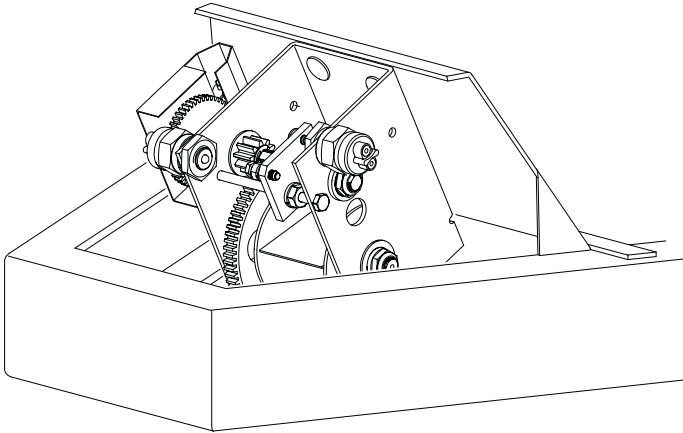

MOTORIZED FOLDING CAMPER WINCH



The 12 Volt Motorized Folding Camper Winch is used to raise and lower the top of folding campers with the touch of the switch, eliminating tiresome hand cranking.

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SAFETY INFORMATION

WARNING

A WARNING INDICATES A POTENTIALLY HAZARDOUS SITUATION THAT, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY AND/OR MAJOR PROPERTY DAMAGE.

CAUTION

A CAUTION INDICATES A POTENTIALLY HAZARDOUS SITUATION THAT MAY CAUSE MINOR TO MODERATE PERSONAL INJURY AND/OR PROPERTY DAMAGE. IT MAY ALSO BE USED TO ALERT AGAINST UNSAFE PRACTICES.

NOTE: A note indicates further information about a product, part, or step.

Tip: A tip provides helpful suggestions.









GENERAL SAFETY INFORMATION

The following Safety Precautions Must be Followed at ALL Times



Failure to follow the warnings and cautions in this manual could result in serious injury and/or property damage.

Thoroughly read the manuals furnished with this product and be familiar with the controls. Do not allow individuals to operate the winch without understanding the safe operation and procedures for the equipment.

WARNINGS

-  ALWAYS unplug the wiring harness before attempting to install, relocate, service or perform maintenance on the winch.
 -  NEVER use the winch to lift or move people or animals.
 -  NEVER use the winch to exclusively hold, support or permanently secure the top. Use separate brace(s) to support the camper top when raised.
 -  NEVER extend the top beyond the visual height indicators on the camper.
 -  ALWAYS stand away from the winch during operation. ALWAYS keep objects, people and animals away from the camper and camper top when operating the winch. Serious injury could occur if the cable breaks.
 -  ALWAYS keep hands clear of the cable spool (drum area).
 -  ALWAYS wear leather gloves when handling the cable. Steel cable can cause serious damage to hands.
 -  NEVER wear loose fitting clothes, scarves, ties or jewelry when operating the winch. Loose clothing can become caught in moving parts.
-

CAUTION

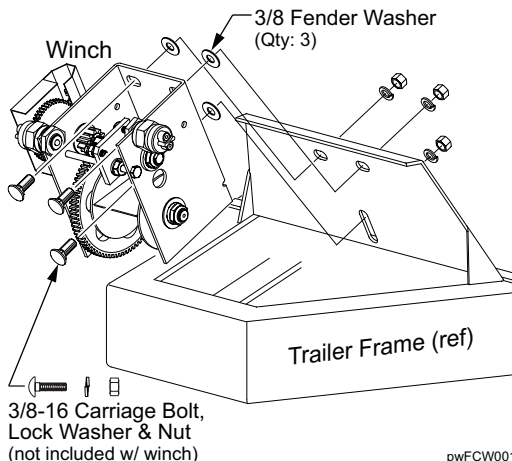
-  Do not lift the camper top if there is cargo such as luggage or bicycles on the camper top. The extra load can overload the winch and cause damage may void the warranty.
-  The winch has a 5-minute duty cycle. Wait at least 5 minutes between each lifting cycle. Running the winch continuously will damage the motor and gears and void the warranty.

WINCH INSTALLATION

1. Park the camper on a hard level surface. Place wheel chocks under the wheels to prevent the camper from moving.
2. Make sure that camper top is lowered completely and there is no tension on the winch cable. Remove the cable from the existing winch.
3. Remove the existing winch. **SAVE** the fasteners to install the new winch.

