DWR (Dual Wire Rope) Spring Reel

Installation, Operation, and Maintenance

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Introduction

Purpose

This document provides installation, operation, and maintenance information for Gleason Reel's DWR (Dual Wire Rope) Spring Reel. The customer and all individuals using and/or maintaining the DWR spring reel product/system must:

- Read and adhere to the information in this manual to install and use the reel safely and professionally.
- Pay particular attention to the safety instructions/warnings and general guidelines for installation and maintenance.
- Keep a copy of this manual available on site for reference.

⚠ CAUTION

- Failure to adhere to the information in this manual may result in injury and/or property damage and may void the warranty.
- Gleason Reel advises the installer and customer to fully review this manual prior to product installation and utilization.

Failure to follow these instructions may result in death, serious Injury, and/or property damage.

Product/System Overview

The DWR spring reel is an overhead retractable reel for use with commercial electric vehicle charging stations. This reel supports large ceiling and wall-mount charging solutions while occupying a minimum footprint in the facility. Dual diameter drums allow for variable rate wrapping of the charging cable. The reel's rugged design allows indoor as well as covered outdoor installation locations for full field flexibility. The simple user interface minimizes operator confusion, allowing easy extension and retraction of the electric vehicle charging cable, safely storing it out of harm's way when not in use.

Functional System Overview

The DWR spring reel's primary function is to conveniently store electric vehicle charging cables out of the way until required. When needed, the user simply grabs the charge cable, or pull handle attached to the cable, and pulls down the charge cable to the required position. The user locks the reel motion via the ratchet lock mechanism and proceeds to charge the vehicle.

The interchangeability of the reel's cable clips enables pairing the reel with a wide variety of charge cable sizes, ranging from 0.31 to 2.38 inches in diameter. To obtain new clips for various cable diameters, order the cable clips independently through a Gleason Reel representative.

Physical System Overview

The exploded view of the product below shows the general layout and structure between the various components.

Additional Resources

For additional information, please refer to Gleason Reel's website at: **https://www.hubbell.com/gleasonreel/en**

Address requests for specific information, not found in this document or on our website, to your Gleason Reel Representative. If this contact information is not available, contact Gleason Reel's main office for inquiries at the following phone number: (920) 387-4120.

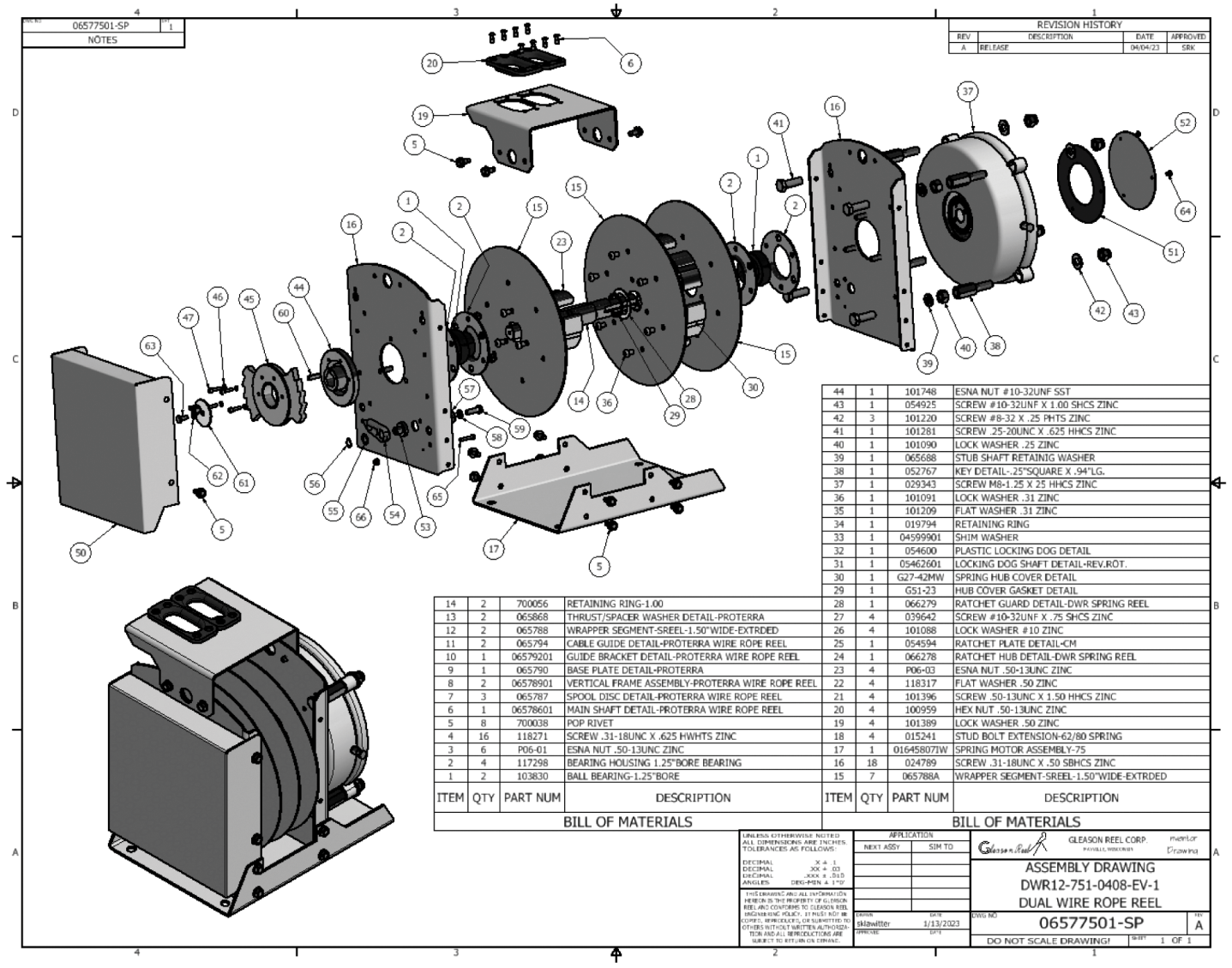


Figure 2: Dual Wire Rope Spring Reel—Exploded View

Nameplate/Product Specifications

Table 1: Product Documentation

Description	Specification
Reel Weight (Approximate)	79 lb
Reel Surface Area (Approximate)	3681 in^2
Reel with Mounting Bracket Weight (Approximate)	109 lb
Reel with Mounting Bracket Surface Area (Approximate)	4989 in^2
Ceiling Mount Canopy System Weight (Approximate)	131 lb
Ceiling Mount Canopy System Surface Area (Approximate)	9105 in^2
DWR Serial Number (Customer Filled)	
Installation Date (Customer Filled)	

Note: Enter the DWR spring reel's serial number and the installation date in the table above to maintain a record of this information.

Safety Documentation/Protocol

By purchasing and installing this product, the customer assumes all responsibility and risk that the product's usage is as the manufacturer intends. This includes compliance to the safety resources in this document, as well as all third-party safety regulations put forth by the customer and/or geographical location of installation. To guarantee the safety of the product user, it is utterly important to understand and follow the guidelines below. Under no circumstance does the manufacturer assume any liability for deviations from the procedures within this document.

Environmental Safety

For disposal of this product, observe all current local, federal, and state regulations pertaining to discarding/recycling various materials. This product primarily consists of steel. Dispose of these components via local recycling practices. For inquiries about product disposal, reach out to your Gleason Reel Representative.

