20W HID Explosion Proof Search Light
C1D1 & C2D1 - 120-277VAC Stepped Down to 12V DC - 50' SOOW
Instruction Manual

Thank you for your purchase of the EPL-20W-HID-X12V-GR50 spotlight. Please follow the steps below in order to operate and maintain this handheld spotlight.

WARNING:

READ CAREFULLY BEFORE OPERATING FIXTURE. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE. CRITICAL SAFETY INSTRUCTIONS:

- **RISK OF Electric Shock** – To avoid electric shock, serious injury or death, be certain all electrical power is disconnected from the supply branch circuit conductors before installing or maintaining this fixture.
- Never place flashlight face down when light is on. Doing so could burn/ignite surfaces such as seats, carpeting, etc. and cause major property damage. Always turn spotlight off when not in use.
- Avoid direct eye exposure the light source when light is on. **DO NOT** shine light into the face of someone else.
- **DO NOT** touch lens of light when on or recently on. The lens/cooling fins will be hot after long periods.
- **DO NOT** allow children to handle or operate this flood light.
- **DO NOT** use this product for other than its intended use.
- **DO NOT** operate in close proximity of combustible or flammable materials.
- **DO NOT** attempt to operate this flood light if cord, plug, lens or any part of the flood light is damaged or corroded.

The EPL-20W-HID-X12V-GR50 is shipped with selected Cord Cap. Images shown may vary depending upon options selected.

When starting the flashlight for the first time (cold start), it is recommended that user allows HID to power up to full (40-60 seconds) before powering off again. This allows the lamp time to achieve a temperature hot enough to vaporize the additives and prevent deposits from forming on the inner arc chamber walls. When powering up, it is normal for the lamp to “flicker”, this is the result of the metal salts in the arc chamber vaporizing. You will also see a slight shade of red and blue. As the light comes to temperature the flickering will subside, the arc will stabilize, and the light output will increase. The light emitted from the flashlight is a higher Kelvin temperature (blue in color) than ordinary flashlights. Full light output occurs in 10-15 seconds. If momentary shut off of the light is needed you can instantly restart the light without worry of damage or cool down. It is suggested not to “flash” the light, as this will shorten run time and lamp life.

Unpack and inspect reel for damage. Turn by hand to check for smooth operation. Check for completeness. Position reel on floor, wall, or ceiling. Secure into place, using four (customer supplied) screws or bolts.

POWER

1. Run cord and plug transformer into compatible receptacle outputting voltage within range 120-277VAC

   Note: *There is no difference in light output between voltages.*

2. This light has a power switch and will illuminate once toggled.

If spotlight does not illuminate, check switch, and/or power source.



Keep encapsulated inline transformer box closed during operation. It is not necessary to access the internals unless during maintenance or repair. Maintenance must be performed by a qualified electrician.

CAUTION: Unless the reel was specified differently when ordering, the maximum installation height is 16 feet. Do not exceed this distance.

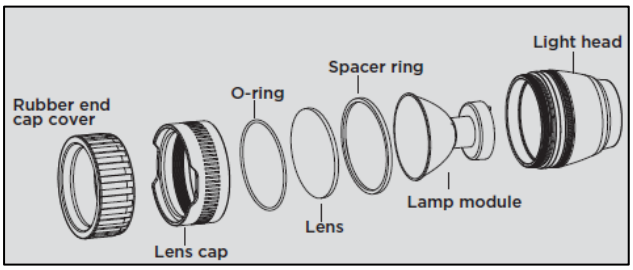
WARNING: Ensure that the power supply voltage does not exceed maximum voltage rating of reel. Observe applicable NEC. OSHA, and local electrical codes.

WARNING: Pull electrical cord from reel by grasping the electrical cord itself, not the work device.

Reel hand lamp and position in desired location using stainless steel swivel hook. Grasp cord stop to begin reeling cord, not hand lamp. The lamp will illuminate once power is supplied.

