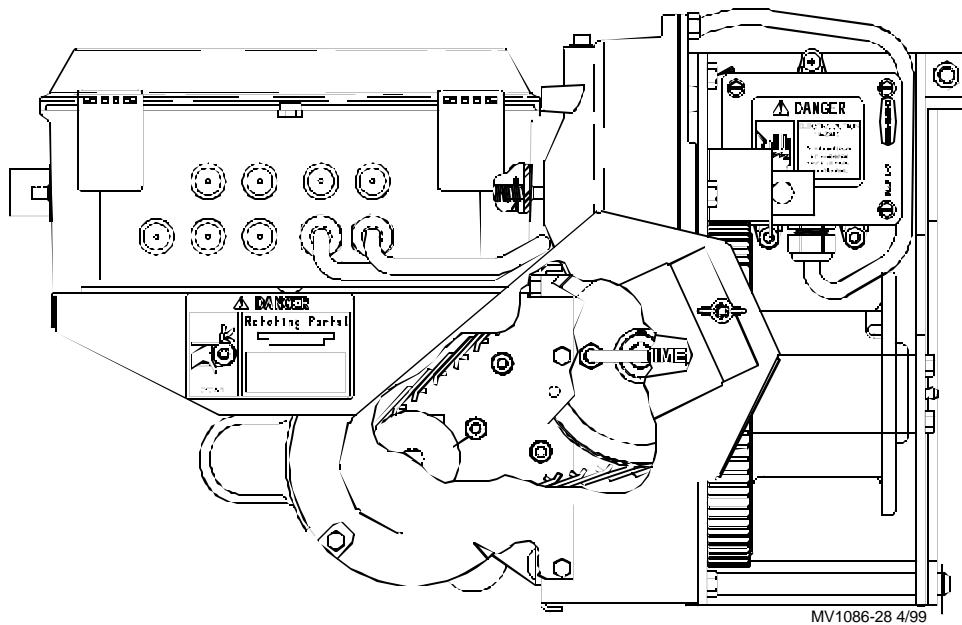


SUPER-LIFT™ Winch

Installation Manual



MV1086-28 4/99

Chore-Time Warranty

Chore-Time Equipment warrants each new product manufactured by it to be free from defects in material or workmanship for one year from the date of initial installation by the original purchaser. If such a defect is found by Chore-Time to exist within the one year period, Chore-Time will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement.

Conditions and limitations:

1. The product must be installed and operated in accordance with instructions published by **Chore-Time** or **warranty will be void.**
2. Warranty is void if **all components** of a system are not supplied by **Chore-Time.**
3. This product must be purchased from and installed by an authorized Chore-Time dealer or certified representative thereof, or the warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under this warranty.
5. This warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this warranty.

Chore-Time shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to have suffered as a result of any defect in the product. **“Consequential” or “Special Damages”** *as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.*

THIS WARRANTY CONSTITUTES CHORE-TIME'S ENTIRE AND SOLE WARRANTY AND CHORE-TIME EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Any exceptions to this warranty must be authorized in writing by an officer of the company. Chore-Time reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

**CHORE-TIME EQUIPMENT, A Division of CTB, Inc.
P.O. Box 2000
Milford, Indiana 46542-2000 U.S.A.**

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General

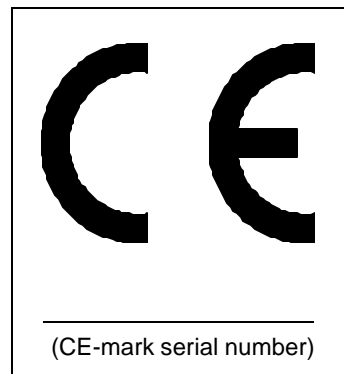
Support Information

The Chore-Time SUPER-LIFT™ Winch is designed to open and close curtains, baffles, etc. in livestock housing applications. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury and/or death.

This manual is designed to provide comprehensive planning, installation, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personnel, installer, and consumer (end user).

IMPORTANT: CE stands for certified Europe. It is a standard which equipment must meet or exceed in order to be sold in Europe. CE provides a benchmark for safety and manufacturing issues. **CE is required only on equipment sold in Europe.**

Chore-Time Equipment recognizes CE Mark and pursues compliance in all applicable products. *Fill in the CE-Mark serial number in the blank space provided for future reference.*



Distributor and Installer Information

Please fill in the following information about your Product.
Keep this manual in a clean, dry place for future reference.

Distributor's Name _____

Distributor's Address _____

Distributor's Phone _____ **Date of Purchase** _____

Installer's Name _____

Installer's Address _____

Installer's Phone _____ **Date of Installation** _____

System Specifications _____

About This Manual

The intent of this manual is to help you in two ways. One is to follow step-by-step in the order of assembly of your product. The other way is for easy reference if you have questions in a particular area.

Important ! Read ALL instructions carefully before starting construction.

Important ! Pay particular attention to all SAFETY information.

- *Metric measurements are shown in millimeters and in brackets, unless otherwise specified. “ ” equals inches and “ ’ ” equals feet in English measurements.*

Examples:

1" [25.4]

4' [1 219]

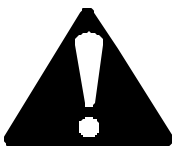
- Optional equipment contains necessary instructions for assembly or operation.
- Major changes from the last printing will be listed on the back cover.
- This Planning Symbol is used in areas where planning needs to take place before construction continues.
- Very small numbers near an illustration (*i.e.*, 1257-48) are identification of the graphic, not a part number.



Safety Information

Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety signs.

Using the equipment for purposes other than specified in this manual may cause personal injury and or damage to the equipment.



Safety–Alert Symbol

This is a safety–alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury. This equipment is designed to be installed and operated as safely as possible...however, hazards do exist.

Understanding Signal Words

Signal words are used in conjunction with the safety–alert symbol to identify the severity of the warning.



DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



CAUTION indicates a hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.

Safety Information- continued

Follow Safety Instructions

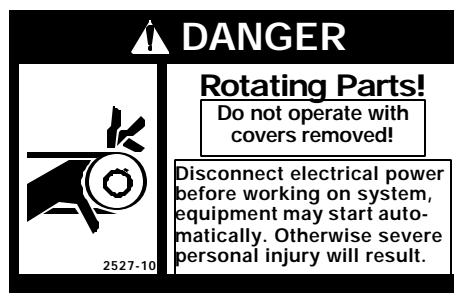
Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.

Decal Descriptions

DANGER: Rotating Parts

Severe personal injury will result, if the equipment is operated without covers properly installed.



DANGER: Electrical Hazard

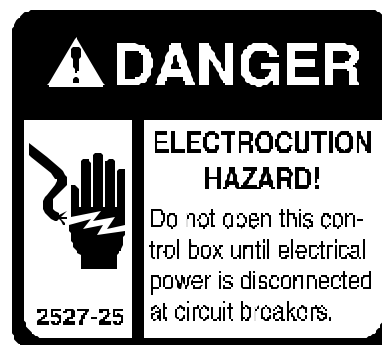
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

Ground all non-current carrying metal parts to guard against electrical shock.

With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.



Introduction

The SUPER-LIFT Winch is designed to raise and lower 6 feet (1.83 m) of side wall curtain for both sides of a 500 foot (152 m) building.

When properly installed, the SUPER-LIFT Winch may be used to drive up to 2,000 lbs (907 kg).

The SUPER-LIFT winch operates at a rate of 12" (127 cm) per minute.

The winch may be used for single or double sided curtain applications and may be installed on the ceiling or the inside or outside walls.

The winch must be mounted out of reach of the livestock.

Installation

Chore-Time strongly recommends securing the winch to the ceiling or wall using bolts and locknuts. However, lag screws may be used in applications where a bolt and locknut cannot be installed.

The winch should be installed so that the drum shaft is in the horizontal position to prevent the cable(s) from becoming entangled in the gears. **See Figure 1.**

However, if the winch must be installed with the drum shaft perpendicular to the ground; a) the cable must be routed on pulleys to ensure that cable wrap and/or interference will not be a problem, and b) the vent plug and the pipe plug may have to be switched to prevent oil leakage through the vent plug.