User Safety

This product requires qualified personnel for installation, operation, and maintenance procedures. Allowing unqualified personnel to install, operate, or maintain this equipment may lead to unsafe operation of the product and potential damage to the unit and/or injury to employees/bystanders.

A qualified person(s) is an individual or individuals who have the proper training in accordance with relevant laws and regulations. All qualified personnel must be familiar with this installation, operation, and maintenance manual prior to performing any work.

Gleason Reel recommends following all applicable OSHA, NFPA, NEC, and local guidelines when working on this product.

Standard Safety Procedures

Gleason Reel recommends following standard safety procedures when installing, operating, or maintaining this product. Always check for additional requirements from the employer and/or geographical location. Refer to the following list of recommended safety procedures:

- Suitable physical barrier around workplace,
- Safety guards in place,
- Clear path within and around working area,
- Qualified personnel only,
- Ensure equipment is clean, and
- Utilize proper PPE (personal protective equipment).

Equipment Specific Warnings

High Tension Components—Spring Motor

⚠ WARNING

PRODUCT CONTAINS HIGH TORQUE SPRING

- Do NOT open the cannister containing the spring reel's spring motor. This spring has been previously wound and will expand if removed from the housing, potentially injuring personnel in the area and/or causing property damage.

Failure to follow these instructions may result in death or serious Injury.

Rotational Bodies—Shaft

⚠ CAUTION

PRODUCT CONTAINS HIGH TORQUE SPRING

- This product utilizes components that rotate. Rotating parts may catch loose clothing, hair, or accessories/ jewelry. This can lead to severe injury. Secure loose clothing, jewelry, and any other loose or protruding items before installing or maintaining this product.

Failure to follow these instructions may result in death or serious Injury.

Transportation and Storage

Package Inspection

Upon receiving the product package, review the shipment for any damage or missing items. Take note of any damage and any other observations on receipt of shipment. If required, reach out to your Gleason Reel Representative for any claims for damaged product.

Product Inspection

Inspect the product for any damage from the shipping process. Take note of any observations on receipt of shipment. If required, reach out to your Gleason Reel Representative for any claims for damaged product.

Lifting Guidelines

There are two one-inch diameter through holes within the vertical frame and cable guide brackets. These are the reel's designated lifting points. Gleason Reel recommends that the installer use two lifting hooks through these holes when moving the product. The reel weight is approximately 79 pounds. Use lifting straps of sufficient rating. It is the installer's responsibility to use safe and efficient lifting practices when moving the reel.

⚠ WARNING

HANDLING, LIFTING, AND TOPPLING HAZARD

- Keep the area below the equipment clear of all personnel and property while lifting.
- Balance and steady the load to prevent tipping.

Failure to follow these instructions may result in death, severe injury, and/or equipment damage.

Transportation and Storage

Product Storage

The DWR spring reel product is ready for installation upon receipt. Refer to the following information and procedures if storing the product upon receipt:

⚠ CAUTION

IMPROPER WORK PRACTICE

- If storing equipment prior to installation, protect it from the weather and keep it free of condensation and dust.

Failure to follow this instruction may result in injury or equipment damage.

Short-Term Storage

- If installing the product within 6-months of reception, follow these short-term storage practices:
- Store the product with the mounting holes against the resting surface (floor, pallet, etc.) and away from the weather (wind, rain, snow, etc.).
- Gleason Reel strongly recommends storing the product indoors.

Long-Term Storage

- Follow long-term storage practices when storing the product longer than 6-months. This includes additional storage requirements beyond the processes in the short-term storage section above:
- Coat all external machined surfaces with a rust preventative material.
- Cover all shafts/bores with a rust preventative.

Precautions

⚠ WARNING

ACCIDENTAL EQUIPMENT OPERATION

- Provide adequate clearance for working space around operator control stations.
- Guard or locate control station so it is not subject to accidental actuation or damage.

Failure to follow these instructions may result in death, injury, or equipment damage.

Only qualified personnel shall install this product. It is the responsibility of the customer to ensure proper structural integrity to support the reel. Guaranteeing a safe and efficient installation requires sufficient structural support. This includes any analysis pertaining to outdoor installations and their subsequent weather factors. If there is any concern, Gleason Reel recommends obtaining approval from a structural engineer. Gleason Reel is not liable and takes no accountability for installation errors and their subsequent effects.

Installation requirements vary from site to site due to location specific prerequisites. If installing to an I-beam, Gleason Reel requires the beam to be steel with a minimum nominal beam thickness of 0.25” and a maximum flange width of 4.25”. If installing to a flat plate, the plate must be steel and a minimum of 0.25” thick. The plate must not exceed 7” width to be used with the mounting base assembly. For questions regarding the best practices during installation, contact your Gleason Reel representative.

Environment

The DWR spring reel is suitable for mounting in various indoor or outdoor environments. Conduct a review, prior to installation, to ensure the best installation location. Install the reel where the charging cable is easily accessible in the lower position for vehicle charging, but still out of the way of any moving third-party equipment, if applicable. Gleason Reel recommends installing the reel 2–4 feet from the ceiling mounted charging cable dispenser for optimal storage of the charging cable.

For outdoor locations, consider the weather of the installation environment. The product has an ambient operating temperature range from −22 °F to +104 °F. In colder environments, where temperatures drop below freezing, the reel requires protection from settling snowfall and ice. If outdoors, ensure the reel has sufficient cover to prevent buildup of the elements on the reel. Gleason Reel recommends using the canopy accessory for all outdoor installations. Furthermore, high wind environments may require extra structural support. If there are any concerns regarding the installation location, Gleason Reel recommends having a structural engineer provide input and approval.

Installation

Provided Materials

The DWR spring reel product includes the following primary components, consisting of:

- the reel,
- installation mounting bracket,
- the saddles, and
- installation hardware.

Accessories (Not Included)

The DWR spring reel product does not provide shielding from the elements for outdoor installations. If installing the reel outdoors, Gleason Reel recommends using the ceiling mount canopy mounting accessory.

Physical Product Installation

Install the DWR spring reel to an overhead structure. At present, the reel is not installable on any vertical mounting structures. See Figure 3 and Figure 4 for the overall dimensions of the reel and the mounting hole pattern. Figure 5 provides the installation adaptor plate mounting hole pattern for all installations. The following sub sections provide installation guidelines.

Note: Installation requirements vary from site to site. Review all installation site requirements prior to commissioning.