NOTE: If there is not an existing winch, the installer must furnish three (3) each of 3/8-16 x 1 carriage bolts, lock washers and nuts.

4. Using the fasteners from step 3 and attach the new electric winch to the trailer frame. The included fender washers go between the winch and the trailer's mounting frame. Ensure that the winch is centered and vertical. Torque nuts to 20 ft-lbs.



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ELECTRICAL SETUP

If mounting the switch in the optional cover, refer to the mounting instructions included with the cover kit. For reference, refer to the wiring diagram on page 8.

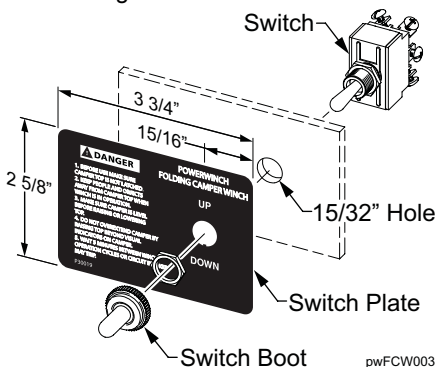
1. Determine the mounting location of the switch. The position should provide easy access but not in a position where the switch can be accidentally damaged.

For reference:

- The cable is 24" from the winch to the switch.
- There is 36" of cable from the switch to the battery connection.
- Before continuing, lay the cable out to be sure that the switch will mount without straining the wire cable allowing a minimum of 1"-2" of slack. The cable must be mounted to avoid moving parts such as the gear train and cable.

2. In the mounting location, drill a 15/32" hole.
3. Clean and dry the surface then peel off the paper backing from the switch plate and adhere the switch plate over the hole. The hole in the plate must align with the hole drilled in step 2.

4. Mount the switch using the supplied jamb nuts and the rubber switch boot. Orient the switch so that the notch in the switch aligns with the tab in the hole of the switch plate.

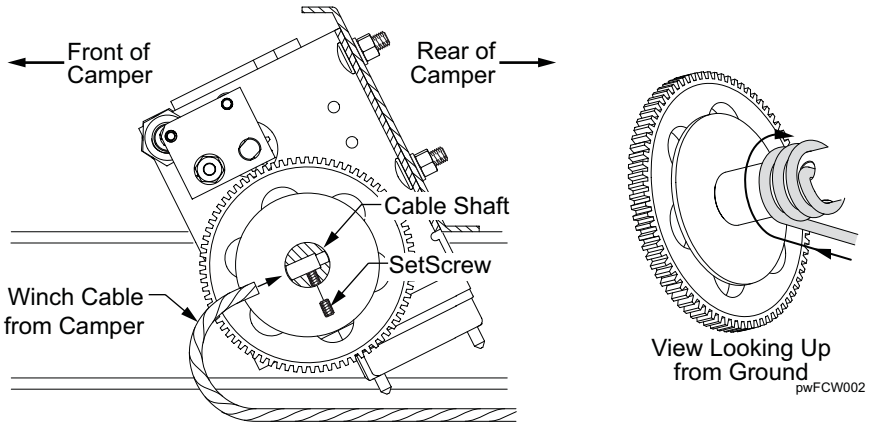


pwFCW003

5. Route the battery wires to the battery.

6. Attach the RED wire with the 50-amp circuit breaker to the POSITIVE (+) terminal of the battery; attach the BLACK wire to the NEGATIVE (-) terminal.
7. Route wire cables away from any moving parts such as the gear train and cable and secure to the frame using nylon ties or equivalent.

SETTING THE CABLE



1. Using the switch, move the cable shaft until the cable hole and the setscrew are accessible.
2. Insert the cable into the large hole of the drum shaft.
3. Using a 1/8" allen wrench, tighten the setscrew to hold the cable in shaft.
4. Begin wrapping the cable onto the shaft by holding the switch in the "UP" position. The cable must have a minimum of three (3) complete wraps around the shaft.
5. Check the cable, there must be no slack in the cable. If there is slack, use the up switch to continue winding the cable on the drum until the slack is gone.

NOTE: The cable is slack if there is perceptible sag or waviness between the winch and other end of the cable.

