION**  
1. Drill Ø 7/8" to depth 4 1/3" using rotary hammer drill and bit. Anchor must be 8" from edge. Concrete must be at least 7.5" thick.  
2. Remove dust using a blow out tool and wire brush.  
3. Insert adhesive in accordance with adhesive instructions. See user instructions for approved adhesives.  
4. Thread socket into adhesive using M6 tool until 1/16" above surface.  
5. Remove excess adhesive from around hole.  
6. Allow time for adhesive to dry according to adhesive instructions.  
7. After the adhesive has cured, insert the detent anchor in the socket. Concrete minimum compressive strength 3000 psi. Not for use in lightweight concrete, hollow brick, brick, grout, or stone.



**C** 3M.com/FallProtection  
Pour in Place Socket: Model 2100152 (A)  
Capacity: One person, 310 lbs  
This socket is only to be used with DBI-SALA Detent Anchor

**WARNING** Manufacturer's instructions supplied with this product at time of shipment must be followed for proper use, maintenance and inspection. This socket can not be installed using adhesives. (B)

**SOCKET INSTALLATION** (C)  
1. Secure socket in position before the concrete pour. Socket top surface must be flush with forms before pour. Concrete must have a min. compressive strength of 5,000 psi. Socket must be at least 12" away from any edge. Concrete must have minimum thickness of 6".  
2. Remove forms to reveal socket.  
3. Allow concrete to fully cure before use.

Poured Concrete  
Flush  
Concrete Form

SERIAL NO. XXXXXX (D)

This product meets: OSHA 1910.140 & 1926.502 requirements.  
Material: Stainless steel socket. (E) 9508259 Rev. B

# SAFETY INFORMATION

EN

**Please read, understand, and follow all safety information contained in these instructions prior to the use of this Anchorage Connector. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.**

**These instructions must be provided to the user of this equipment. Retain these instructions for future reference.**

## Intended Use:

This Anchorage Connector is intended for use as part of a complete personal fall protection system.

Use in any other application including, but not limited to, material handling, recreational or sports related activities, or other activities not described in the User Instructions, is not approved by 3M and could result in serious injury or death.

This device is only to be used by trained users in workplace applications.

## **WARNING**

This Anchorage Connector is part of a personal fall protection system. It is expected that all users be fully trained in the safe installation and operation of their personal fall protection system. **Misuse of this device could result in serious injury or death.** For proper selection, operation, installation, maintenance, and service, refer to these User Instructions and all manufacturer recommendations, see your supervisor, or contact 3M Technical Service.

- **To reduce the risks associated with working with an Anchorage Connector which, if not avoided, could result in serious injury or death:**
  - Inspect the device before each use, at least annually, and after any fall event. Inspect in accordance with the User Instructions.
  - If inspection reveals an unsafe or defective condition, remove the device from service and repair or replace according to the User Instructions.
  - Any device that has been subject to fall arrest or impact force must be immediately removed from service and destroyed.
  - The device must only be installed in the specified substrates or on structures detailed in the User Instructions. Installations and use outside the scope of this instruction must be approved by 3M Fall Protection.
  - The substrate or structure to which the anchorage connector is attached must be able to sustain the static loads specified for the anchor in the orientations permitted in the User Instructions.
  - Only connect other fall protection subsystems to the designated anchorage connection point on the device.
  - Prior to drilling or fastening, ensure no electric lines, gas lines, or other critical embedded systems will be contacted by the drill or the device.
  - Ensure that fall protection systems/subsystems assembled from components made by different manufacturers are compatible and meet the requirements of applicable standards, including the ANSI Z359 or other applicable fall protection codes, standards, or requirements. Always consult a Competent or Qualified Person before using these systems.
- **To reduce the risks associated with working at height which, if not avoided, could result in serious injury or death:**
  - Ensure your health and physical condition allow you to safely withstand all of the forces associated with working at height. Consult with your doctor if you have any questions regarding your ability to use this equipment.
  - Never exceed allowable capacity of your fall protection equipment.
  - Never exceed maximum free fall distance of your fall protection equipment.
  - Do not use any fall protection equipment that fails pre-use or other scheduled inspections, or if you have concerns about the use or suitability of the equipment for your application. Contact 3M Technical Services with any questions.
  - Some subsystem and component combinations may interfere with the operation of this equipment. Only use compatible connections. Consult 3M prior to using this equipment in combination with components or subsystems other than those described in the User Instructions.
  - Use extra precautions when working around moving machinery (e.g. top drive of oil rigs) electrical hazards, extreme temperatures, chemical hazards, explosive or toxic gases, sharp edges, or below overhead materials that could fall onto you or your fall protection equipment.
  - Use Arc Flash or Hot Works devices when working in high heat environments.
  - Avoid surfaces and objects that can damage the user or equipment.
  - Ensure there is adequate fall clearance when working at height.
  - Never modify or alter your fall protection equipment. Only 3M or parties authorized in writing by 3M may make repairs to the equipment.
  - Prior to use of fall protection equipment, ensure a rescue plan is in place which allows for prompt rescue if a fall incident occurs.
  - If a fall incident occurs, immediately seek medical attention for the worker who has fallen.
  - Do not use a body belt for fall arrest applications. Use only a Full Body Harness.
  - Minimize swing falls by working as directly below the anchorage point as possible.
  - If training with this device, a secondary fall protection system must be utilized in a manner that does not expose the trainee to an unintended fall hazard.
  - Always wear appropriate personal protective equipment when installing, using, or inspecting the device/system.