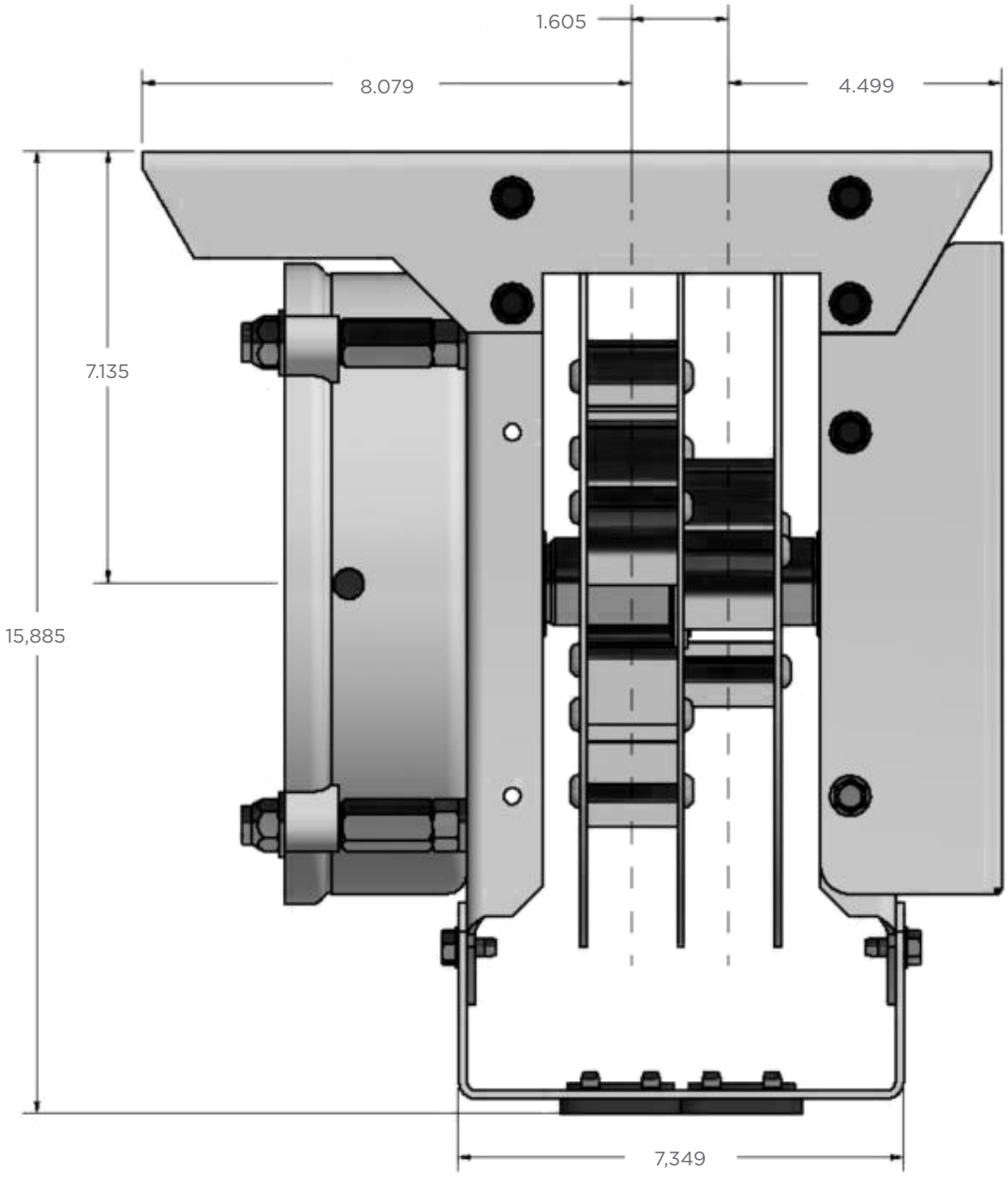


Figure 3: Dual Wire Rope Spring Reel—Overall Reel Dimensions

Installation

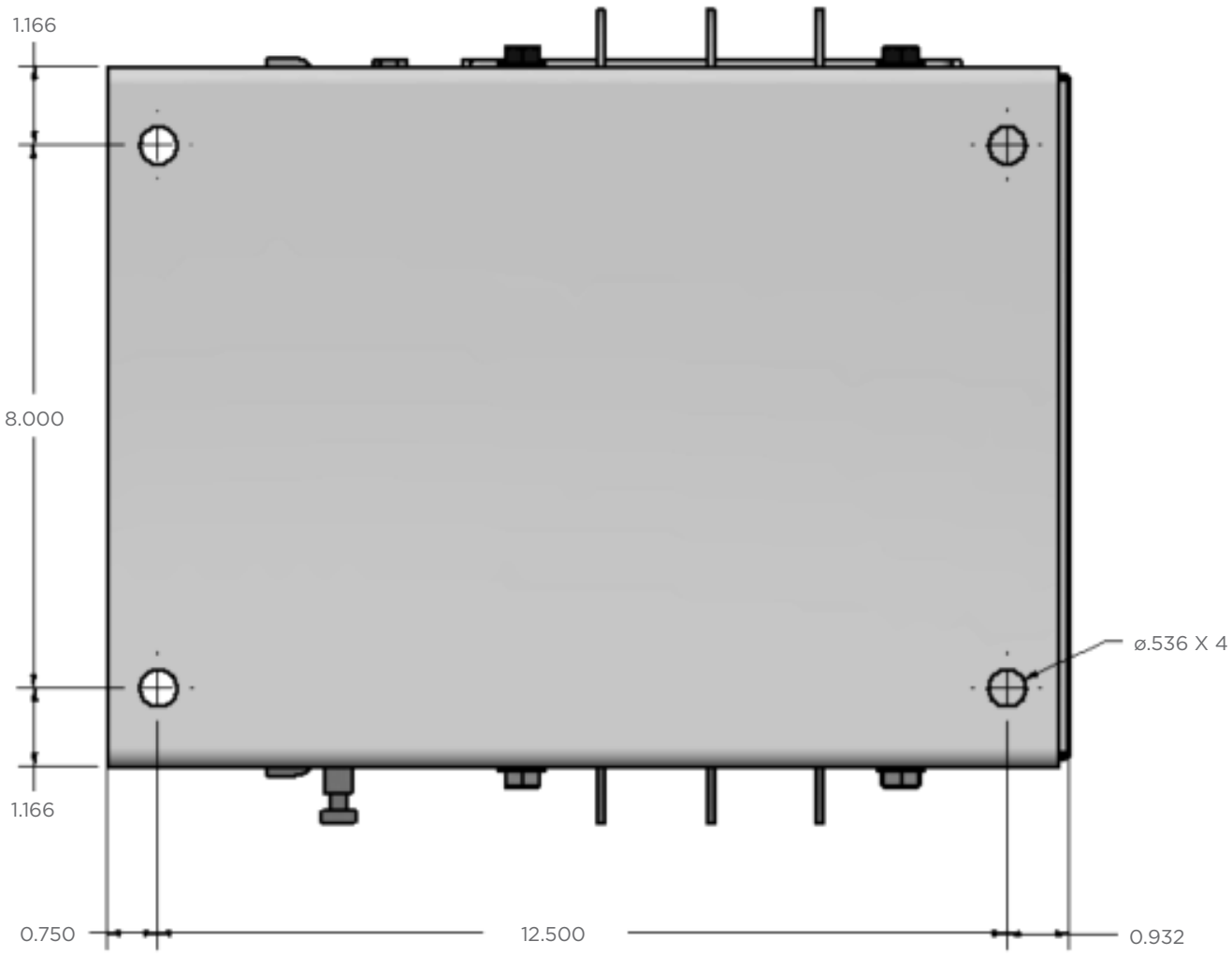


Figure 4: Dual Wire Rope Spring Reel—Mounting Bolt Pattern

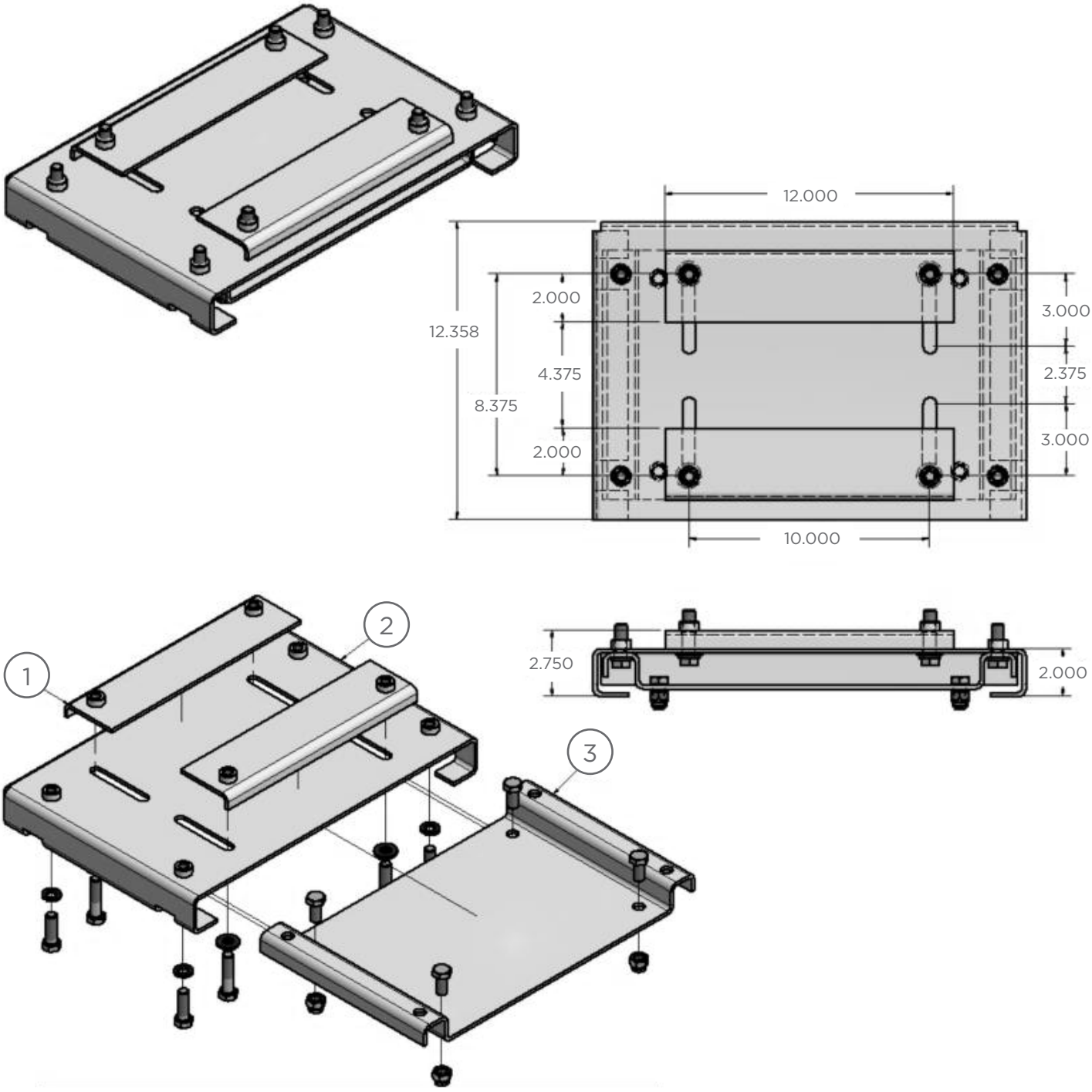


Figure 5: Mounting Plate Detail

Bill of Materials

Item	Qty	Part Number	Description
1	2	**066168**	Clamping Bar Detail
2	1	**066166IW**	Mounting Base Assembly-DWR Reel
3	1	**0066167**	Adapter Plate Detale-DWR12

Installation

Reel—Overhead Installation

⚠ WARNING

- The reel includes a mounting adaptor assembly:
- Use this assembly for all overhead mounting installations to provide extra safety and installation ease when aligning the reel to the mounting fixture.

Failure to follow these instructions may result in death, injury, or equipment damage.

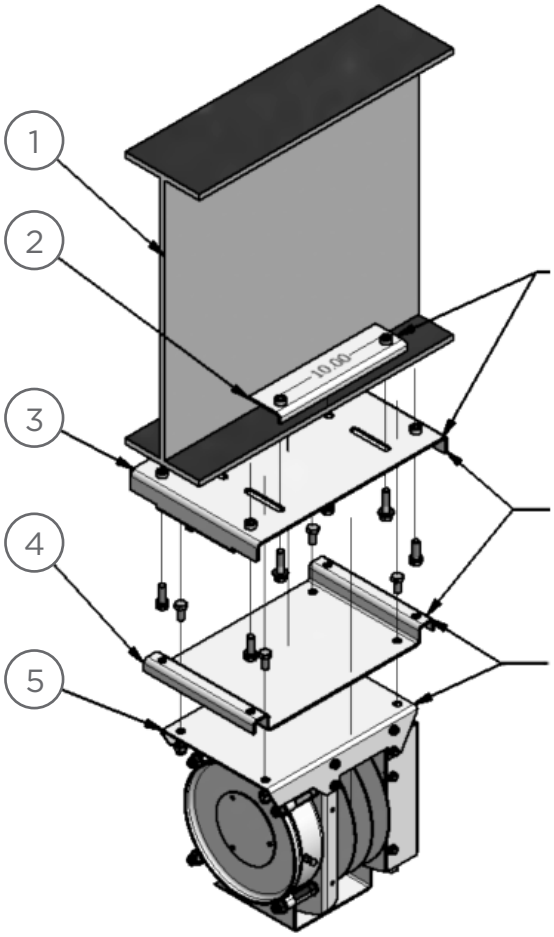
Upon receipt, the DWR spring reel's orientation is with the mounting plate flat on the ground or shipping pallet. Prior to lifting the reel, ensure all necessary equipment is readily available and the area is clear of all obstructions.

- Install the mounting adaptor assembly's clamping bars and mounting base to the support structure using four 1/2" flat and lock washers with 1/2-13 UNC minimum grade-5 hex-bolts.
- The clamping bars have preinstalled PEM® nuts.

  Note: The mounting base has slotted holes to account for various support structure widths. One end of the mounting base is open. Ensure the open end is in the proper orientation for the adapter plate to slide in.
- Rotate the reel and install the mounting adaptor assembly's adaptor plate to the DWR spring reel using four 1/2-13 UNC minimum grade-5 hex-bolts and four 1/2-13 ESNA nuts.
- Lift the reel from the shipping/storage pallet and position the adaptor plate so the flat face is oriented upwards.
- Raise the reel up to the mounting base and slide the adaptor plate into the mounting base, aligning the bolt pattern on the adaptor plate with the corresponding bolt pattern on the mounting base.

  Note: Slide the adaptor plate into the mounting base from the end necessary to orient the cable guide in the proper direction.
- Secure the adaptor plate to the mounting base using four 1/2" lock washers with 1/2-13 UNC minimum grade-5 hex-bolts.

  The mounting base has preinstalled PEM® nuts.



STEP 1: install clamping bars and mounting base to the mounting structure

STEP 3: install the adaptor plate to the mounting base.

STEP 2: Install the Adaptor Plate to the Dual Wire rope motor reel.