- Do not exceed the voltage or ampere rating of the cable. Do not exceed the voltage or ampere rating of the reel. Overheating, fire, damage to equipment or personal injury could result.
- Do not allow cable to retract without restraining the retraction speed.
- Operate the reel within the cable size and length and spring tensioning limits for which it was intended.
- Two wraps of cable should remain on the reel at maximum extension to avoid excessive tension on the cable entrance watertight.
- The spring should not be wound to its last two turns at maximum payout to avoid over-stressing the spring, thus reducing its life or damaging the reel.
- Keep the reel and cable clean to avoid excessive wear and damage.
- Arrange for maintenance service if damage is found on the cable or reel.
- Cable should be fully retracted when not in service to maximize spring life.

LAMP AND BALLAST REPLACEMENT



CAUTION NOTICE: Before replacing lamp, make sure the light is "OFF" for a minimum of 10 minutes or longer to ensure any stored power has dissipated, to avoid electric shock from stored energy in the ballast, and temperature of lens has cooled enough to avoid being burned from high temperature.

The lens cap has a "fine thread". Grasp the lamp-head-housing (serrated edge behind lens protector), with one and while grasping the lens cap in the other, rotate the lens cap counter clockwise to access the lamp. While removing the lens cap, be careful not to drop lens, spacer and lamp to avoid damage.

While installing the lamp module, inspect the rubber O-rings for chaffing or breakage, Replace if signs of wear. There is a plastic spacer between the lens and the outer reflector. The flat side faces the lens and the slotted side faces the reflector. Check the rubber seal under the clear lens for wear or breakage, replace if signs of wear. A dab of silicon lubricant or low mineral petroleum jelly should be used on the threads of the light head before replacing the lens cap. Be careful not to cross thread and DO NOT FORCE, or you will void your warranty and your light will be rendered inoperative.

MAINTENANCE

Check all seals to insure proper seating and all are in good condition, with no marks or dents. Replace all seals as necessary. Lubricate with silicon lubricant or low mineral petroleum jelly. A discoloration of the lamp reflector is normal on a new lamp. When this occurs, remove the lens cap and wipe reflector with soft lens cloth, be careful not to damage the lamp and ignition wire.

USE AND CARE

Unauthorized modification may impair the function and/or safety of the work light and could affect the life of the equipment. Always check damaged or worn out parts before using the work light. When work light is not in use, store it in a secure place out of the reach of children. Inspect for good working condition prior to storage and before re-use.

REPLACEMENT PARTS

The EPL-20W-HID-X12V-GR50 is designed to provide years of reliable lighting performance. Should the need for replacement parts arise, please contact Larson Electronics at the contact information below.

THESE INSTRUCTIONS MAY NOT COVER ALL DETAILS OR VARIATIONS OF THIS PRODUCT FOR YOUR EQUIPMENT OR INSTALLATION REQUIREMENTS. SHOULD FURTHER INFORMATION NOT COVERED BY THESE INSTRUCTIONS BE REQUIRED, PLEASE CONTACT LARSON ELECTRONICS BY EMAIL AT SALES@LARSONELECTRONICS.COM OR BY PHONE AT 1-800-369-6671 FOR FURTHER ASSISTANCE.

PLEASE VISIT LARSONELECTRONICS.COM FOR **WARRANTY** AND **RETURN** INFORMATION.

Operating Instructions Cord Reels







IMPORTANT

Read this manual carefully before installing, operating or servicing this equipment.

Electrical Information

Voltage	AMPS	Frequency
125	13	60 HZ Single Phase
125	15	60 HZ Single Phase
600	16	60 HZ Single Phase
125	20	60 HZ Single Phase
125	30	60 HZ Single Phase

SAFETY

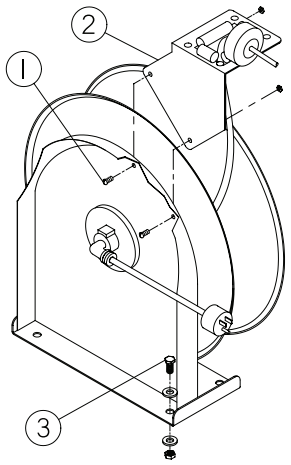
Personal injury and/or equipment damage may result if proper safety precautions are not observed.