Prior to installation and use of this equipment, record the product identification information from the ID label in the Inspection and Maintenance Log (Table 2) at the back of this manual.

Always ensure you are using the latest revision of your 3M instruction manual. Visit the 3M website or contact 3M Technical Services for updated instruction manuals.

## PRODUCT DESCRIPTION:

Figure 1 illustrates the 3M™ DBI-SALA™ Concrete Detent Anchor. The Concrete Detent Anchor is designed to be embedded in a concrete structure for use as an anchorage connection point in a Fall Arrest, Fall Restraint, and Work Positioning System. The Concrete Detent Anchor may also be used as an end termination for a 3M-approved Horizontal Lifeline System.

Figure 2 illustrates components of the Concrete Detent Anchor. See Table 1 for Component Specifications. The Concrete Detent Anchor is comprised of the Detent Pin and the Anchor Socket. The Detent Pin is comprised of the Detent Ring (A), which serves as the attachment point for the Concrete Detent Anchor. The Detent Ring is secured to the Detent Bolt (B), which secures to the Anchor Socket by means of the Detent Balls (C). The Detent Button (D) disengages the Detent Balls for attachment to or removal from the Anchor Socket. The Socket Cap (E) is intended to cover the Anchor Socket when not secured to a Detent Pin. The Detent Pin will connect to one of two Anchor Sockets during use. The Adhesive Mount Anchor Socket (F) secures the Concrete Detent Anchor via means of an adhesive. The Pour-in-Place Anchor Socket (G) secures the Concrete Detent Anchor via means of a concrete pour into a new structure.

**Table 1 – Specifications**

<b>System Specifications:</b>	
<b>Capacity:</b>	One user with a combined weight (clothing, tools, etc.) of no more than 310 lb. (140 kg).
<b>Anchorage Strength:</b>	The Concrete Detent Anchor may sustain an anchorage force only in the directions of loading indicated by Figure 7. See Section 2.1 for further information regarding Anchorage Strength requirements.
<b>Service Temperature:</b>	-40°C (-40°F) Minimum Service Temperature
<b>Standards:</b>	The Concrete Detent Anchor meets the requirements of the standards listed on the front cover.
<b>Dimensions:</b>	See Figure 1 for product dimensions.