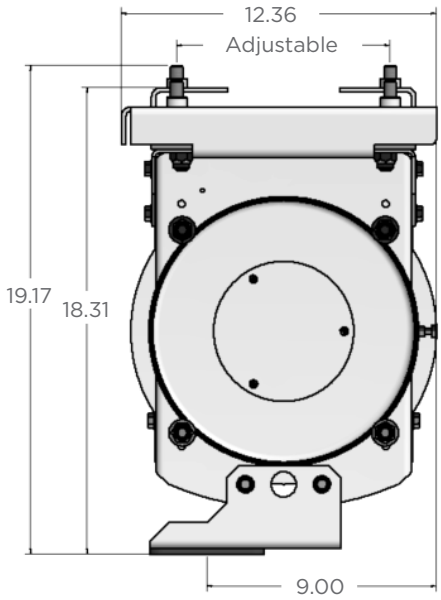


Figure 6: Overhead Mounting with Mounting Adaptor Assembly

Bill of Materials

Item	Qty	Part Number	Description
1	2	**MOCK I-BEAM**	
2	1	**066168**	Climping bar detail
3	1	**066166IW**	Mounting base assembly-DWR reel
4	1	**066167**	Adapter plate detail-DWR12
5	1	**06577501**	DWR12-751-0408-EV-1 wire rope reel

Installation

Reel—Overhead Installation with Canopy

Upon receipt, the DWR spring reel's orientation is with the mounting plate flat on the ground or shipping pallet. Prior to lifting the reel, ensure all necessary equipment is readily available and the area is clear of all obstructions.

- Install the mounting adaptor assembly's clamping bars, overhead canopy ceiling mount, and mounting base, to the support structure, using four 1/2" flat and lock washers with 1/2-13 UNC minimum grade-5 hex-bolts.

  Position the canopy between the clamping bars and mounting base with the flanges facing downward. The clamping bars have preinstalled PEM® nuts.

  Note: The mounting base and canopy ceiling mount have slotted holes to account for various support structure widths. One end of the mounting base is open. Ensure the open end is facing towards the covered area under the canopy.

- Rotate the reel and install the mounting adaptor assembly's adaptor plate to the DWR spring reel using four 1/2-13 UNC minimum grade-5 hex-bolts and four 1/2-13 ESNA nuts.
- Lift the reel from the shipping/storage pallet and position the adaptor plate so the flat face is oriented upwards.
- Raise the reel up to the mounting base and slide the adaptor plate into the mounting base, aligning the bolt pattern on the adaptor plate with the corresponding bolt pattern on the mounting base.

  Note: Slide the adaptor plate into the mounting base from the end that positions the cable guide towards the center of the mounting base.

- Secure the adaptor plate to the mounting base using four 1/2" lock washers with 1/2-13 UNC minimum grade-5 hex-bolts.
- The mounting base has preinstalled PEM® nuts.
- Secure the overhead canopy end panels to the canopy ceiling mount using two 1/4-20 UNC hex washer head tap screws for each plate.

  Note: The canopy end panel goes inside the canopy ceiling mount flanges.

- Secure the overhead canopy side panels to the canopy ceiling mount and end panels using four 1/4-20 UNC hex washer head tap screws for each plate.

  Note: The side panels go over the end panels, but still reside within the ceiling mount flanges.

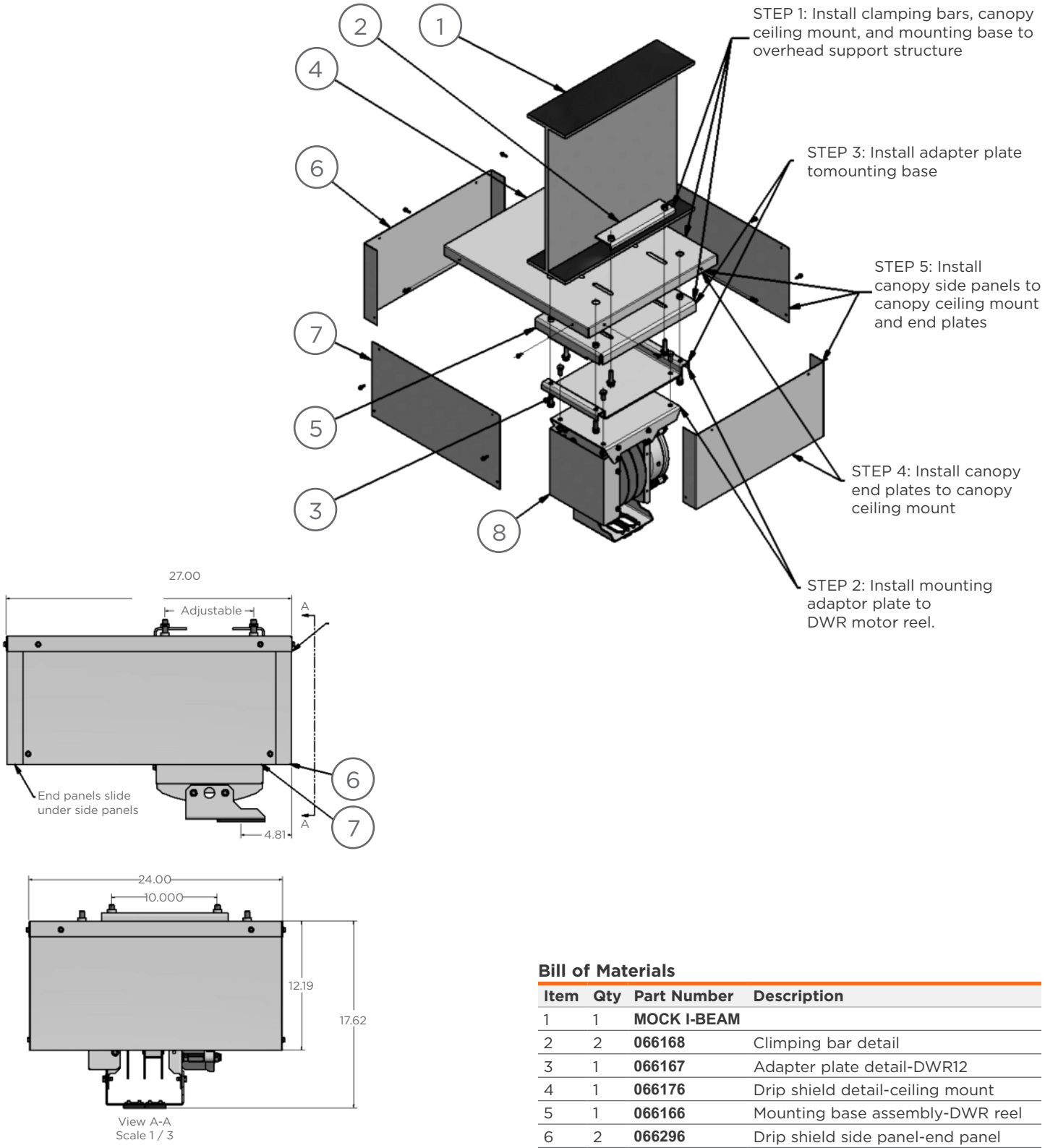


Figure 7: Overhead Mounting with Mounting Adaptor Assembly and Canopy

Bill of Materials

Item	Qty	Part Number	Description
1	1	**MOCK I-BEAM**	
2	2	**066168**	Climping bar detail
3	1	**066167**	Adapter plate detail-DWR12
4	1	**066176**	Drip shield detail-ceiling mount
5	1	**066166**	Mounting base assembly-DWR reel
6	2	**066296**	Drip shield side panel-end panel
7	2	**066297**	Drip shield side panel-side panel
8	1	**06577501**	DWR12-751-0408-EV-1 wire rope reel

Installation

Reel—Improper Installation

Do not allow the cable to come out/off the reel at a sharp angle. Always lower and raise the charging cable vertically out of the cable guide. Any deviation from this may stress the cable through usage cycles of the product, shortening the cable's life.