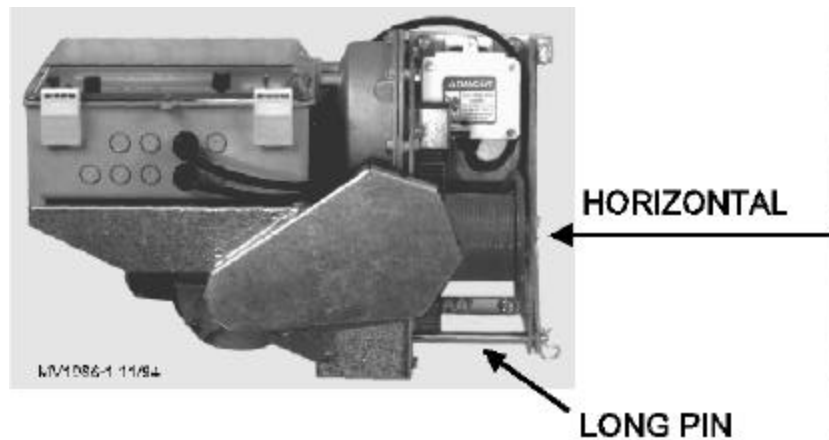


Figure 1. Winch Drum should be horizontal.

The Winch may be installed in a variety of locations, such as open trusses (See Figure 3), on drop ceiling (see Figure 4), on a side wall (see Figure 5), on an end wall-inside or outside (see Figure 5).

Winch Mounting Procedure:

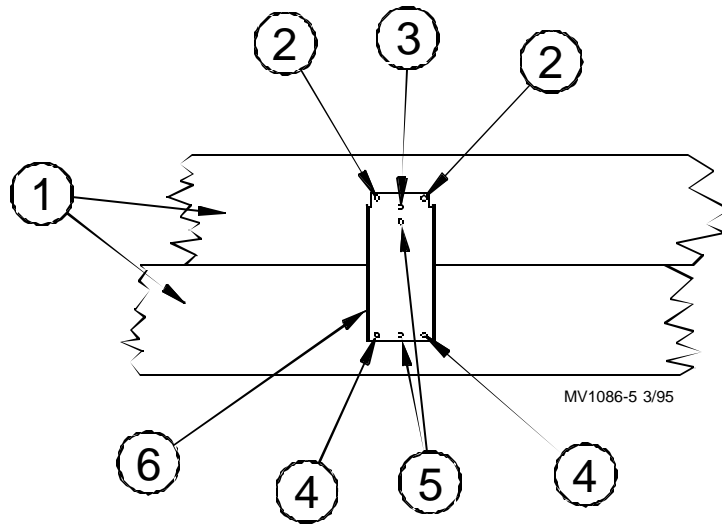
The installation procedure is basically the same for each type of installation. The Winch must be secured to (2) 2" X 10" [50 x 250 mm] boards that will span at least three trusses. If possible, the winch should be located near the center of the boards.

Remove the Base Plate from the Winch Assembly by removing the long pin and factory installed keeper bolt.

Position the Base Plate on the boards. Mark and drill 3/8" holes in the boards using the Base Plate as a template to determine hole locations.

Secure the Base Plate to the boards. Do not install the bolts in the upper left and right corners until the Winch has been mounted on the Base Plate. **See Figure 2.**

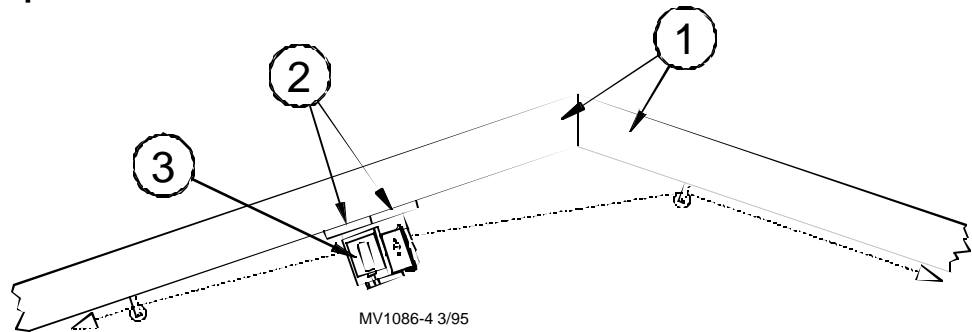
Refer to the appropriate section below depending on where your Winch is to be installed.



Key	Description
1	2" x 10" [20 x 250 mm] Boards
2	Do not install bolts in these holes until the Winch Assembly is being secured to the Base Plate.
3	This is a clearance hole required when the unit is secured to the Base Plate. Do not install a lag bolt here
4	Install lag bolts in these locations to secure the Base Plate to the boards.
5	These holes are provided to hold the Base Plate in place while installing lag bolts.
6	Base Plate

Figure 2. Base Plate Mounting

Open Truss Installation



Key	Description
1	Trusses
2	2" x 10" Winch mounting Boards
3	Super-Lift Winch

Figure 3. Open Truss Mounting

Secure the (2) 2" X 10" (50 x 250 mm) boards with Base Plate to the trusses, as shown in **Figure 3**.

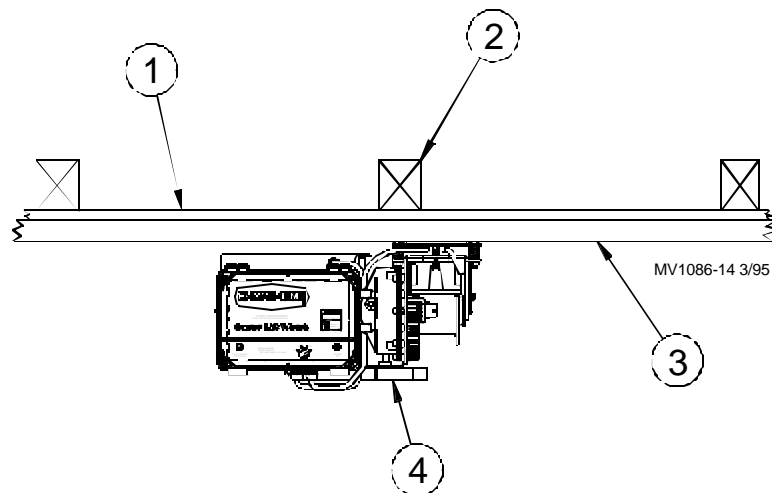
Important ! The winch should not be mounted to a roof pitch greater than 4/12.

Place the unit on the Base Plate and insert the long pin. See **Figure 1**.

Insert (2) bolts through the top (2) holes in the unit and Base Plate. Secure with lock nuts. See **Figure 3**.

Refer to the appropriate cable installation information on **page 13**.

Ceiling Mount Installation



Key	Description
1	Ceiling
2	Trusses
3	2" x 10" Winch mounting Boards
4	Super-Lift Winch

Figure 4. Ceiling Mount Installations

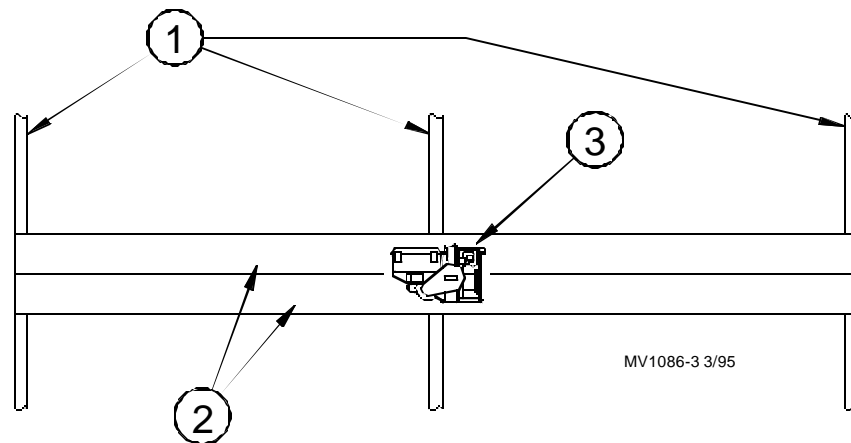
Secure the (2) 2" X 10" [50 x 250 mm] boards with Base Plate to the trusses, as shown in **Figure 3**. The boards should span at least (3) trusses.