- Ensure that only a qualified electrician installs/services this equipment.
- Ensure that power supply voltage does not exceed maximum voltage rating of reel.
- Ensure that all electrical power is removed from reel before servicing.
- A high-tension spring assembly is contained within the reel. Exercise extreme caution.
- Check for frayed and/or broken wires before each use. Pull electrical cord from reel by grasping the electrical cord itself, not the work device.
- If an electrical malfunction should occur, remove power from reel immediately.
- Ensure that reel, electrical cord, and equipment being serviced are properly grounded. Use an ohmmeter to check ground continuity.
- If reel ceases to unwind or rewind, remove power immediately. Do not pull or jerk on electrical cord!
- Treat and respect the reel as any other piece of machinery, observing all common safety practices.
- All cord reels with flying leads must be hard wired into the electrical circuit to ensure proper function.

WARNING: Even low voltage can cause irreparable damage or death! Exercise extreme caution while operating or servicing this equipment.

Installation Instructions

Mounting

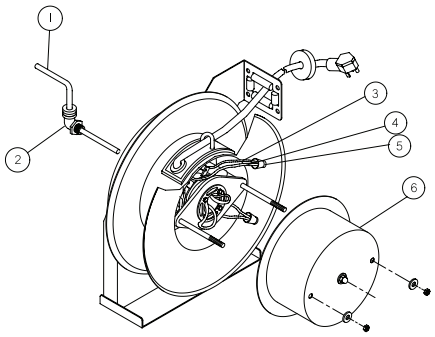


CAUTION:
Unless reel was specified differently when ordering, maximum installation height is 16 feet. Do not exceed this distance. Ensure that only a qualified electrician installs/ services this equipment. Observe applicable NEC, OSHA, and local codes when install - ing this equipment. Installation of GFCI cord reels should be performed by a qualified and licensed professional in accordance with local building codes and applicable NEC standards.

1. Unpack and inspect the reel for damage. Turn by hand to check for smooth opera - tion. Check for completeness.
2. Configure reel for top, side or bottom-wind (bottom-wind for constant tension reels only) electrical cable dispensing by removing bolts (1) securing guide arm bracket (2).
3. Determine new guide arm bracket loca - tion and remove corresponding bolts. Position guide arm bracket to reel and replace bolts.
4. Position reel on floor, wall or ceiling. Secure into place using four (customer supplied) screws or bolts (3).

Installing the Input Electrical Cable: 30 AMP Models

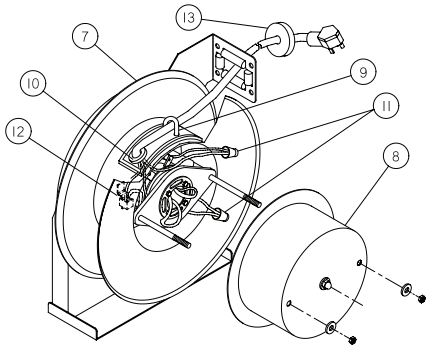
WARNING:
Use only 10/3 cable for input wiring. Ensure that application does not exceed electrical rat - ing of reel. (See page 1 of this manual).



1. Feed input cable (1) through elbow (2) and main shaft.
2. Screw elbow (2) into reel.
3. Connect input wires (3) and collector ring wires (4) together using wire nuts (5).
4. Assemble cover (6) to reel.