Saddles—Ceiling Mounted Charging Cable

Tighten and clamp down the two saddles to the electric vehicle charging cable:

Locate the first saddle 4 feet back and the second saddle 11.5 feet back from the charger head; leaving 7.5 feet of the charge cable between the two saddles.

This may require later adjustment for customer preferences of the charging cable hanging loop height.

Saddles—Floor/Low Mounted Charging Cable

Tighten and clamp down a single saddle to the electric vehicle charging cable:

Locate the saddle 9.5 feet back from the base of the charger head.

This may require later adjustment for customer preferences of the charging cable hanging loop height.

Spring Motor Pretensioning

Clock-type springs provide power for automatic cable take-up. Each reel includes a spanner wrench attached to the reel's base.

⚠ WARNING

- This reel includes a spanner wrench. Follow the instructions below to safely use the wrench.
- Do not attempt to relieve spring tension using the spanner wrench.
- Do not exceed 12 turns on the spring motor. Over-tensioning can cause a broken spring, sheared shaft, or other damage.

Failure to follow these instructions may result in death, injury, or equipment damage.

- Secure the spanner wrench from the reel.
- Unspool the wire rope from the reel, without allowing the spool to rotate, to reach the charging cable saddle connections. Do not pull the cable directly off the reel as this will apply tension to the spring and may cause over tensioning
- when placing the reel into service.
- Connect the wire ropes to the saddles.
- Remove the cover plate on the spring housing to expose the shaft and spring hub. See Figure 8 below.
- Insert the spanner wrench into the holes in the spring hub. See Figure 9 below. Rotate the wrench counterclockwise to add pretension turns until the cable lifts to the ideal height.

  Note: Do not exceed 12 turns on the spring motor.

- Install the cover plate back onto the spring housing and return the spanner wrench to the reel.