## Component Specifications:

<b>Figure 2 Reference</b>	<b>Component</b>	<b>Materials</b>
(A)	Detent Ring	Stainless Steel
(B)	Detent Bolt	Stainless Steel
(C)	Detent Ball	Stainless Steel
(D)	Detent Button	Stainless Steel
(E)	Socket Cap	Plastic
(F)	Adhesive Mount Anchor Socket	Stainless Steel
(G)	Pour-in-Place Anchor Socket	Stainless Steel

## Concrete Hole Requirements - (Figure 8)

<b>Anchor Socket Type</b>	<b>Concrete Compressive Strength</b>	<b>Concrete Thickness (A)</b>	<b>Hole Depth (B)</b>	<b>Hole-to-Hole Spacing (C)</b>	<b>Hole-to-Edge Spacing (D)</b>
Adhesive Mount	≥3,000 psi (20.7 MPa)	≥7.5 in. (19 cm)	4.25 in. (10.8 cm)	≥10 in. (25 cm)	≥8.0 in. (20 cm)
Pour-in-Place	≥5,000 psi (34.5 MPa)	≥6.0 in. (15 cm)	---	≥12 in. (30.5 cm)	≥12 in. (30.5 cm)

Drill bits used for drilling mounting holes for the Adhesive Mount Anchor Socket must conform to ANSI B212.5.

## 1.0 PRODUCT APPLICATION

**1.1 PURPOSE:** Anchorage Connectors are designed to provide anchorage connection points for Fall Arrest<sup>1</sup>, Fall Restraint<sup>2</sup>, Work Positioning<sup>3</sup>, or Rescue<sup>4</sup> systems.

**Fall Protection Only:** This Anchorage Connector is for connection of Fall Protection Equipment. Do not connect Lifting Equipment to the Anchorage Connector.

**1.2 STANDARDS:** Your Anchorage Connector conforms to the national or regional standard(s) identified on the front cover of these instructions. If this product is resold outside the original country of destination, the re-seller must provide these instructions in the language of the country in which the product will be used.

**1.3 SUPERVISION:** Use of this equipment must be supervised by a Competent Person<sup>5</sup>.

**1.4 TRAINING:** This equipment must be installed and used by persons trained in its correct application. This manual is to be used as part of an employee training program as required by ANSI and OSHA, and/or regional regulations. It is the responsibility of the users and installers of this equipment to ensure they are familiar with these instructions, trained in the correct care and use of this equipment, and are aware of the operating characteristics, application limitations, and consequences of improper use of this equipment.

**1.5 RESCUE PLAN:** When using this equipment and connecting subsystem(s), the employer must have a rescue plan and the means at hand to implement and communicate that plan to users, authorized persons<sup>6</sup>, and rescuers<sup>7</sup>. A trained, on-site rescue team is recommended. Team members should be provided with the equipment and techniques to perform a successful rescue. Training should be provided on a periodic basis to ensure rescuer proficiency.

**1.6 INSPECTION FREQUENCY:** The 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 longer than one year.<sup>8</sup> Inspection procedures are described in the "Inspection and Maintenance Log". Results of each Competent Person inspection should be recorded on copies of the "Inspection and Maintenance Log".

**1.7 AFTER A FALL:** If the Anchorage Connector is subjected to the forces of arresting a fall, it must be removed from service immediately, clearly marked "DO NOT USE", and then either destroyed or forwarded to 3M for replacement or repair.

## 2.0 SYSTEM REQUIREMENTS

**2.1 ANCHORAGE:** Anchorage structure requirements vary with the system application and whether it is a certified anchorage<sup>9</sup> or non-certified anchorage<sup>10</sup>. The structure to which a fall arrest, restraint, positioning, or rescue system is attached must sustain static loads applied in the directions permitted as shown in the following table. Anchorage Strength requirements, along with system applications, are specified below, unless noted or defined otherwise in Table 1:

Fall Protection System	Certified Anchorage <sup>9</sup>	Non-Certified Anchorage <sup>10</sup>	Defined by
Fall Arrest	2 times maximum arresting force	5,000 lbs (22.2 kN)	OSHA, ANSI
Restraint/Travel Restraint	2 times foreseeable force	1,000 lbs (4.4 kN) per ANSI 5,000 lbs (22.2 kN) per OSHA	OSHA, ANSI
Work Positioning	2 times foreseeable force	3,000 lbs (13.3 kN)	OSHA, ANSI
Rescue	5 times applied load	3,000 lbs (13.3 kN)	ANSI

When more than one system is attached to an anchorage, the strengths stated above must be multiplied by the number of systems attached to the anchorage. See ANSI Z359.2 for more information.