Installing the Output Electrical Cable: 30 AMP Models

WIRE COLOR CODE
Black-Hot
White-Neutral
Green-Ground



WARNING:
Select output cable in accordance with power requirement of apparatus to be supplied. Ensure that application does not exceed electrical rating of reel (see page 1 of this manual). Use extreme caution, reel under ten - sion. Avoid releasing latch mechanism.

1. Manually turn sheave (7) until spring is tight, back off 2 turns, and latch.
2. Remove access cover (8).
3. Remove 6" of output electrical cable outer jacket.
4. Route cable through guide arm and U-clamp (9) then through cut-out (10) in spool.
5. Tighten U-clamp (9).
6. Using wire nuts (11), connect output electrical cable wires to collector assem - bly brush wires as indicated in illustra - tion.
7. Connect ground wire of output electrical cable to ground lug (12) located on inner side of spool.
8. Using ohmmeter, check for ground faults.
9. Replace access cover (8). Release latch and wind output electrical cable onto reel.
10. Install bumper stop (13).

Adjusting the Spring Tension

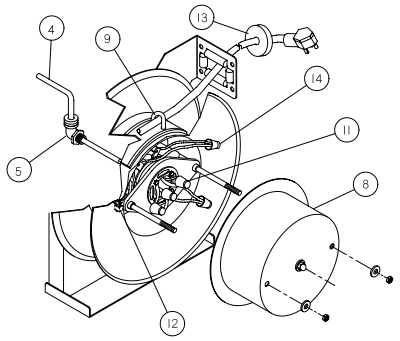
If necessary, adjust spring tension on reel by adding or removing wraps of electrical cord from spool, one wrap at a time, until desired tension is obtained. Add wraps to increase tension. Remove wraps to decrease tension.

WARNING:
When adding wraps of electrical cord, be care - ful not to exceed the winding mechanism's spring capacity. Add just enough wraps of cord to achieve the desired tension. Damage to the winding mechanism will result if spring is over-tightened. Always be aware of spring tension on reel. Exercise extreme caution.

Troubleshooting Instructions: 30 AMP Models

Troubleshooting of the reel consists of isolating a problem to a defective electrical cord/work device, brush holder/brushes, or collector assembly. Refer any other discrepancies only to an authorized service person or directly to Larson Electronics.

WARNING:
The following procedure directs the techician to take voltage measurements. Remember, even low voltage is dangerous and can cause personal injury or death. Exercise extreme caution! Ensure that only a qualified electrician installs/services this equipment.



1. Remove power from reel.
2. Remove cover (8) from reel.
3. Remove wire nuts (14) securing input electrical cable wires to collector ring assembly wires. Ensure that bare wires do not contact each other or the reel superstructure.
4. Apply power to reel.
5. Using voltmeter, check voltage between black wire (hot) and white wire (neutral). If voltage reading is correct (120 vac), proceed to step 6. If voltage reading is incorrect, replace input electrical cable or Collector Ring Ass'y (refer to Service Instructions).

Service Instructions:
30 AMP Models

WARNING:
Remove power from reel before performing any of the following procedures.

Replacing the Input Electrical Cable

1. Remove access cover (8) from reel.
2. Remove wire nuts (14) connecting input electrical cable (4) wires to collector ring ass'y wires.
3. Unscrew elbow (5) from reel & pull out input cable from main shaft & elbow.
4. Install replacement input cable (refer to Installation Instructions).

Replacing the Output Electrical Cord

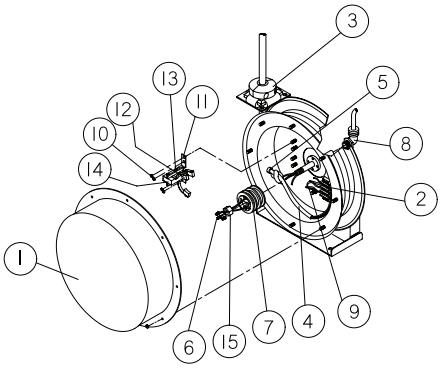
WARNING:
Use extreme caution, reel under tension. Avoid releasing latch mechanism.