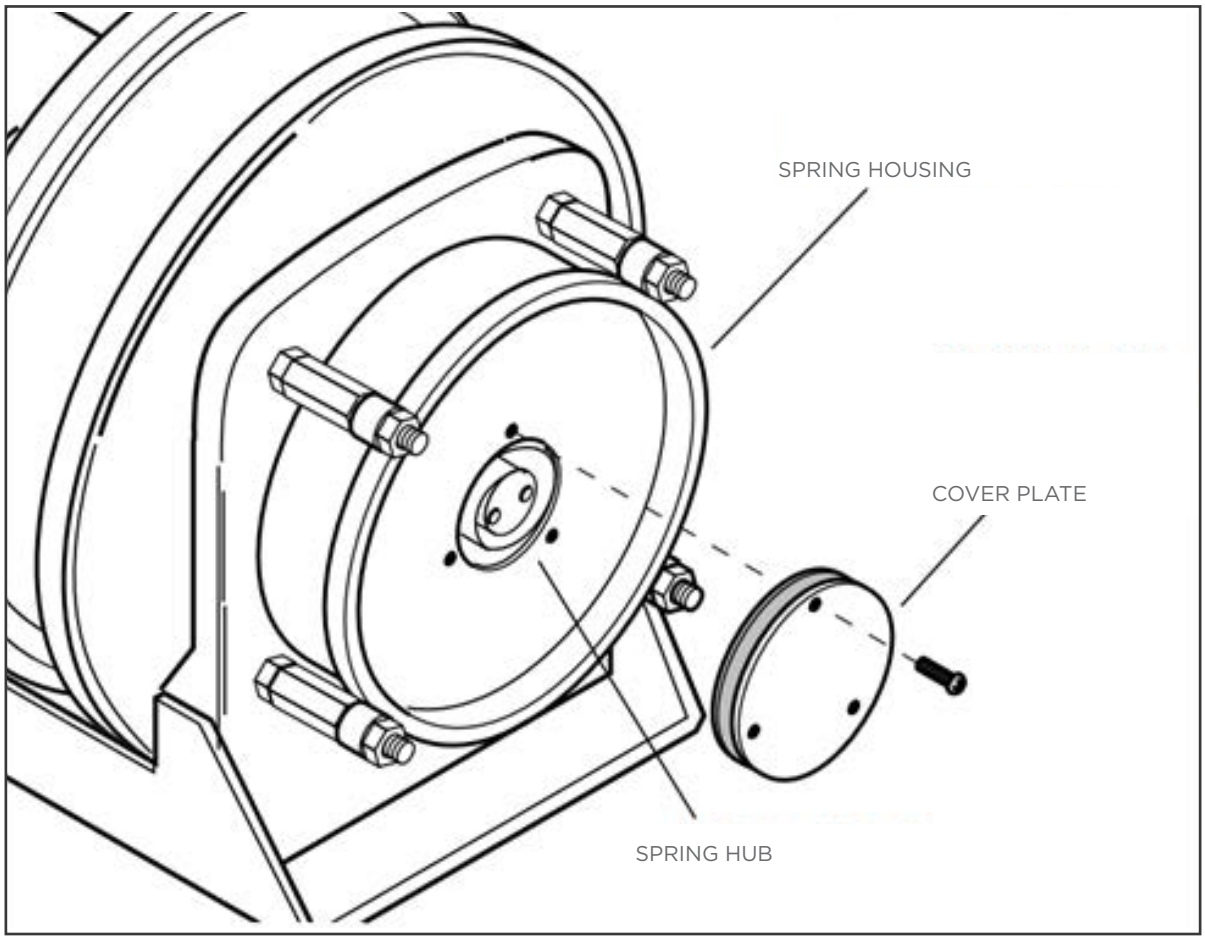


Figure 8: Spring Housing Cover Plate Removal

Installation

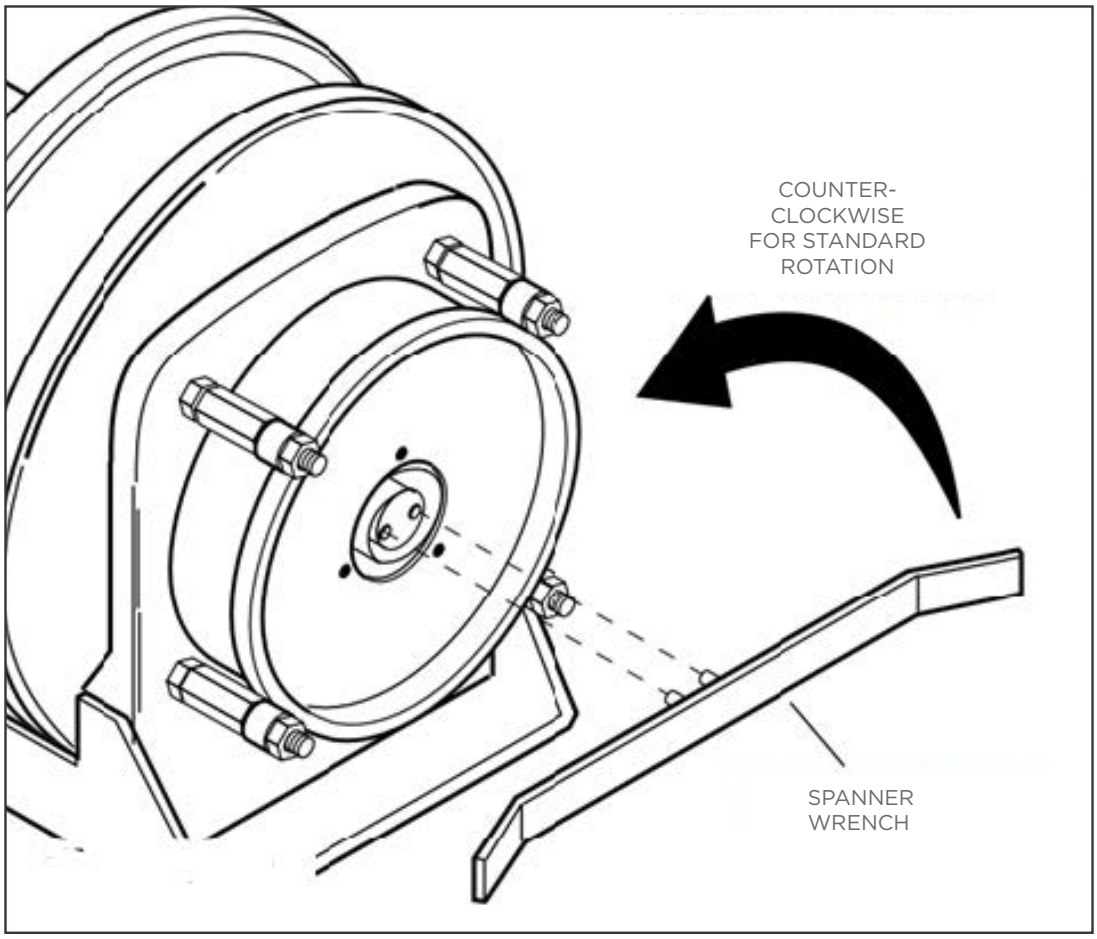


Figure 8: Spring Housing Cover Plate Removal

Configuration

Note: The instructions below refer to the DWR spring reel configuration with a ceiling mounted charge cable and two saddle locations. For floor/low mounted charge cable and single saddle installations, follow the instructions below with exclusion to actions specific to the second saddle, farther up the cable from the charge head. Additionally, remove the wire rope connection to the smaller diameter drum and only use the wire rope connected to the larger diameter drum.

Saddle Locations

Note: Depending on customer preference, more or less of the charging cable loop may hang down from the spring reel. Adjustments to the saddle locations may require adjusting the tension on the spring motor.

Ceiling Mounted Charge Cable (Two Saddles).

Adjust the distance of the saddles from the charging cable head to set the height of the charge cable loop, between the saddles.

- Move the saddles farther apart to increase the overall loop length and decrease the height to the bottom of the loop.
- Move the saddles closer together to decrease the overall loop length and increase the height to the bottom of the loop.

Floor Mounted Charge Cable (One Saddle)

Move the single saddle further/closer from the charge cable head to set the proper amount of slack in the cable.

System Startup

Safely start operating the system after completing the installation processes:

- Monitor the initial system startup for any faults in the equipment and/or installation process.
- Raise and lower the charging cable, while ensuring the desired travel is obtainable.
- Engage the ratchet lock, ensuring it functions properly.

After satisfactory configuration of the reel and ensuring it is operating properly and safely; the product is ready for use in standard operation.

Installation Checklist

Installation Step	Brief Description	✓
Dual Wire Rope Spring Reel Mounting	• Use the support mounts to install the reel. • Secure the reel to a fixture with sufficient structural support. • Orient the reel in the correct direction. • If outdoors, the reel has appropriate coverage from the elements and/or has a canopy. • Attach and secure the saddles to the charging cable at the required distances.	
Spring Motor Pretensioning	• Add the necessary amount of pretention to support the charging cable. • The complete travel distance is obtainable to charge the vehicle.	
Reel Locking Functionality	• The locking ratchet engages properly. • The proper amount of cable remains supported in the locked position.	

Table 2: Installation Checklist

Operation

Product Usage

The DWR spring reel is for use with daily charging requirements of electric vehicles. Typical operation of the reel is to raise/lower the cable as vehicles require charging and to store the cable away when not in use. Gleason Reel anticipates this to occur several times per day. This usage does not limit the duty cycle of the charger.

Charging an Electric Vehicle

A driver requiring a vehicle recharge needs to:

- Position their vehicle in the charging zone.
- Walk up to the charge cable pull handle or docking station, which is dependent upon cable storage, above the vehicle or at ground level.
- Grab the charge cable and pull enough wire rope out of the reel to reach the vehicle. Ensure there is enough slack to safely plug the charge cable into the vehicle.
- Engage the reel's ratchet lock.
- Walk up to the vehicle and connect the charge cable to the vehicle to begin charging.

When charging is complete, the driver needs to

- Disconnect the charge cable from the vehicle.
- Disengage the reel's ratchet lock.
- Walk the charge cable back to its resting position or docking station, guiding the wire rope back onto the reel.
- Release the pull handle when the charge cable is back in its resting position or redock the charge cable, which is dependent upon cable storage, above the vehicle or at ground level. Once raised or redocked, the vehicle charging cable is out of the way until the next vehicles needs charging.

Spring Motor Pretensioning

Clock-type springs provide power for automatic cable take-up. Each reel includes a spanner wrench attached to the reel's base.

Conventional Errors—Diagnostics and Troubleshooting

Table 3 references potential errors that may occur in the field, along with respective tests and solutions. The table is not all encompassing. Use it as an initial reference if the product exhibits any issues. Contact your Gleason Reel Representative for product support for any issues this section does not cover.

Error/Symptom	Potential Cause	Test	Solution
Reel will not raise cable	Damage to spring motor	Verify if the broken spring indicator is in the out position. Pull 2/3 of the wire rope off the reel and observe the broken spring indicator on the side of the spring cannister.	Replace the spring motor.
	Not enough pretension on motor	Add more pretension to see if cable will rise to its ideal height.	Conduct pretensioning of spring motor to set the ideal cable height.
	Wire rope is stuck on obstruction	Verify that no obstructions are catching the wire rope.	Free the wire rope from the obstruction.
Cable is not out of vehicle path	Improper saddle placement	Verify if moving the saddle up/down the charging cable positions the cable out of the vehicle path.	Modify the saddle locations and hanging cable loop height per the application.
	Reel is too close to dispenser	After moving the saddle locations and adjusting pretension, the cable is still not in the desired location.	Move the reel further away from the dispenser to adjust the hanging loop length.

Table 3: Diagnostic and Troubleshooting Table

Maintenance

Table 4 below provides necessary maintenance procedures along with recommended service intervals. Reference the table below to maintain the DWR spring reel. Failure to follow.

Note: The table below contains Gleason Reel's recommended maintenance procedures and frequencies. The installation site may dictate additional longer/shorter maintenance intervals and/or additional maintenance procedures.

Note: Only certified individuals shall perform all maintenance work.

Equipment	Area	Maintenance Description	Intervals
Reel	Wire Rope Cable	Inspect cable for any wear or areas of concern. If seen, replace wire rope cable.	Bi-Annually
	Wire Rope Termination Points	Inspect the wire rope cable clips for wear or damage. Replace worn or damaged clips immediately	Annually
Saddle	Connection to Charge Cable	Inspect the saddle(s) for any wear or damage. Verify the saddle is not too tight on the charge cable.	Bi-Annually
Spring Motor	Spring Pretension	Inspect the spring motors pretension. Ensure sufficient tension to support the electric vehicle charging cable.	Bi-Annually

Table 4: Maintenance Table

Wire Rope Replacement

Use the following procedure to remove worn or damaged wire rope from reel prior to installation of new wire rope.