**2.2 PERSONAL FALL ARREST SYSTEM:** Figure 1 illustrates the application of this Anchorage Connector. Personal Fall Arrest Systems (PFAS) used with the system must meet applicable Fall Protection standards, codes, and requirements. The PFAS must incorporate a Full Body Harness and limit Arresting Force to the following values:

	Maximum Arresting Force	Free Fall
PFAS with Shock Absorbing Lanyard	1800 lbs (8 kN)	Refer to the instruction(s) included with your Lanyard or SRD for Free Fall limitations.
PFAS with Self Retracting Device (SRD)	1800 lbs (8 kN)	

**2.3 FALL PATH AND SRD LOCKING SPEED:** A clear path is required to assure positive locking of an SRD. Situations which do not allow for an unobstructed fall path should be avoided. Working in confined or cramped spaces may not allow the body to reach sufficient speed to cause the SRD to lock if a fall occurs. Working on slowly shifting material, such as sand

**1 Fall Arrest System:** A collection of Fall Protection Equipment configured to arrest a free fall. Protects the user in the event of a fall. Free fall is permitted up to the limits allowed by the connecting device (either an Energy Absorbing Lanyard or Self-Retracting Device (SRD)).

**2 Restraint System:** A collection of Fall Protection Equipment configured to prevent the person's center of gravity from reaching a fall hazard. Prevents the user from reaching a hazard. No vertical free fall is permitted.

**3 Work Positioning System:** A collection of Fall Protection Equipment configured to support a user at a work position. Must include a back-up personal fall arrest system. Maximum permissible free fall is 2 feet.

**4 Rescue System:** A collection of Fall Protection Equipment configured to remove a person from danger, harm, or confinement to a safe location. No vertical free fall is permitted.

**5 Authorized Person:** A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.

**6 Rescuer:** Person or persons other than the rescue subject acting to perform an assisted rescue by operation of a rescue system.

**7 Certified Anchorage:** An anchorage for fall arrest, positioning, restraint, or rescue systems that a Qualified Person certifies to be capable of meeting the criteria for a certified anchorage according to Section 2.1.

**8 Non-Certified Anchorage:** A fall arrest anchorage that a Competent Person can judge to be capable of supporting the predetermined anchorage forces listed in Section 2.1.

or grain, may not allow enough speed buildup to cause the SRD to lock.

**2.4 HAZARDS:** Use of this equipment in areas with environmental hazards may require additional precautions to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to: heat, chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges, or overhead materials that may fall and contact the user or Personal Fall Arrest System.

**2.5 FALL CLEARANCE:** Figure 3 illustrates the components of a Fall Arrest. There must be sufficient Fall Clearance (FC) to arrest a fall before the user strikes the ground or other obstruction. Clearance is affected by a number of factors including: Anchorage Location, (A) Lanyard Length, (B) Lanyard Deceleration Distance or SRD Maximum Arrest Distance, (C) Harness Stretch and D-Ring/Connector Length and Settling. Refer to the instructions included with your Fall Arrest subsystem for specifics regarding Fall Clearance calculation.

**2.6 SWING FALLS:** Swing Falls occur when the anchorage point is not directly above the point where a fall occurs (see Figure 4). The force of striking an object in a swing fall may cause serious injury or death. Minimize swing falls by working as directly below the anchorage point as possible. Do not permit a swing fall if injury could occur. Swing falls will significantly increase the clearance required when a Self-Retracting Device or other variable length connecting subsystem is used.

**2.7 COMPONENT COMPATIBILITY:** 3M equipment is designed for use with 3M approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system.

**2.8 CONNECTOR COMPATIBILITY:** Connectors are considered to be compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Contact 3M if you have any questions about compatibility. Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22.2 kN). Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (see Figure 5). Connectors must be compatible in size, shape, and strength. If the connecting element to which a snap hook or carabiner attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner (A). This force may cause the gate to open (B), allowing the snap hook or carabiner to disengage from the connecting point (C).