Place the unit on the Base Plate and insert the long pin. **See Figure 1**.

Insert (2) bolts through the top (2) holes in the unit and Base Plate. Secure with lock nuts.

Refer to the appropriate cable installation information on **page 13**.

Side Wall Installation



Key	Description
1	Trusses
2	2" x 10" Winch mounting Boards
3	Super-Lift Winch

Figure 5. Side Wall Installation

For double or single sided curtain installations, the winch may be located on the outside wall near the center of the building or at the end of the building.

The winch must be mounted low enough to provide sufficient cable travel.

Secure the (2) 2" X 10" [50 x 250 mm] boards with Base Plate to the trusses, as shown in Figure 5. The boards should span at least (3) studs and the winch should be located within 2 feet [61 cm] of a stud.

Place the unit on the Base Plate and insert the long pin.

Insert (2) bolts through the top (2) holes in the unit and Base Plate. Secure in place with lock nuts.

Refer to the appropriate cable installation information on **pages 14 - 17**.

Cable Installation

1. Determine the amount of cable required to route from the winch to the curtain(s). Allow approximately 5 feet (1.5 m) extra.
2. Turn the winch drum so that the tab (on the drum) is opposite the ceiling or wall.
3. Make a small loop in the center of the cable measured in step 1, above.

Place the loop over the tab on the winch drum. Figure 6A shows the cable wrap for side wall & end wall mount installations. Figure 6B shows the cable wrap for ceiling mount installations.

4. Tighten the set screw to secure the cable to the Winch Drum.

Important ! The Cable must not be allowed to wrap back on its self as the drum is turned.

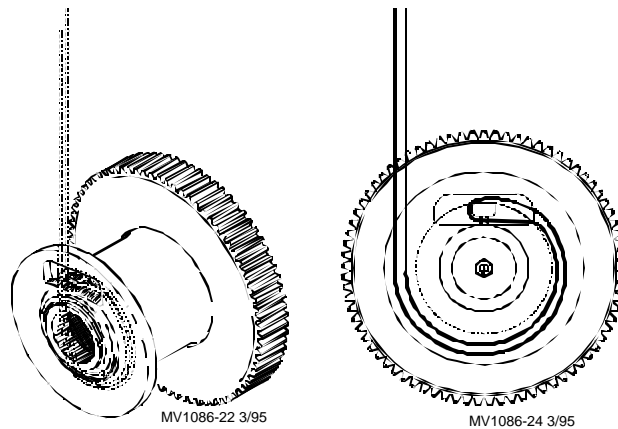


Figure 6A. Side & end wall mount installations.

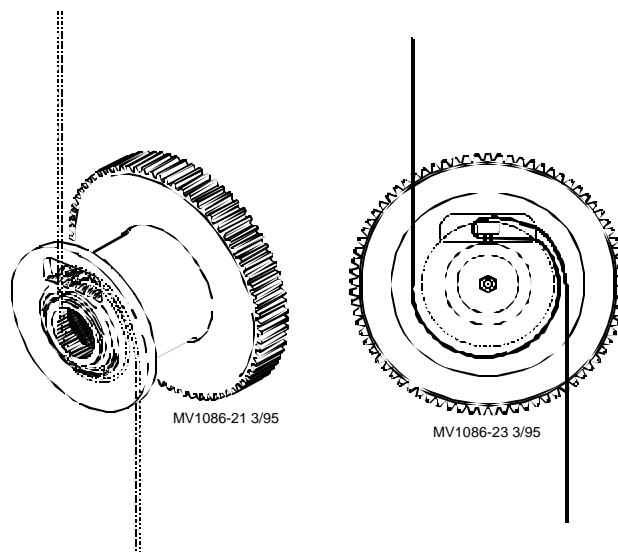


Figure 6B. Ceiling mount installations.

Cable Routing:

Cable routing will vary with the winch location, other equipment in building, building styles, etc.

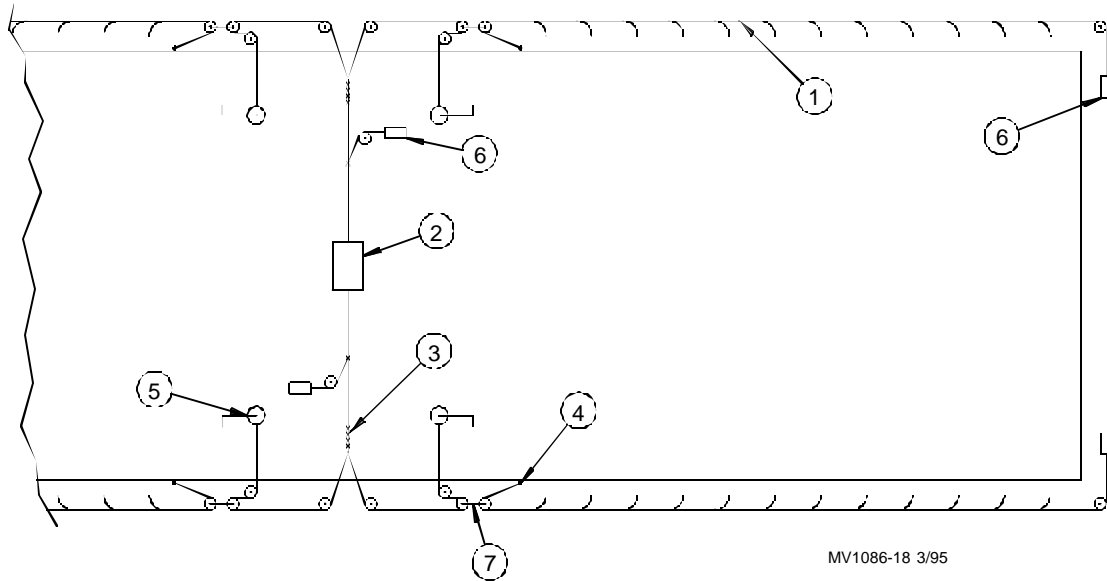
Figures 7 through 12 provide guidelines for cable routing and component locations. Primary components are noted on each individual application layout drawing.

Refer to the appropriate section, as determined by your winch location.

Center Ceiling Mounted Applications

Ceiling Mounted installations may have the winch located at the end of the house or near the center, as shown in Figure 7.

Note ! Always allow adequate space for cable clamps to travel without interfering with the winch and/or pulleys. The cable clamps should not be allowed to wrap on the winch drum.



Key	Description
1	Main Curtain Cable
2	SUPER-Lift Winch
3	Use (2) cable clamps here
4	Tie Down
5	Hand Winch
6	50 lbs. weight
7	2-Pulley Assembly

Figure 7. Center ceiling mounted application layout drawing.