⚠ WARNING

PRODUCT CONTAINS HIGH TORQUE SPRING

Failure to relieve all spring tension prior to removing cable could result in damage to equipment or personal injury. Follow instructions carefully.

Failure to follow these instructions may result in death or serious Injury.

Remove Damaged Wire Rope

- Move the reel's supported load to the closest position to the reel.
  ⚠ CAUTION ⚠ The springs will still be under pretension at this point.
- Prevent the spool from turning by engaging the ratchet to lock the spool.
- Grip the spool by hand and carefully disengage the ratchet.
- Slowly unwind the remaining tension.
- Again, engage the ratchet to prevent rotation.
- Remove the wire rope from the spool by unscrewing the mounting bolt on the wrapper.

Install New Wire Rope

- Install the new wire rope onto the wrapper.
- Rotate the spool by hand, in the clockwise direction, to wind the wire rope onto the reel's spool. Leave enough wire rope length to reconnect the saddles.
- Connect the wire rope to the saddles.
- Pretension the reel as described in the Spring Motor Pretensioning section.

Maintenance

Spring Replacement

⚠ WARNING

PRODUCT CONTAINS HIGH TORQUE SPRING

Do NOT open the cannister containing the spring reel's spring motor. This spring has been previously wound and will expand if removed from the housing, potentially injuring personnel in the area and/or causing property damage.

Failure to follow these instructions may result in death or serious Injury.

The unique SAFETYCHANGE® spring motor consists of a spring and hub sealed within a housing. The housing completely seals the replacement spring. The customer should discard the old spring motor completely. Remove Damaged Wire Rope

- Move the reel's supported load to the closest position to the reel.
  ⚠ CAUTION ⚠ The springs will still be under pretension at this point.
- Prevent the spool from turning by engaging the ratchet to lock the spool.
- Grip the spool by hand and carefully disengage the ratchet.
- Slowly unwind the remaining tension.
- Remove the cover plate from the face of the spring housing.
- Rotate the spool clockwise and observe the inner shaft.
  The shaft should rotate clockwise. The hub (with spring attached) should remain stationary.

  NOTE: Do not attempt to remove spring if it resists movement or the hub tends to rotate with the shaft. Continue to rotate the spool while striking the end of the shaft with a rubber mallet until the shaft rotates freely and the hub remains stationary.

- Remove the four nuts that secure the spring motor to the frame..
- Slide spring motor off the shaft and discard.
- Install the replacement spring motor, pawl, and pawl springs.

  NOTE: Pawl springs must be between the pawls and the deepest section of the shaft grooves. Make sure that the pawls and pawl springs are flush with ends of the shaft and hub, or they may rub against the cover plate. See Figure 10for further illustration.

- Tighten the nuts and extension bolts securing the spring housing to the reel frame.
- Pretension the reel as described in the Spring Motor Pretensioning section.

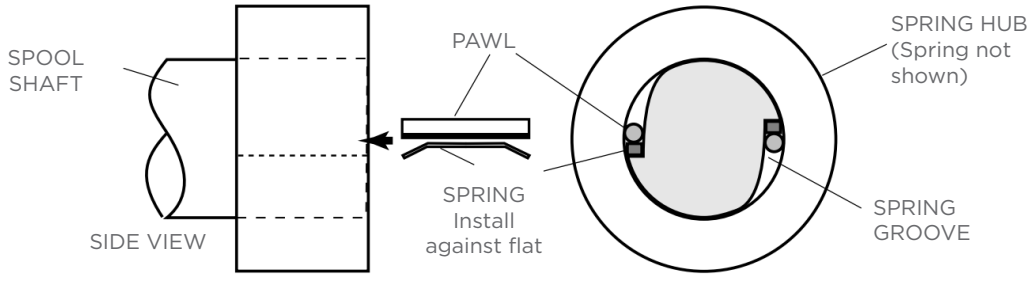


Figure 10: Shaft, Hub, and Pawl Illustration

Wire Rope Replacement

Table 5 lists the DWR spring reel replaceable parts in the event of product damage. Reach out to your Gleason Reel Representative for a formal quote for all replacement part requirements..

⚠ CAUTION

- Replacing any components of the DWR spring reel with products not supplied by Gleason Reel may lead to product failure and result in injury and/or property damage.
- Replacing any components of the DWR spring reel with products not supplied by Gleason Reel may void the product warranty. Gleason Reel takes no liability for damage or injury caused by modifying the standard product without approval.

Failure to follow these instructions may result in death, serious Injury, and/or property damage.

Part	Part Number
Wire Rope	**GR065618**
Saddle	**Varies**
Spring Motor	**GR017047IW**

Table 5: Spare Parts List

Buy America

In regard to the regulations put forth by Buy America, Gleason Reel and Hubbell provide the following statement:

The below part number(s) complies with the definition of “domestic end product” under FAR 25.003 and the required percentage of components, by cost, are of U.S. origin/manufacture, and the product is manufactured in the U.S.

Hubbell provides the above data and information in good faith, based upon current knowledge and experience, but makes no warranty that such data or information is free from error, is complete, or is sufficient for the user’s intended purpose, even if made known to Hubbell. For purposes of this certification, manufactured in the U.S. means raw materials and/or subcomponents were transformed through manufacturing processes, at a Hubbell facility in the U.S., to create a functionally different product. This certification letter is valid from March 20, 2023, through December 31, 2023.

Material	COO
GR06577501	**US**

Product Warranty

Gleason Reel warrants, for a period of twelve (12) months, after date of shipment, that all goods it manufactures to be free from defects in material and workmanship. If, within such warranty period, any such goods are shown, to Gleason's satisfaction, to be defective, such goods shall be repaired or, at Gleason's options, replaced f.o.b. Gleason's factory, without charge. Gleason's obligation hereunder shall be confined to such repair or replacement and shall be further conditioned upon Gleason's receiving written notice of any alleged defect within 10 days after its discovery and, at Gleason's option, the return of the allegedly defective goods to Gleason, f.o.b. its factory.

The foregoing warranty shall not apply to goods not manufactured by Gleason, or to goods which shall have been repaired or altered by others than Gleason so as, in Gleason's judgement, adversely affect the same, or which shall have been subject to other than normal care, or storage. With respect to goods furnished but not manufactured by Gleason, the warranty obligations of Gleason shall in all respects conform and be limited to the warranty extended to Gleason by the supplier.

The foregoing warranty is in lieu of all other express or implied warranties (except of title) and of all other obligations of Gleason.

Warranty Guarantee

The Purchaser has a reasonable time to ascertain whether the apparatus is as represented. Tests made by the Purchaser shall be made within 60 days from date of shipment. The conditions of such tests shall be mutually agreed upon and the Company shall be notified of and reserves the right to be represented at any test. Attempts to disassemble or repair equipment by the customer will invalidate all intended warranty. There are no warranties after acceptance, but the Company will repair or replace F.O.B. factory, any part which under normal and proper use proves defective in workmanship or material within one year from date of shipment. The correction of such defects by repair or replacement shall constitute fulfillment of all the Company's obligations with respect to the apparatus sold hereunder. With respect to goods furnished but not manufactured by Gleason, the warranty obligations of Gleason shall in all respects conform and be limited to the warranty extended to Gleason by the supplier.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF QUALITY WHETHER WRITTEN, ORAL, OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Warranty Inquiries/Claims

For any inquiries regarding this products warranty or to submit a warranty claim, please contact your Gleason Reel representative.

A proud member of the Hubbell family.

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www.hubbell.com/gleasonreel | 920-387-4189

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