Self-locking snap hooks and carabiners are required by ANSI Z359 and OSHA.

**2.9 MAKING CONNECTIONS:** Snap hooks and carabiners used with this equipment must be self-locking. Ensure all connections are compatible in size, shape and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked.

3M connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 6 for examples of inappropriate connections. Do not connect snap hooks and carabiners:

- A. To a D-ring to which another connector is attached.
- B. In a manner that would result in a load on the gate. Large throat snap hooks should not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates, unless the snap hook complies with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify that it is appropriate for your application.
- C. In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor, and without visual confirmation seems to be fully engaged to the anchor point.
- D. To each other.
- E. Directly to webbing or rope lanyard or tie-back (unless the manufacturer's instructions for both the lanyard and connector specifically allows such a connection).
- F. To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or that roll-out could occur.
- G. In a manner that does not allow the connector to align properly while under load.

### 3.0 INSTALLATION

Installation of the DBI-SALA Concrete Detent Anchor must be performed or supervised by a Competent Person.

**3.1 PLANNING:** Plan your fall protection system prior to installation of the Concrete Detent Anchor. Account for all factors that may affect your safety before, during, and after a fall. Consider all requirements, limitations, and specifications defined in Section 2 and Table 1.

**3.2 INSTALLING THE CONCRETE DETENT ANCHOR:** The Concrete Detent Anchor can be installed in concrete meeting the anchorage requirements specified in Table 1. See Figure 7 for proper loading of the Concrete Detent Anchor. The installation method of the Concrete Detent Anchor is dependent on the Anchor Socket used for installation:

When properly installed, the Anchor Socket will be permanently set in the concrete structure and cannot be removed.

**ADHESIVE MOUNT SOCKET INSTALLATION:** Use of the Concrete Detent Anchor with the Adhesive Mount Anchor Socket requires the device to be secured through the use of an adhesive. See Figure 9 for reference. To install the Concrete Detent Anchor:

1. **Create the Mounting Hole:** The mounting hole for the Anchor socket should be created via the following steps. See Figure 9.1 for reference.

A. Drill a hole that is 4.25 in. (10.8 cm) in depth at the desired mounting hole location. Mounting holes must meet all concrete mounting requirements as specified in Table 1. To drill the mounting hole, use a Rotary Hammer and an industrial grade 7/8 in. (22 mm) Rotary Hammer drill bit.

Before drilling the mounting hole, inspect the hole location to prevent drilling into power transmission cables or other live utilities.

B. The mounting hole must be free of debris for the Anchor Socket to bond securely in the mounting hole. Blow all debris out of the hole with a Blow-Out Bulb or compressed air. Remove loose particles with a Hole Brush, if necessary. Then, blow out the hole again to remove any remaining debris.

C. Inject the recommended anchor adhesive into the mounting hole to a depth of 1/3 to 1/2 full.

To ensure proper bonding, only Hilti HIT-HY 200, Simpson SET Epoxy-Tie, or Fisher FIS-V Adhesives should be used to secure the Anchor Socket in the mounting hole. Always follow the adhesive manufacturer's instructions when applying adhesive in the mounting hole.

2. **Insert the Socket:** Slowly thread the Anchor Socket into the mounting hole with the provided M6 Allen Wrench until the top of the socket is flush with the concrete surface. Remove any excess adhesive protruding from the hole and allow the adhesive to set and cure per the manufacturer's recommendations.

The Anchor Socket must be threaded into the mounting hole. Do not push or pound into the hole and adhesive.

3. **Insert the Detent Pin:** Once the adhesive has had sufficient time to set and cure, press the Detent Button (A) on the Detent Pin and insert the Detent Bolt into the Anchor Socket. Release the Detent Button and then pull on the Detent Pin to ensure it is locked in the Anchor Socket.