Single Winch Side Wall Mounted Applications

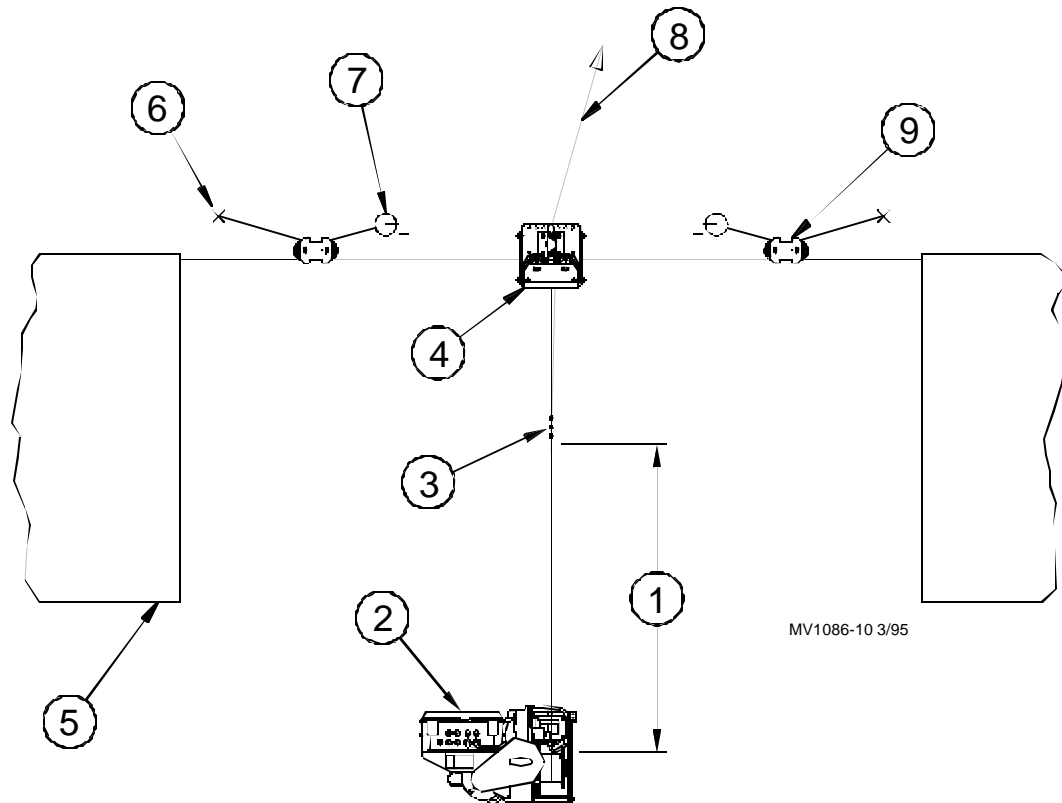
Side Wall mounted installations may have the winch located at the end of the house or near the center.

Figure 8 provides a side view of the winch and associated components.

Figure 9 provides an overview for additional clarity.

Mount the 3-Pulley Assembly directly above the winch, as shown in **Figure 8**. Use at least (3) cable clamps to secure the cables together.

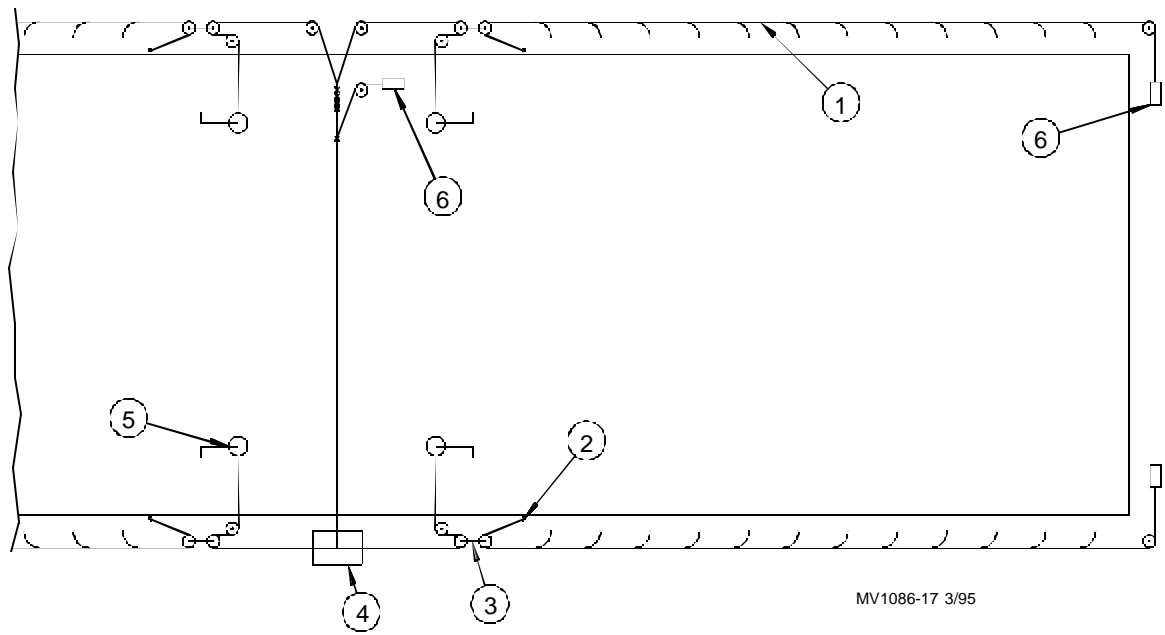
Note ! Always allow adequate space for cable clamps to travel without interfering with the winch and/or pulleys. The cable clamps should not be allowed to wrap on the winch drum.



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Key	Description
1	This distance must be greater than the curtain
2	SUPER-Lift Winch
3	Use (3) cable clamps here
4	Three Pulley Assembly
5	Side Wall Curtain
6	Tie Down
7	Hand Winch
8	Route this cable to other side of building.
9	Two-Pulley Assembly

Figure 8. Single Winch side wall mounted application layout drawing.



Key	Description
1	Main Curtain Cable
2	Tie Down
3	2-Pulley Assembly
4	SUPER-Lift Winch Assembly
5	Hand Winch
6	50 lbs. weight

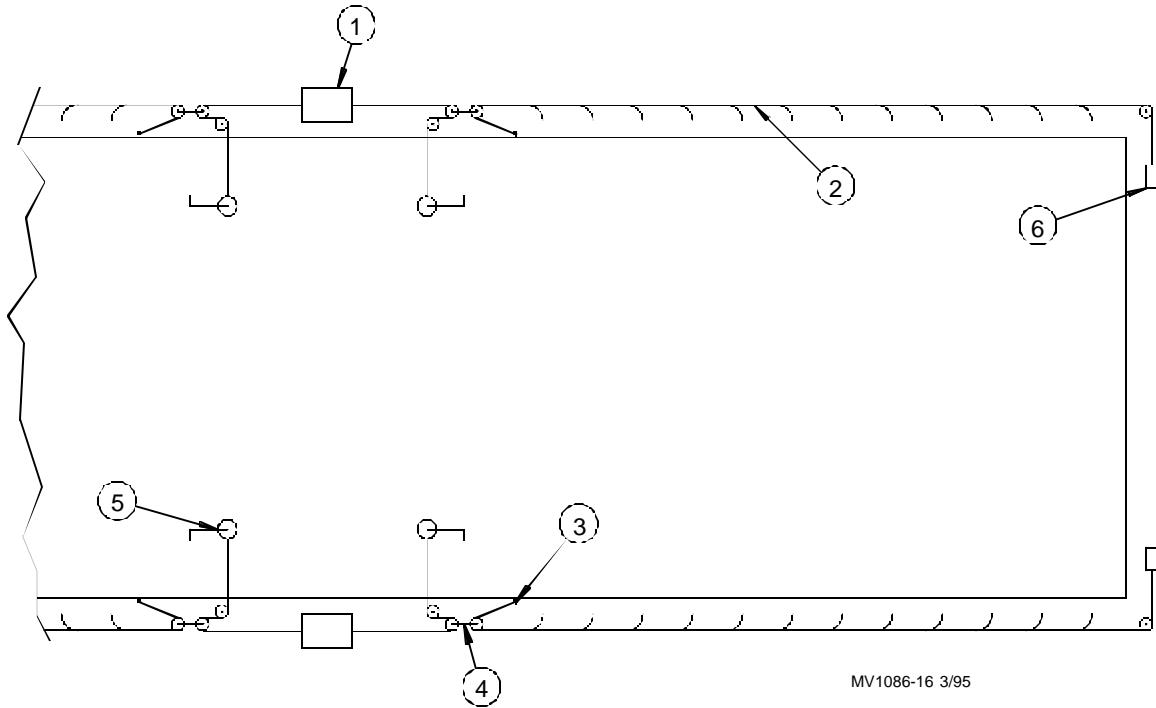
Figure 9. Single Winch side wall mounted application layout drawing.