SETTING THE LIMIT SWITCHES

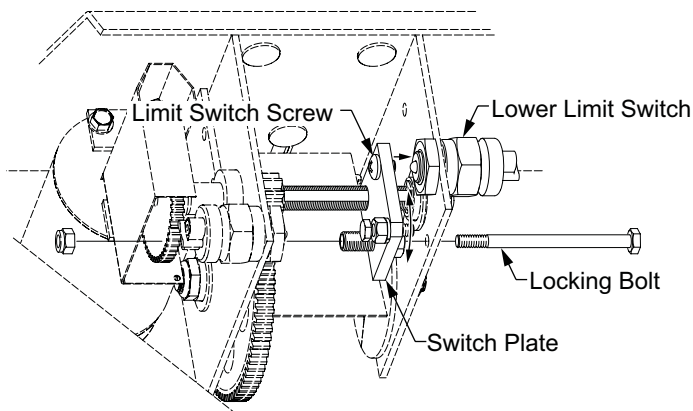
The limit switches turn off the winch when the camper top is closed (lower limit switch) and when the top is fully extended (upper limit switch).

⚠️ WARNINGS

- ⚠️ Always disconnect the power source when making adjustments or repairs.
- ⚠️ Failure to set the lower limit switch can cause the top to not close completely (switch shuts off early) or cause the motor to run after the top is down causing an overload for the motor. Both conditions can result in damage to the winch and/or camper and will void the warranty.
- ⚠️ The upper limit switch shuts the winch off when the camper top is raised to the proper height recommended by the camper manufacturer. Failure to set the upper limit switch can cause the top to not extend completely (switch shuts off early) or cause the top to be overextended. Both conditions can result in personal injury and/or damage to the winch and camper.
- ⚠️ The winch has a 5-minute duty cycle. Wait at least 5 minutes between each lifting cycle. Running the winch continuously will damage the motor and gears.

Setting the Lower Limit Switch

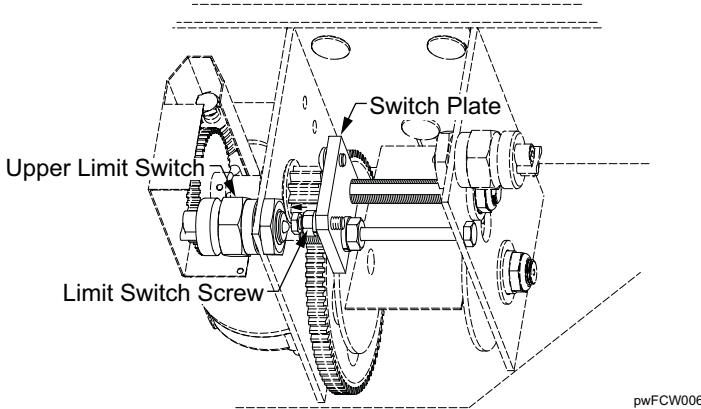
After attaching and winding the cable as described previously (page 4), it is necessary to set the lower limit switch.



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1. Remove the switch plate locking bolt and nut and set aside.
2. Spin the switch plate toward the lower limit switch until the limit switch screw presses the switch plunger.
3. Install the locking bolt for the switch plate that was removed previously. This bolt **MUST** be installed before operating the winch.
4. Test the setting:
 - Make sure that the latches for the camper top are released.
 - Use the winch switch and raise the camper top 10"-12".
 - Use the winch switch to lower the camper top.
 - If the top does not close completely before the motor stops, the limit switch is prematurely shutting off the motor. Repeat steps 1 through 3 to back the switch plate away from the limit switch.
 - If the motor continues to run after the top is down, the limit switch is not shutting off the motor soon enough. Repeat steps 1 through 3 and move the switch plate closer to the limit switch.

Setting the Upper Limit Switch

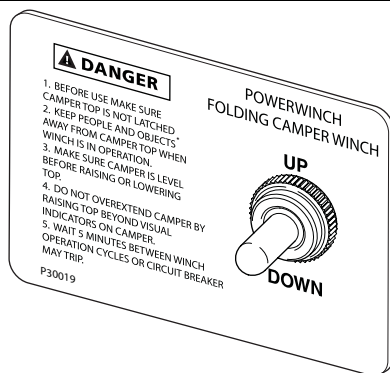


1. Raise the camper top to the maximum height recommended by the camper manufacturer. There is generally a cord or other visual indicator to indicate when the top is at the correct height.
2. Use a brace to support the camper top while adjusting the winch.
3. Loosen the jamb nut on the limit switch screw.
4. Turn the limit switch screw until it presses the upper limit switch plunger.
5. Tighten the jamb nut.
6. Test the setting:
 - Remove the support brace from step 2.
 - Use the winch switch and lower the camper top 10"-12".
 - Use the winch switch to raise the camper top.
 - If the camper top stops below the recommended height, the limit switch is prematurely shutting off the motor. Repeat steps 1 through 5 to back the limit switch screw away from the limit switch.
 - If the motor continues to run after the camper top is fully raised, the switch is not shutting off the motor soon enough. Repeat steps 1 through 5 and move the limit switch screw closer to the limit switch.