**POUR-IN-PLACE SOCKET INSTALLATION:** Use of the Concrete Detent Anchor with the Pour-in-Place Anchor Socket requires the device to be secured through a concrete pour. See Figure 10 for reference. To install the Concrete Detent Anchor:

The Pour-in-Place Anchor Socket (2100152) may only be used with Detent Anchor models 2101002 or 2101004.

1. **Secure the Socket:** Prior to pouring concrete, secure the Pour-in-Place Anchor Socket at the desired position with its top socket surface flush against the concrete forms. See Table 1 for required Anchor Socket spacing. Each Anchor Socket should have a Minimum Hole-to-Edge Spacing (A) of 12 in. (30.5 cm).

To mount Pour-in-Place Anchor Sockets in the top surface of the concrete slab, pour concrete into the form as directed below and then insert the Anchor Socket into the concrete before it cures. The top surface of the Anchor Socket should be flush with the concrete surface. Do not allow the concrete to enter the Anchor Socket opening.

2. **Pour Concrete:** Pour concrete into the forms of your structure. The concrete structure must meet all concrete mounting requirements as specified in Table 1. All Anchor Sockets should have a Minimum Hole-to-Hole Spacing (A) of 12 in. (30.5 cm).

3. **Remove Concrete Forms:** Remove the Concrete Forms (A) to reveal the Pour-in-Place Sockets and then allow the concrete to fully cure.

4. **Insert the Detent Pin:** To install the Detent Pin in the Anchor Socket, press the Detent Button (A) on the Detent Pin and insert the Detent Bolt into the Anchor Socket. Release the Detent Button and then pull on the Detent Pin to ensure it is locked in the Anchor Socket.

**3.3 REMOVAL:** The Detent Pin may be removed from the Anchor Socket after installation. See Figure 11 for reference. To remove the Detent Pin, first hold down the Detent Button (A). Then, extract the Detent Pin from the Anchor Socket (B). Finally, cover the opening of the remaining Anchor Socket with the Socket Cap (C).

When properly installed, the Anchor Socket will be permanently set in the concrete structure and cannot be removed.

**3.3 REUSE:** Before reusing the Detent Pin or Anchor Socket, always inspect the Detent Pin and Anchor Socket per the "Inspection and Maintenance Log" (Table 2). To reuse the Anchor Socket, remove the Socket Cap and insert the Detent Pin into the Anchor Socket.

## 4.0 USE

**4.1 BEFORE EACH USE:** Verify that your work area and Personal Fall Arrest System (PFAS) meet all criteria defined in Section 2 and that a formal Rescue Plan is in place. Inspect the Concrete Detent Anchor per the 'User' inspection points defined on the "Inspection and Maintenance Log" (Table 2). If inspection reveals an unsafe or defective condition, do not use the Concrete Detent Anchor. Remove the Concrete Detent Anchor from service immediately and clearly mark the device "DO NOT USE". Destroy the device or contact 3M regarding replacement or repair.

**4.2 SYSTEM CONNECTIONS:** The Concrete Detent Anchor is used with a Full Body Harness and Energy-Absorbing Lanyard or Self-Retracting Device (SRD). Connect the Lanyard or SRD between the D-Ring on the Concrete Detent Anchor and the back Dorsal D-Ring on the Harness as specified in the instruction manual included with your connecting subsystem. Refer to Figure 10a and 10b for Fall Arrest Connections.

**4.3 HORIZONTAL SYSTEMS:** Select Anchorage Connectors can be used as end anchor points for horizontal systems. Anchorages for horizontal systems must be designed and certified by a Qualified Person<sup>1</sup> with experience and training in designing and using horizontal lifeline systems. Non-certified anchorages shall not be used for horizontal lifelines. Only use an anchorage connector that meets the load, moment, and directional requirements for that specified horizontal system. Non-Fixed, Sliding, or Counterweight Anchorage Connectors should not be used with a horizontal system. Refer to the instruction manual and installation manual supplied with your horizontal lifeline system for more information on anchorage and anchorage connector requirements.

## 5.0 INSPECTION

**5.1 INSPECTION FREQUENCY:** The Concrete Detent Anchor must be inspected at the intervals defined in Section 1. Inspection procedures are described in the "Inspection and Maintenance Log" (Table 2). Inspect all other components of the Fall Protection System per the frequencies and procedures defined in the manufacturer's instructions.