Dual Winch Side Wall Mounted Applications

Side Wall mounted installations may have the winch located at the end of the house or near the center.

Figure 10 provides an overview of the winch location and associated components.

Note ! Always allow adequate space for cable clamps to travel without interfering with the winch and/or pulleys. The cable clamps should not be allowed to wrap on the winch drum.



Key	Description
1	SUPER-Lift Winch Assembly
2	Main Curtain Assembly
3	Tie Down
4	2-Pulley Assembly
5	Hand Winch
6	50 lbs. weight

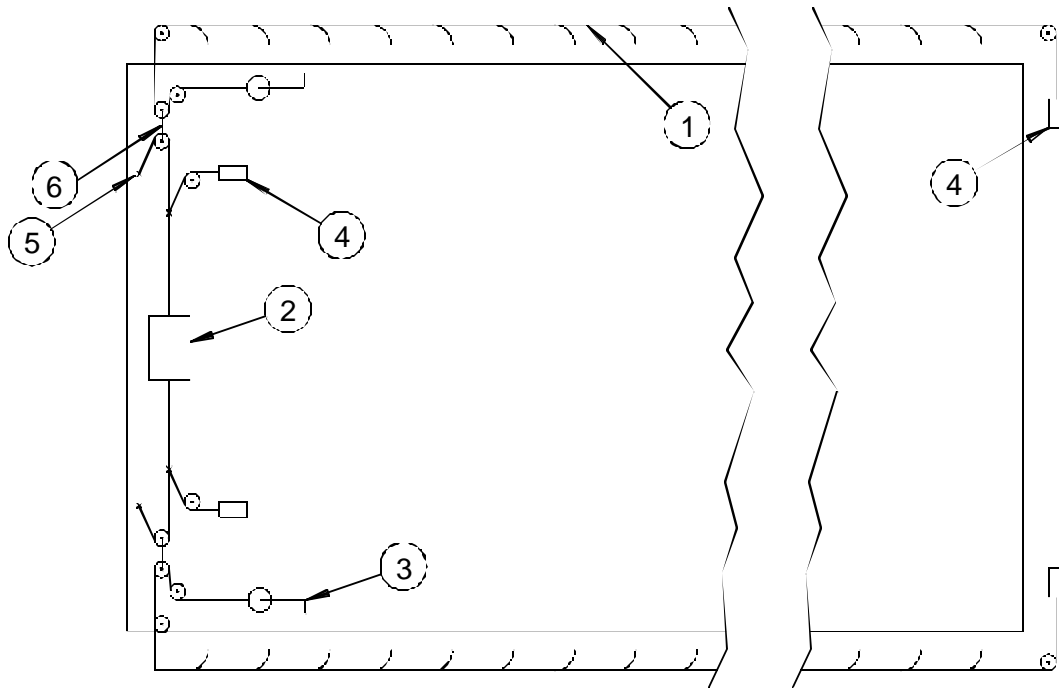
Figure 10. Single Winch side wall mounted application layout drawing.

End Wall Mounted Applications

Ceiling Mounted installations may have the winch located at the end of the house or near the center.

Figure 11 provides an overview of the winch location and associated components.

Note ! Always allow adequate space for cable clamps to travel without interfering with the winch and/or pulleys. The cable clamps should not be allowed to wrap on the winch drum.



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Key	Description
1	Main Curtain Cable
2	SUPER-Lift Winch
3	Hand Winch
4	50 lbs. Weight
5	Tie Down
6	2-Pulley Assembly

Figure 11. Single Winch side wall mounted application layout drawing.

Limit Switch Adjustment

The UP and DOWN Limit Switches for the curtain travel are located inside the Winch Control Box. See Figure 12 for component locations.

Remove the Control Box Cover Screws to access the switches.

To set the limits for the curtain travel, set the curtain at the completely open position.

Remove the cotter-pin at the gearbox end of the plastic screw.

Rotate the screw to move the red block until the down limit switch clicks.

Replace the cotter-pin.

Run the winch until the curtain is in the desired closed position.

To adjust the closed position limit switch, loosen the nuts under the up limit switch.

Slide the switch to the block on the plastic screw until the switch clicks and retighten the nuts. Fine adjustment of the closed limit position should be done with the hand winches.

For the Limit Switch #3 adjustment, see the SUPER-SELECTOR Manual (MV1041).

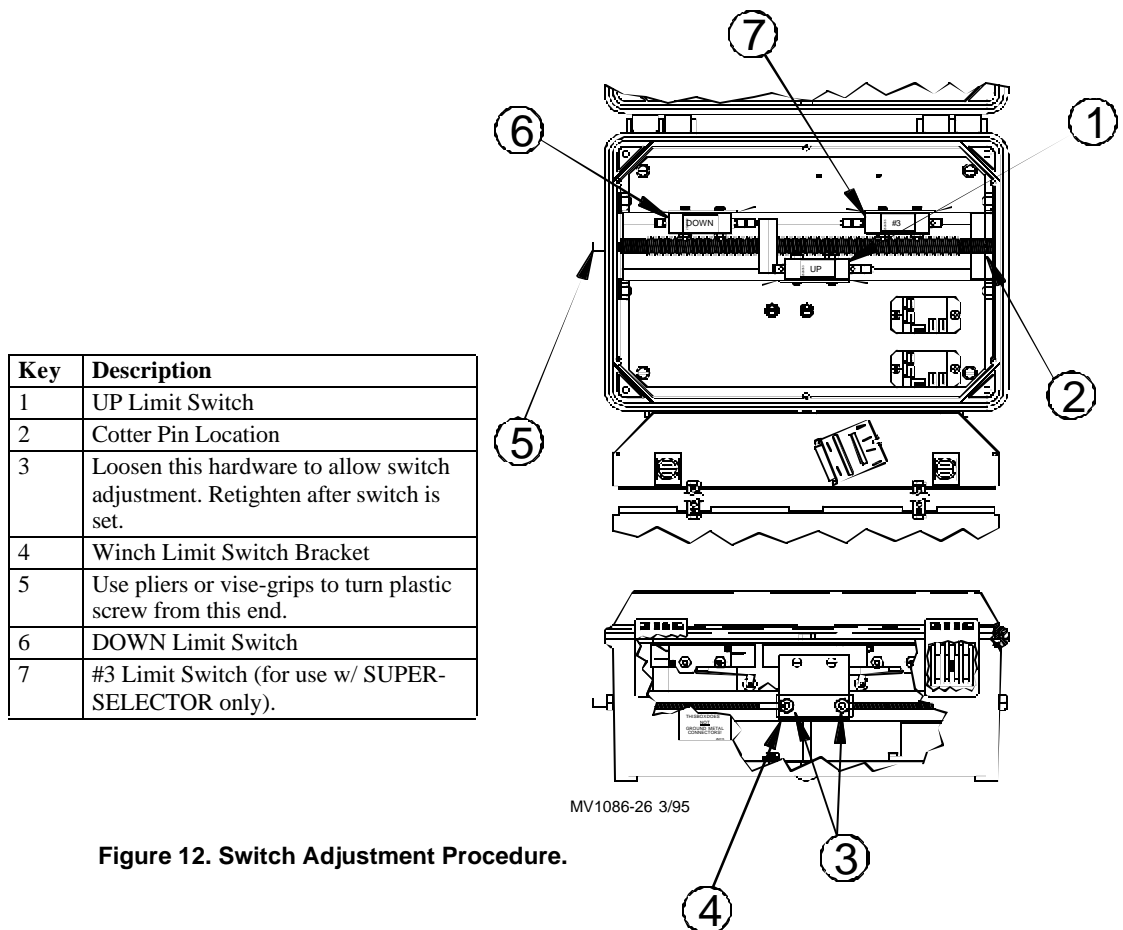


Figure 12. Switch Adjustment Procedure.