1. Pull output electrical cable from reel until cable is fully extended, then latch.
2. Remove access cover (8).
3. Remove wire nuts (11) securing output electrical cable wires to collector assembly brush wires.
4. Remove output electrical cable ground wire from ground lug (12).
5. Loosen U-clamp (9).
6. Remove output electrical cable.
7. Remove bumper stop (13).
8. Install replacement input electrical cable (refer to Installation Instructions).

Troubleshooting Instructions:
20 AMP Models

Troubleshooting of the reel consists of isolating a problem to a defective electrical cord/work device, brush holder/brushes, or collector assembly. Refer any other discrepancies only to an authorized service person or directly to manufacturer.

WARNING:
The following procedure directs the technician to take voltage measurements. Remember, even low voltage is dangerous and can cause personal injury or death. Exercise extreme caution! Ensure that only a qualified electrican installs or services this equipment.



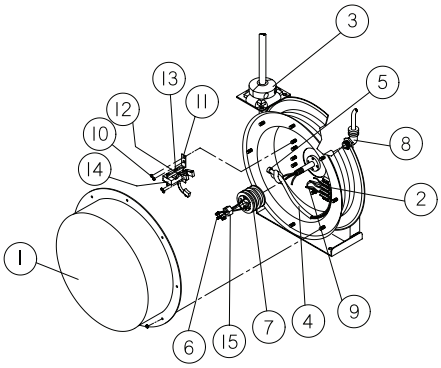
1. If work device is either an incandescent or fluorescent light, replace bulb with a known good bulb. If this does not correct the problem, proceed to step 2. If work device is an electrical receptable, ensure that tool or fixture connected to it is in good working order. If it is, proceed to step 2.
2. Remove power from reel.
3. Remove access cover (1).
4. Reapply power to reel.
5. Check for correct voltage (120 vac) at a terminal strip (2). If voltage reading is correct, replace output electrical device (refer to Service Instructions). If voltage reading is incorrect, proceed to step 6.
6. Remove power from reel.
7. Using ohmmeter, check continuity of input electrical cord. If cord checks good, proceed to step 8. If cord is faulty, replace it (refer to Service Instructions). Remove brush holder/brushes from reel and inspect (refer to Service Instructions). Replace defective components then proceed to step 9.
8. Reapply power to reel.
9. Check for correct voltage (120 vac) at terminal strip (2).
10. If voltage reading is still incorrect, replace defective collector assembly (refer to Service Instructions).
11. Replace access cover (1).

Service Instructions:
20 AMP Models

Maintain reel by following the service instructions given below. Refer all other repairs, other than those listed, only to an authorized service person or directly to Larson Electronics. Failure to do so can result in personal injury and/or equipment damage and may void the warranty.

Replacing the Output Electrical Cord/Work Device

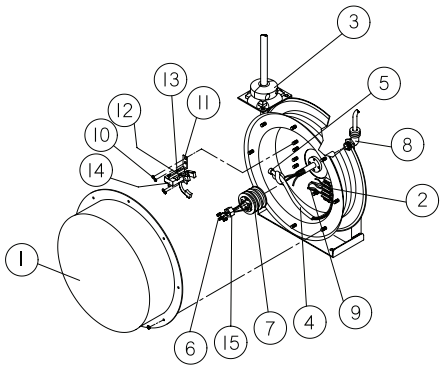
WARNING:
Remove power from reel before performing any of the following procedures. Use extreme caution, reel under tension. Avoid releasing latch mechanism.



1. Pull output electrical cord from reel until fully extended, then latch.
2. Remove output bumper stop (3).
3. Remove access cover (1).
4. Disconnect output electrical cord/work device (4) at terminal strip (2).
5. Remove cable clamp.
6. Remove strain relief (5). Remove output electrical cord/work device.
7. Install replacement electrical cord/work device by reversing steps 2 through 5.
8. Release latch and rewind electrical cord on reel.
9. Replace access cover (1) and bumper stop (3).