OPERATING THE WINCH

⚠ WARNINGS

- ⚠ The camper must be on a hard surface and leveled before raising or lowering the top.
- ⚠ Make sure that the travel latches for the camper top ARE RELEASED before operating the winch to raise the camper top.
- ⚠ The winch has a 5-minute duty cycle. Wait at least 5 minutes between each lifting cycle. Running the winch continuously will damage the motor and gears.



↑ Press Up and Hold to
RAISE the camper top

↓ Press Down and Hold to
LOWER the camper top

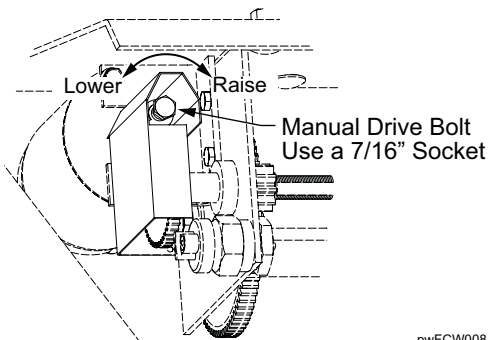
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MANUAL OVERRIDE

In the case of a power failure, (battery is discharged or missing), the winch can be operated manually to raise or lower the camper top.

1. Locate the manual drive bolt located at the end of the motor drive shaft inside the gear cover.

NOTE: Remove and save the gear grease inside the gear cover to see the bolt. The grease must be replaced after completing the operation.



pwFCW008

2. Using a 7/16" socket, turn the bolt clockwise to raise the top; counterclockwise to lower the top.

⚠ CAUTION

IF USING AN ELECTRIC DRIVER (I.E. DRILL) FOR THE SOCKET, USE CARE TO NOT OVEREXTEND THE TOP WHEN RAISING OR OVERWIND WHEN LOWERING THE TOP. OVER WINDING CAN CAUSE DAMAGE TO THE WINCH MOTOR AND GEARS.

3. After using the manual bypass, be sure to repack the grease removed to access the bolt. Refer to the maintenance section for information on lubrication.

MAINTENANCE

⚠ WARNING

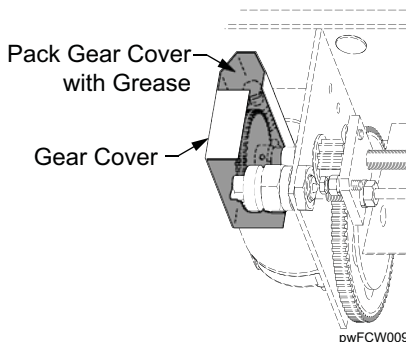
ALWAYS DISCONNECT POWER TO THE WINCH BEFORE ATTEMPTING TO INSTALL, SERVICE OR PERFORM ANY MAINTENANCE ON THE UNIT.

Cable

- Periodically inspect the cable for kinks, cuts, or breaks. Immediately replace the cable if any damage is found. Replacement cables are available from the camper manufacturer.
- Lubricate the cable with 30 weight motor oil a minimum of once a year.

Gears

- Lubricate the worm drive and gear at the beginning of every camping season or every three months if the camper is used once per month. Use only extreme-pressure lithium complex grease with a thickness rating of NLGI #2. The recommended grease for lubricating the gears is MPC PL10 Power Lift Grease™.
- Pack the gear cover full of grease making sure there is grease on all sides of the gear cover.