Torque Limit Switch Adjustment

The Torque Limit Switch is adjusted at the factory to be actuated at 2000 lbs. total cable load on the drum. If unexpected torquing occurs check the Torque Limit Switch setting as follows:

1. Remove the tension from the cable.
2. Place the 1/8" shim (included) between the nut and the steel plate on the spring loaded bolt. **See Figure 13.**



Figure 13. Shim installation

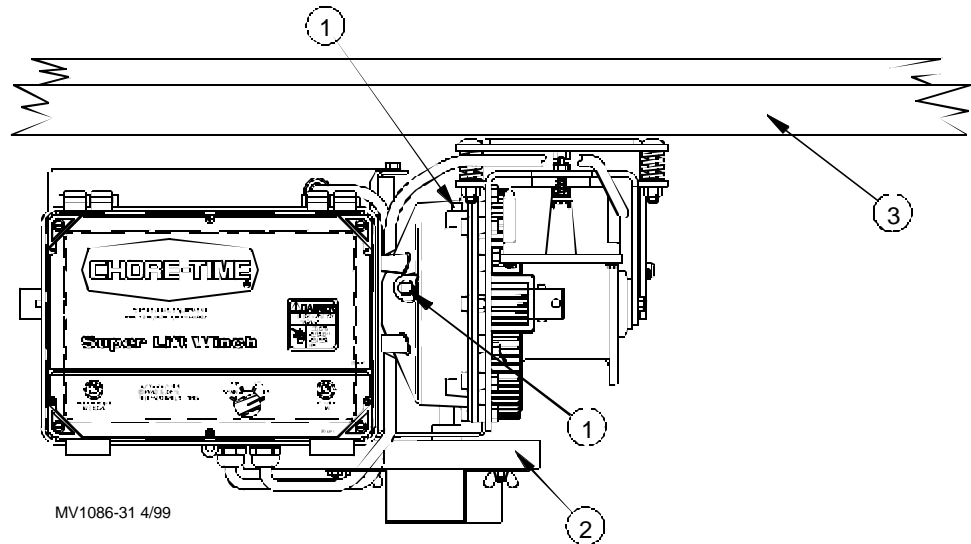
3. With the shim in place, turn the spring loaded bolt clockwise until it clicks. This will set the torque limit to approximately 2000 lbs. total cable load on the drum.

Important ! Do not set the Torque Limit Switch over 2000 lbs. If the Torque Limit Switch is set too high, damage may occur to the winch, building, and/or curtain.

Preventive Maintenance

Before installing the SUPER-LIFT Winch, be sure the gearbox has been filled at the factory with the appropriate type and amount of lubricant.

Also, depending on the winch installation location, make sure the vent plug and pipe plugs are installed in the appropriate openings. **See Figure 14.** The Vent Plug must be installed in the up-most plug location.



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Key	Description
1	Potential Vent Plug Locations
2	SUPER-Lift Winch Assembly
3	Mounting Boards

Figure 14. Vent Plug Installation

Check the oil every 6 months. The oil level should be approximately 1" [2.5 cm] below the filler (pipe or vent) plug. Use a clean piece of wire as a measuring device to check the oil level.

The oil should be changed every 12 months to insure adequate lubrication of the gears. The SUPER-LIFT Winch has a capacity of 1 quart (.95 l). Use an ISO 460EP oil.

The drum shaft on the winch should be lubricated at least once during each flock. A grease fitting is provided on the end of the drum shaft. Use an automotive or industrial type grease. Fill the shaft with enough grease that it begins to exit out around the hub. Severe squealing and winch damage may be expected if the winch is allowed to run dry.

Manual Crank Version

To operate the Winch during a power outage or in circumstances that have caused loss of power to the unit.

- 1.Remove two wing nuts on cover.
- 2.Loop hook of Manual Crank through exposed U-Bolt on Winch and manually adjust to desired position.

Warning ! Do not turn past Limit Switches. Serious Damage can be done if Lift is adjusted beyond Limit Switches.

Important ! Control panel may have to be opened and switches checked to insure you do not crank unit manually past limits.