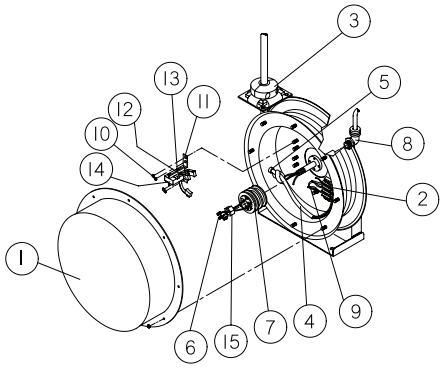
Replacing the Input Electrical Cord

WARNING:
All cord reels with GFCI receptacles must be hard wired into the electrical circuits. Use of 2 or 3 prong plugs may cause a potential malfunction of the GFCI receptacle.



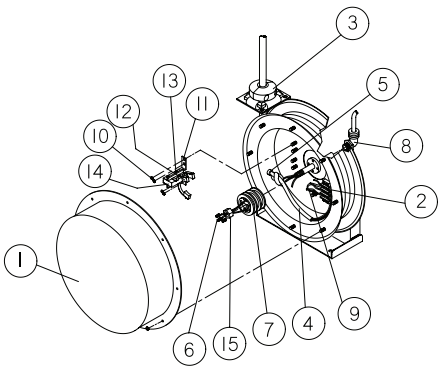
1. Remove access cover (1).
2. Remove wire nuts (6) securing input electrical cord to collector assembly (7).
3. Remove zip tie (not pictured), being careful to not damage wires.
4. Remove 90 degree elbow (8).
5. Remove input electrical cord.
6. Remove 11" of outer jacket from replacement input electrical cord (input electrical cord wires must protrude a minimum of 6" from center of collector assembly).
7. Install replacement input electrical cord by reversing steps 1 through 4.
8. Replace access cover (1).

Replacing the Brush Holder/Brushes



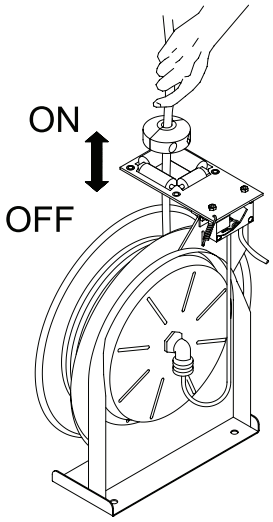
1. At terminal strip (2), remove wires connecting brushes (9) to terminal strip.
2. Remove lock nuts (10) securing brush holder (11) to reel. Relocate cable clamp temporarily and remove brush holder.
3. Remove brushes (12) from brush holder (11).
4. Install replacement brush holder/brushes by reversing steps 1 through 3. Upon completion of installation, adjust brush-to-ring alignment by loosening nuts (13) and sliding finger assembly (14).

Replacing the Collector Assembly



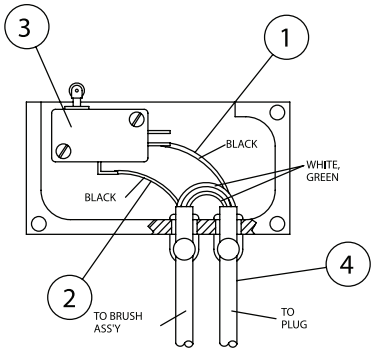
1. Remove access cover (1).
2. Remove wire nuts (6) securing input electrical cord to collector assembly.
3. Remove zip tie (not pictured), being careful to not damage wires.
4. At terminal strip (2), disconnect wires (9) connecting brushes (12) to terminal strip.
5. Remove lock nuts (10) securing brush holder (11) to reel. Relocate cable clamp temporarily and remove brush holder.
6. Remove coupling nut (15).
7. Remove collector assembly.
8. Install replacement collector assembly by reversing steps 1 through 5. Upon completion of installation, adjust brush-to-ring alignment by loosening nuts (13) and sliding finger assembly (14).
9. Replace access cover (1).