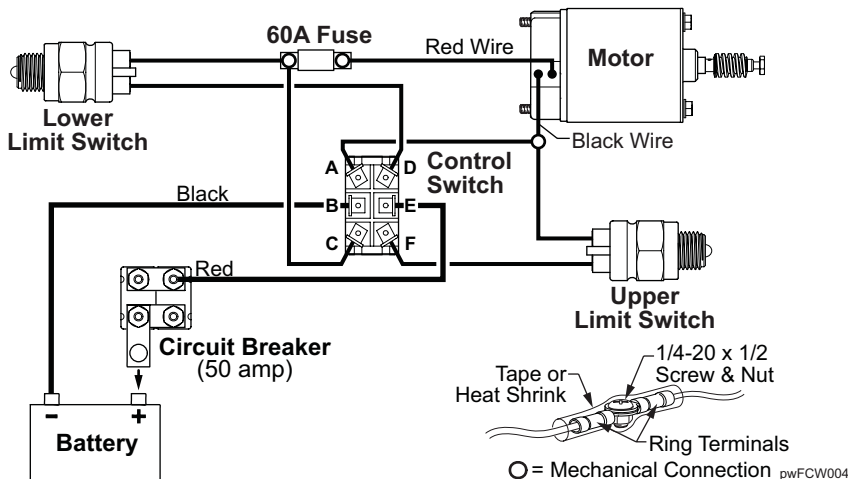


NOTE: Under heavy use, there may be some minor smoking from the gears. Heavy gear smoke or loud winch vibration may be an indication of a serious problem that should be examined by a trained service technician.



Electrical

- Periodically check the wiring for cuts, breaks and corrosion. Replace any broken wires. Clean any corrosion found on the electrical connections. Tighten any loose connections.

WIRING DIAGRAM



TROUBLESHOOTING GUIDE**WINCH DOES NOT OPERATE**

A.	Confirm power to winch 1. Check battery is fully charged 2. Confirm connections are for tight & clean. 3. Check if wires are worn or bare that may cause shorts		Correct as required.
B.	Check circuit breaker at battery Bypass circuit breaker and test winch. Does the winch run?  CAUTION Do not operate the winch without the circuit breaker. Removing the CB from the circuit is ONLY for testing.	YES	If winch runs, circuit breaker is bad, replace.
		NO	Reconnect circuit breaker and go to step C.
C.	Check Fuse in Wire Harness A 60-amp in-line fuse is located at the end of the red motor wire in the harness. Remove the fuse and connect the 3 wires together. Does the winch run?	YES	Fuse is bad. Replace fuse and test winch operation
		NO	Fuse is OK. Contact your authorized service center.
 WARNING The winch is equipped with a fuse and circuit breaker to protect the winch gear train in the event of an overload. A blown fuse is an indication that the winch was overloaded and may have sustained damage. Bypass the fuse only for testing. Do NOT use the winch with the fuse bypassed.			

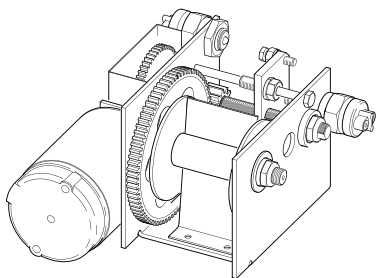
CAMPER TOP OVER OR UNDER EXTENDS

A.	<u>Lower Limit Switch:</u> If the motor continues to run after the top is down; or, the motor stops before the top is down.	The lower limit switch is set incorrectly. Refer to "Setting the Lower Limit Switch" on page 5.	
B.	<u>Upper Limit Switch:</u> If the motor continues to run after the camper top is fully raised; or, the top is not raised high enough before the motor shuts off.	The upper limit switch is set incorrectly. Refer to "Setting the Upper Limit Switch" on page 6.	

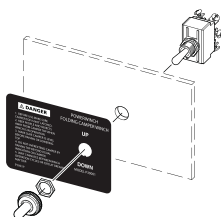
WINCH OPERATES OPPOSITE THE PLATE MARKINGS

A.	Use the wiring diagram on page 8 to check that the wiring is correct. Ensure that the red wire with the circuit breaker is attached to the positive (+) terminal of the battery	Correct as required.
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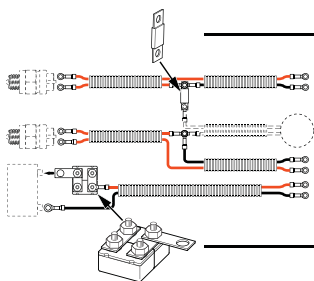
COMPONENT LIST



P55000 Folding Camper Winch

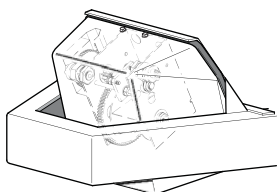


R001491
Switch Kit



P91021
60 Amp In-Line Fuse

P30033
50 Amp Circuit Breaker



P30084
Optional Cover Kit

pwFCW502

These components are available from your Powerwinch Dealer.

WARRANTY

Carefree of Colorado (hereafter referred to as Carefree) warrants to the FIRST retail Purchaser that the Powerwinch Product described in this manual is free of defects in material and workmanship within the terms and conditions as set forth below. Carefree's obligation under this warranty is limited to the repair or replacement, at Carefree's option, of any defective component within the stated warranty period. THIS WARRANTY IS NOT TRANSFERABLE.