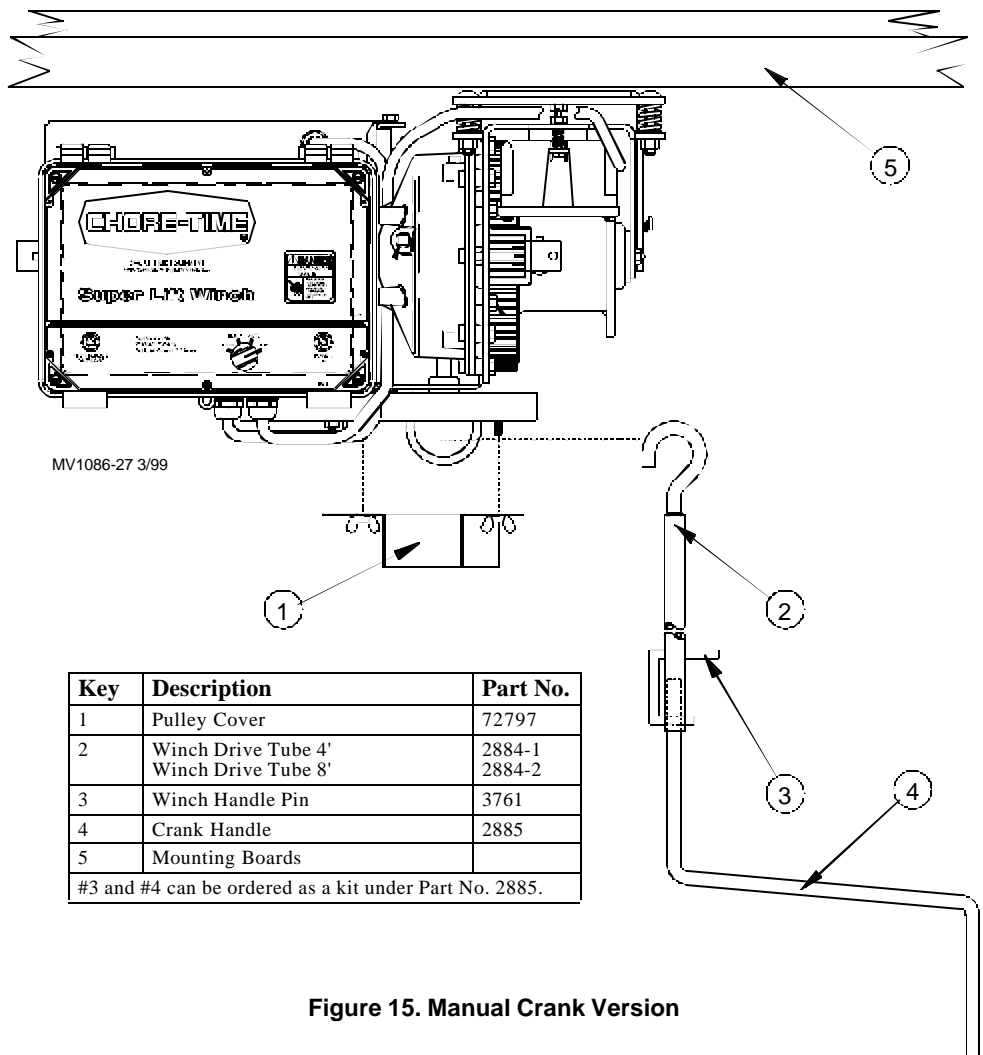
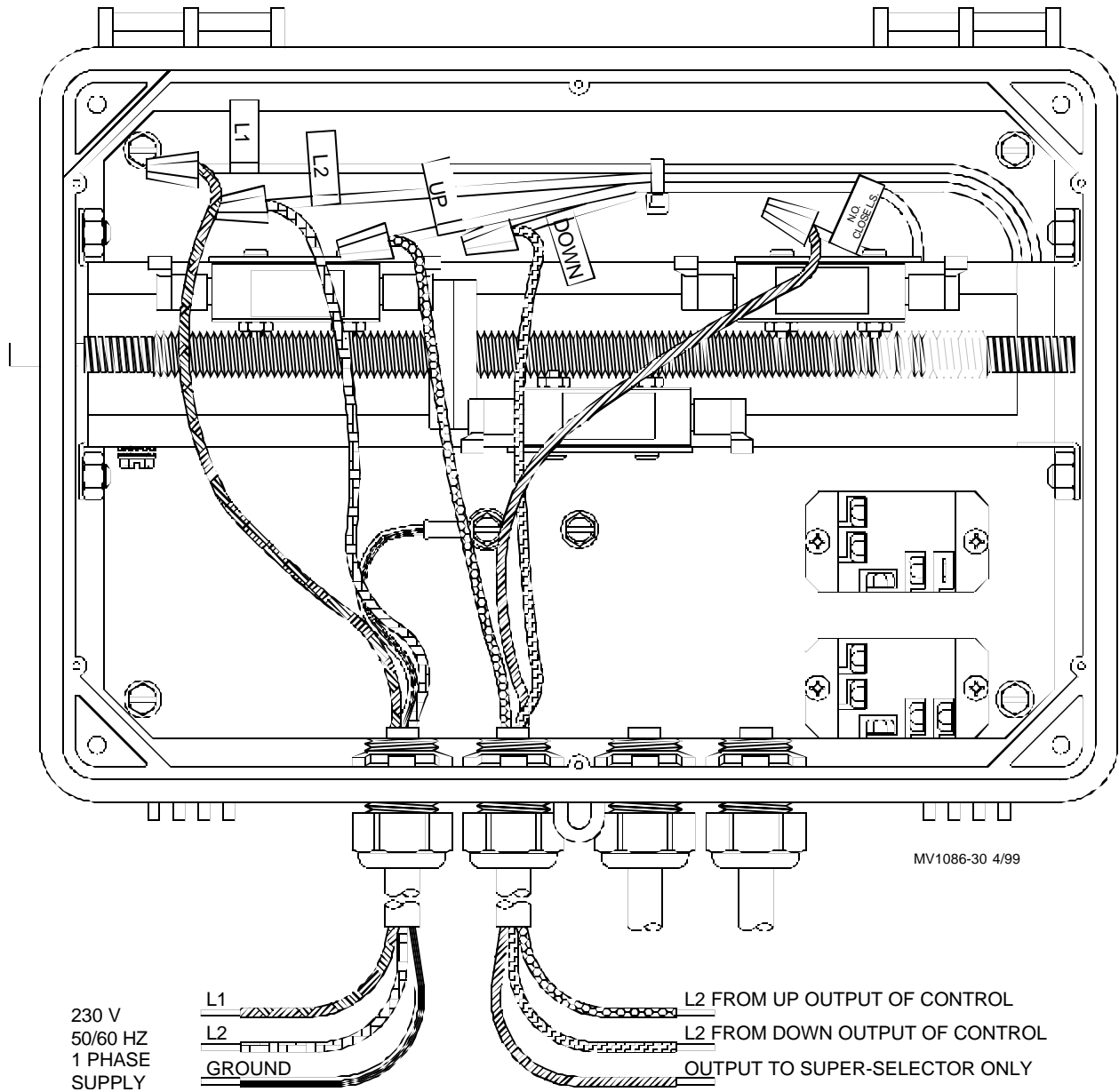
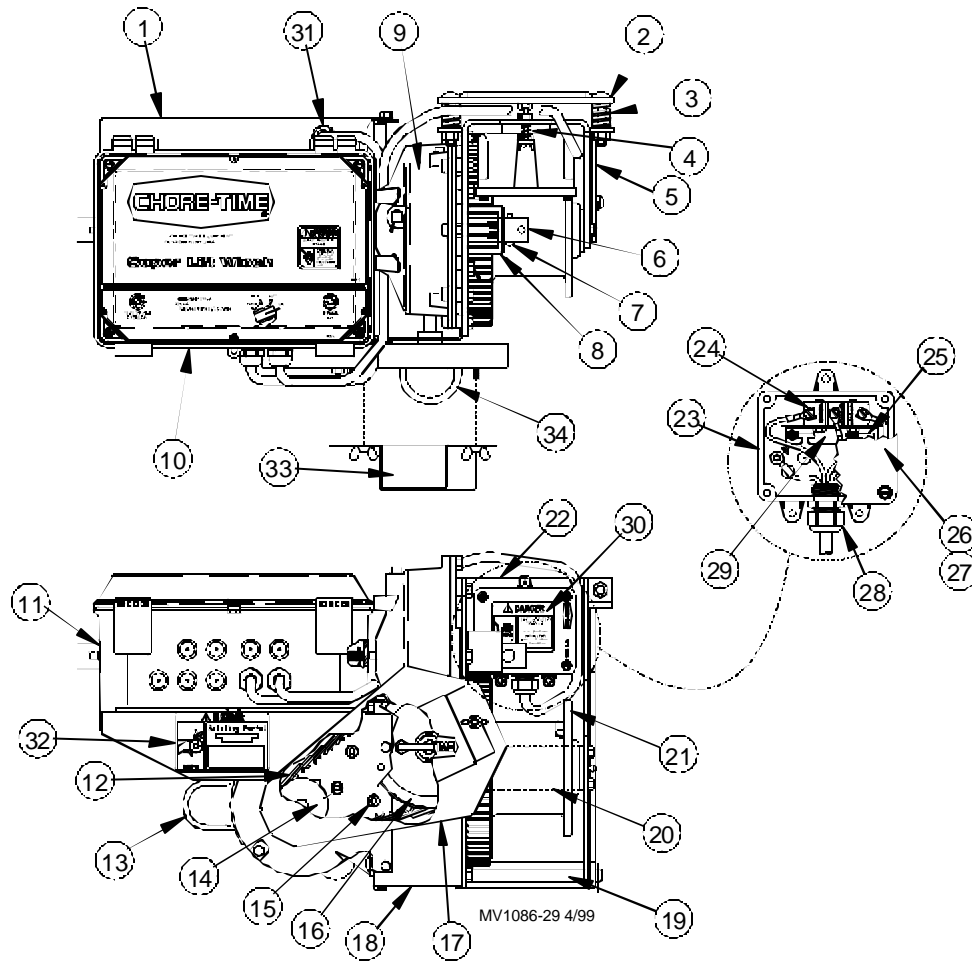