Operating Instructions
Autoswitch



Operation
To operate Autoswitch reels, pull and retract cable. When cable is fully retracted, the reel is in the "OFF" position. As the cable is pulled out, the guide arm pivots upward and the reel is in the "ON" position.

Troubleshooting
Autoswitch



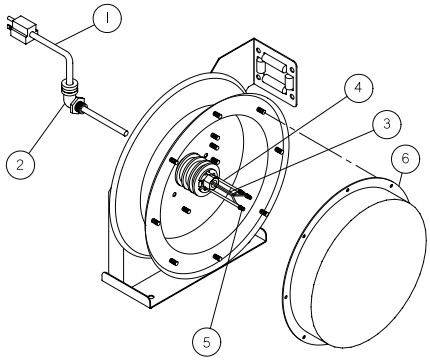
Service Instructions
Maintain reel by following the service instructions given below. Refer all other repairs, other than those listed, only to an authorized service person or directly to Larson Electronics. Failure to do so can result in per -sonal injury and/or equipment damage and may void the warranty.

If reel fails to operate electrically, refer to "Troubleshooting" instructions on page 5. If problem persists, check switch using the following steps.

Using an ohmmeter, check for continuity between lines (1) and (2) while switch is in the "ON" of "UP" position.
If continuity test fails, replace switch (3).
If continuity test passes, check for inlet cord (4) damage.

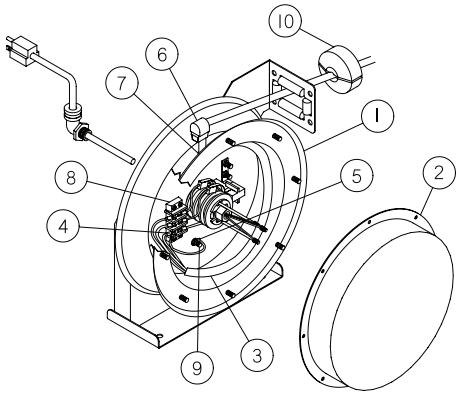
Installation Instructions

Installing the Input Electrical Cable: 20 AMP Models
WARNING:
Use only 12/3 or 16/3 cable for input wiring. Ensure that application does not exceed electrical rating of reel (see page 1 of this manual).



1. Feed input cable (1) through elbow (2) and main shaft.
2. Screw elbow (2) onto reel.
3. Connect input wires (3) and collector ring wires (4) together using wire nuts (5).
4. Take the provided zip tie (not pictured) and zip tie the input cable wires together closest to the slip ring.
5. Assemble cover (6) to reel.

Installing the Output Electrical Cable: 20 AMP Models
WARNING:
Select output cable in accordance with power requirement of apparatus to be supplied. Ensure that application does not exceed electrical rating of reel (see page 1 of this manual). Use extreme caution, reel under tension. Avoid releasing latch mechanism.



1. Manually turn sheave (1) until spring is tight, back off 2 turns and latch.
2. Remove access cover (2).
3. Remove 6" of output cable outer jacket (3) and add fork terminals (4) to ends.
4. Route cable through strain relief (6), then through cut out in spool (7).
5. Pull enough cable through hole for roughly a 1/2 an inner wrap shown.
6. Connect output wires to terminal block (8) as shown.
7. Connect ground wire to grounding stud (9) as shown.
8. Using an ohmmeter check for ground faults.
9. Take the provided cable clamp (not pic - tured) and attach it to the wire. Then take the cable clamp and screw it down to the right-most screw on the brush assembly (with the brush assembly facing upward).
10. Replace cover (2).
11. Replace latch and wind cable onto reel.
12. Install bumper stop (10).