1. DURATION

- 1.1. 1 year on parts and labor.
- 1.2. Carefree will pay the transportation charges for return shipment to the purchaser of any product received for legitimate warranty repair.

Warranty duration is not extended by the length of time the product is not in use or the time that the purchaser is deprived the use of the product. The duration of coverage is determined by the date of the original product purchase, not the date of repairs.

2. WHAT IS COVERED UNDER THIS WARRANTY

Defects in the manufacturer's material and workmanship of product under normal use, and which occur within the duration of the warranty period.

3. WHAT IS NOT COVERED UNDER THIS WARRANTY

- 3.1. Improper installation and/or any consequent damage or failure that results from improper installation of the product.
- 3.2. Normal wear.
- 3.3. Conditions that are not related to the material or workmanship of the product: including any failure that results from an accident, wind, rain, or other acts of God.
- 3.4. Purchaser's abuse, including but not limited to neglect; failure to operate, use or maintain the product in accordance with the instructions provided with the product.
- 3.5. Any component not sold or manufactured by Carefree.
- 3.6. Any failure that results from the use of another manufacturer's product with a Carefree product that is not specifically approved by Carefree.
- 3.7. Any incidental, indirect, or consequential loss, damage or expense that may result from any defect, failure or malfunction of the product.
- 3.8. The removal or alteration of any product component or device. In the event of such removal or alteration, this warranty is void.
- 3.9. Any expense related to delivery or pick-up of product to/from the service dealer.

4. RESPONSIBILITIES OF THE PURCHASER

IN ORDER FOR THE WARRANTY TO BE HONORED, THE PURCHASER MUST HAVE PROOF OF PURCHASE. FAILURE TO PROVIDE THE REQUIRED DOCUMENTATION MAY DELAY OR VOID ANY WARRANTY CLAIM.

- 4.1. Retain dated proof of purchase for the product, and provide it as requested.
- 4.2. Perform "Periodic Maintenance" as specified in Owners Manual.
- 4.3. Use reasonable care in maintenance, operation, use and storage of the product in accordance with the instructions contained in the owner's manual.
- 4.4. If the product fails because of defects in the manufacturer's material or workmanship within one (1) year of the date of purchase, return the product and dated proof of purchase to the Powerwinch dealer for replacement.

THIS WARRANTY GIVES THE OWNER SPECIFIC LEGAL RIGHTS. THE LAWS OF CERTAIN JURISDICTIONS MAY GRANT THE OWNER ADDITIONAL RIGHTS AND PRIVILEGES. Except as set forth above; Carefree makes no warranty, whether statutory or otherwise, including without limitation, any warranty of merchantability or fitness for a particular purpose. Carefree shall have no liability except to repair, replace or adjust defective products and parts. Carefree specifically excludes any liability, whether in contract, tort or otherwise, for personal injury, property damage, economic or consequential losses. Carefree has not authorized any person or company to alter the terms of this warranty.

It is Carefree of Colorado's policy and practice to continuously improve the company's products and services. Therefore, Carefree reserves the right to make changes in design and components, without notice, whenever it is believed the quality of the product will be improved, but without incurring any obligation to incorporate such improvements in any product, which has been shipped, or in service.

FOR YOUR RECORDS:

DEALER/INSTALLER

NAME: _____

ADDRESS: _____

PHONE: _____

PURCHASE DATE: _____

PART NUMBER: _____

SERIAL NUMBER: _____

PRODUCT NAME

OR DESCRIPTION: _____

***Retain your original proof of purchase.
It is required for all warranty repairs and returns.***

NOTES: _____

_____**PROPRIETARY STATEMENT**

The Powerwinch Motorized Folding Camper Winch is a product of Carefree of Colorado, located in Broomfield, Colorado, USA. The information contained in or disclosed in this document is considered proprietary to Carefree of Colorado. Every effort has been made to ensure that the information presented in the document is accurate and complete. However, Carefree of Colorado assumes no liability for errors or for any damages that result from the use of this document.

The information contained in this manual pertains to the current configuration of the model(s) listed on the title page. Earlier model configurations may differ from the information given. Carefree of Colorado reserves the right to cancel, change, alter or add any parts and assemblies, described in this manual, without prior notice.

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The logo for Powerwinch, featuring the word "Powerwinch" in a bold, italicized sans-serif font. The letter "P" is stylized with a circular graphic element inside its upper loop.www.powerwinch.com