Figure 15. Manual Crank Version

SUPER-LIFT Winch Assembly Wiring Diagram



34468 SUPER-LIFT Winch Assembly Parts



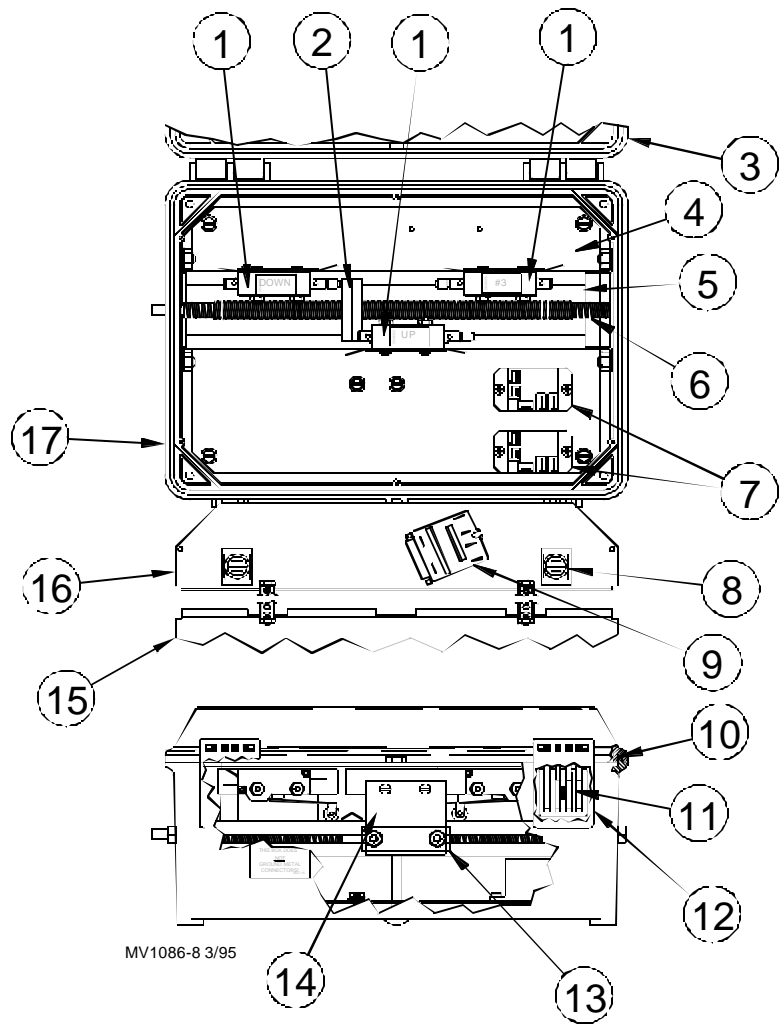
Key	Description	Part No.	Key	Description	Part No.
1	Winch Control Box Mounting Brkt.	36906	20	Winch Drum Shaft	30419
2	Spring Reaction Plate	33817	21	Winch Drum	3723
3	Torque Limit Spring	34691	22	Drum & Gearbox Mounting Brkt.	33815
4	Compression Spring	6972	23	Switch Box	34824
5	Winch Mounting Brkt.	33816	24	SPDT Actuator Switch	7114
6*	Winch Drive Pinion Gear	34556	25	Switch Insulation	1907-5
7*	1/4" x 1-1/4" Semi-Tubular Rivet	34724	26	Switch Box Cover	6776
8	Winch Gear Shield	33826	27	Gasket	6777
9	Winch Gearhead Assembly	34710	28	Liquid Tight Connector	23779
10§	Super-Lift Winch Control	34716	29	Switch Brkt.	7068
11	Seal	34698	30	Danger Decal	2527-25
12	Link Belt	29969	31	Bushing	3326
13	Winch Motor (230V, 50/60 HZ)	34695	32	Danger Decal	2527-10
14	Pulley	34703	33**	Pulley Cover	42797
15	Spacer	35666	34**	U-Bolt 5/16x2	42798
16	Pulley	34704			
17	V-Belt Shield #34468 Winch	36904			
**	#42799 Winch	42796			
18	Winch Motor Mount Brkt.	36905			
19	Pivot Pin	30423			

*Items #6 & #7 are components of #9.

** Used on #42799 Manual Crank version only.

§See individual parts listing in this instruction.

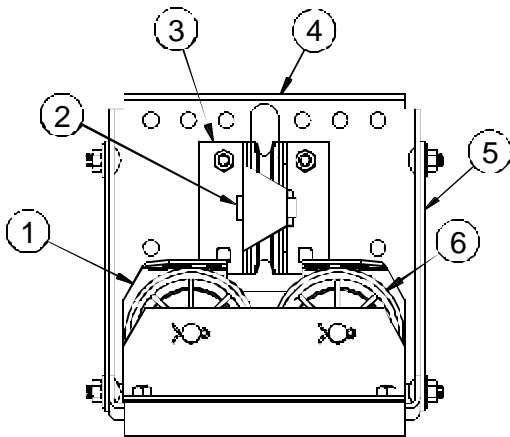
34716 SUPER-LIFT Winch Control



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Key	Description	Part No.
1	Switch	4604
2	Winch Limit Switch Actuator	34028
3	Control Box Lid	30859-1
4	Winch Control Mounting Plate	33765
5	Winch Threaded Shaft Channel	35645
6	Winch Threaded Actuator Shaft	30430
7	SPDT 230V Relay	34702
8	Pilot Light Assembly	7044
9	Rotary Switch	8005
10	Seal	34767
11	Control Box Latch	30862
12	Control Box Latch Pivot	30863
13	Stud Assembly	35277
14	Winch Limit Switch Brkt.	35276
15	Upper Front Cover Panel	34659
16	Lower Front Switch Panel	34658
17	Winch Control Box	34696

34651 3 Pulley Assembly

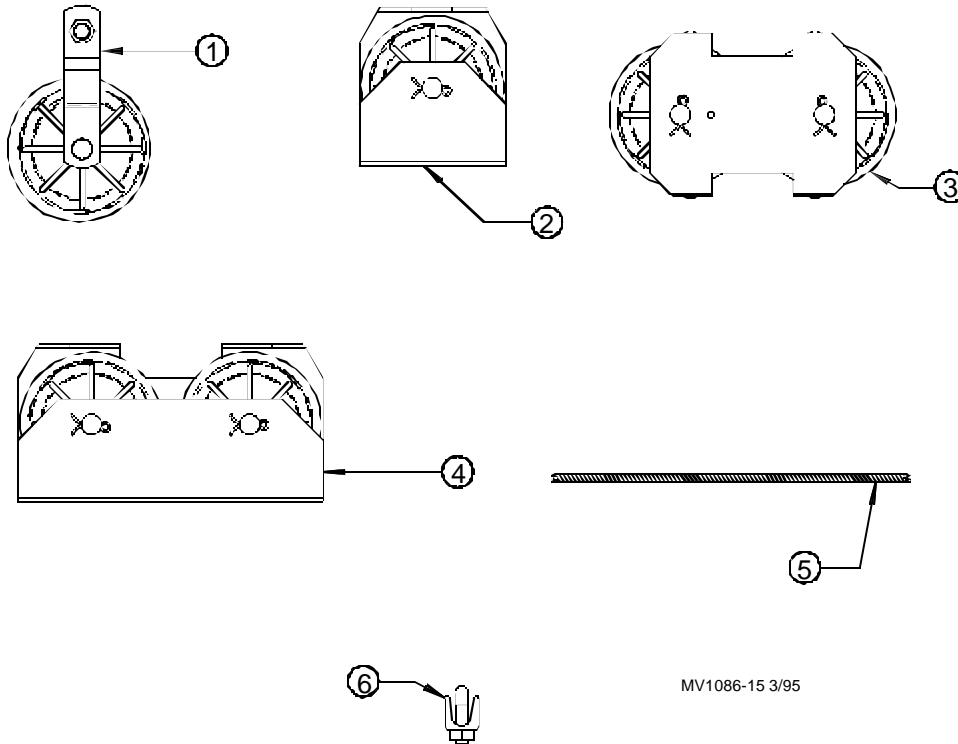


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Key	Description	Part No.
1*	Double Pulley Weldment	27308
2	1/2" Clevis Pin	2498-1
3*	Single Pulley Weldment	27305
4	3-Pulley Frame	34650
5	3-Pulley Support	34649
6	Pulley Wheel	2503

*Items #1 & #3 are available as assemblies, including pulley(s), clevis pin(s), and hair pin(s). The single Pulley Assembly may be ordered under Chore-Time part No. 27301. The Double Pulley Assembly may be ordered under Chore-Time part No. 27302.

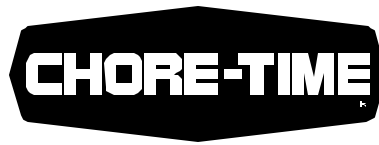
Miscellaneous Components



MV1086-15 3/95

Key	Description	Part No.
1	Pulley Assembly	2500
2	Pulley Kit	27301
3	2-Pulley Assembly	27772
4	Center Pulley Assembly	27302
5	3/16" Cable (150') 3/32" Cable (galvanized)	13976 4973
6	Cable Clamp	732

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**Made to work.
Built to last.**

Revisions to this Manual

Page No.	Description of Change
	Updated all graphics and part numbers to include the Manual Crank Version.

Contact your nearby Chore-Time distributor or representative for additional parts and information.

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