**5.2 DEFECTS:** If inspection reveals an unsafe or defective condition, or if any doubt should arise as to its condition for safe use, remove the Concrete Detent Anchor from service immediately and clearly mark the device "DO NOT USE". Destroy the device or contact 3M regarding replacement or repair. Do not attempt to repair the device.

**Authorized Repairs Only:** Only 3M or parties authorized in writing my make repairs to this equipment.

If inspection reveals a defective Anchor Socket, label the socket to prevent future use or fill the socket opening with concrete.

**5.3 PRODUCT LIFE:** The functional life of the Concrete Detent Anchor is determined by work conditions and maintenance. As long as the product passes inspection criteria, it may remain in service.

## 6.0 MAINTENANCE, SERVICE, and STORAGE

**6.1 CLEANING:** Periodically clean the Concrete Detent Anchor's metal components with a soft brush, warm water, and a mild soap solution. Ensure parts are thoroughly rinsed with clean water. After each use, blow off the Concrete Detent Anchor with compressed air. Keep the Concrete Detent Anchor free of grease, oils, and dirt.

**6.2 SERVICE:** Only 3M or parties authorized in writing by 3M may make repairs to this equipment. If the Concrete Detent Anchor has been subject to fall force or if inspection reveals unsafe or defective conditions, it must be removed from service immediately, clearly marked "DO NOT USE", and then destroyed.

**6.3 STORAGE AND TRANSPORT:** When not in use, store and transport the Concrete Detent Anchor and associated fall protection equipment in a cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect components after extended storage.

## 7.0 LABELS and MARKINGS

**7.1 LABELS:** Figure 13 illustrates labels on the Concrete Detent Anchor. Labels must be replaced if they are not fully legible. Information provided on each label is as follows:

<b>A</b>	A) Warning Statement - Read all user instructions for further information. B) Maximum Capacity - One user with a combined weight (clothing, tools, etc.) of no more than 310 lb. (140 kg). C) Applicable Standards and Product Materials D) Date of Manufacture (Year/Month) E) Lot Number F) Model Number
<b>B</b>	A) Adhesive Mount Anchor Socket Installation Procedure B) Adhesive Mount Anchor Socket Installation Components C) Warning - Locking balls must extend fully and lock.
<b>C</b>	A) Maximum Capacity - One user with a combined weight (clothing, tools, etc.) of no more than 310 lb. (140 kg). B) Warning Statement - Read all user instructions for further information. This socket cannot be installed using adhesives. C) Pour-in-Place Anchor Socket Installation Procedure and Components D) Serial Number E) Applicable Standards and Product Materials

**Table 2 – Inspection and Maintenance Log**





## **U.S. PRODUCT WARRANTY, LIMITED REMEDY AND LIMITATION OF LIABILITY**

**WARRANTY:** THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Unless otherwise provided by applicable law, 3M fall protection products are warranted against factory defects in workmanship and materials for a period of one year from the date of installation or first use by the original owner.

**LIMITED REMEDY:** Upon written notice to 3M, 3M will repair or replace any product determined by 3M to have a factory defect in workmanship or materials. 3M reserves the right to require product be returned to its facility for evaluation of warranty claims. This warranty does not cover product damage due to wear, abuse, misuse, damage in transit, failure to maintain the product or other damage beyond 3M's control. 3M will be the sole judge of product condition and warranty options.

This warranty applies only to the original purchaser and is the only warranty applicable to 3M's fall protection products. Please contact 3M's customer service department at 800-328-6146 or via email at [3MfallProtection@mmm.com](mailto:3MfallProtection@mmm.com) for assistance.

**LIMITATION OF LIABILITY:** TO THE EXTENT PERMITTED BY APPLICABLE LAW, 3M IS NOT LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO LOSS OF PROFITS, IN ANY WAY RELATED TO THE PRODUCTS REGARDLESS OF THE LEGAL THEORY ASSERTED.



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EU DECLARATION OF CONFORMITY:  
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