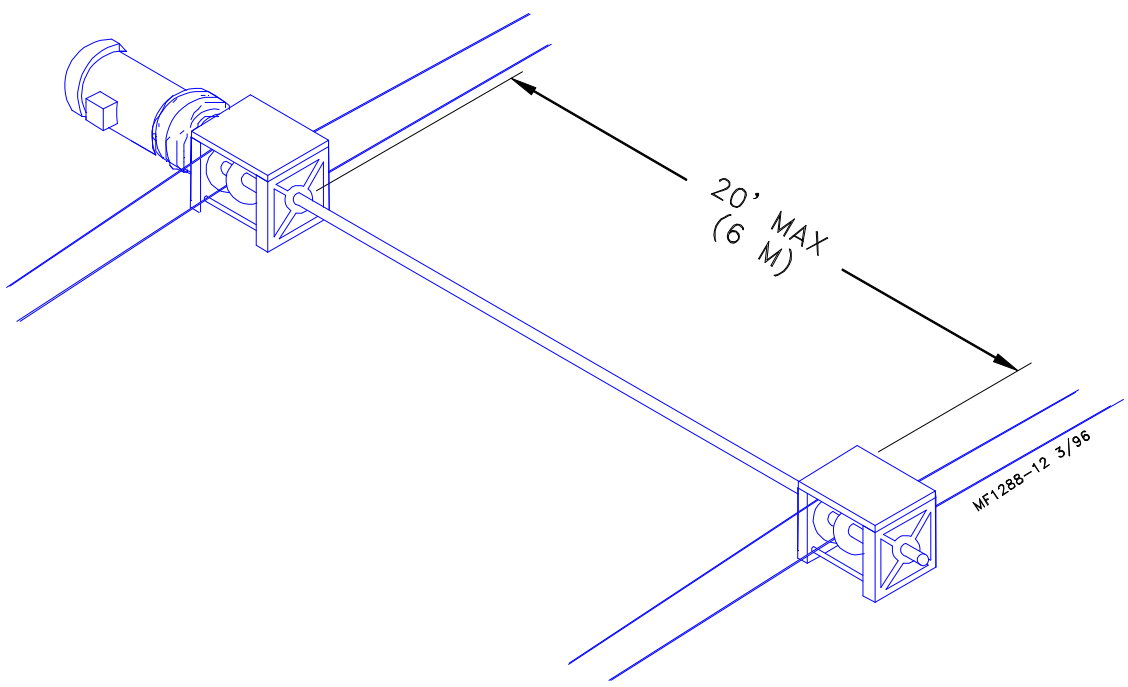


• *MULTI-LIFT™ Winch System Installation Manual* •

***MULTI-LIFT™***  
***Winch System***  
***Installation Manual***





# 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 or damage to the equipment.

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## 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. Chore-Time equipment is designed to be installed and operated as safely as possible...however, hazards do exist.



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## Signal Words

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

DANGER .....identifies immediate hazards which, if not avoided, WILL result in severe personal injury or death.

WARNING.....identifies hazards or unsafe practices which, if not avoided, COULD result in severe personal injury or death.

CAUTION .....identifies hazards or unsafe practices which, if not avoided, COULD result in minor personal injury or product or property damage.



**DANGER**



**WARNING**



**CAUTION**

---

## DANGER—ELECTRICAL HAZARD

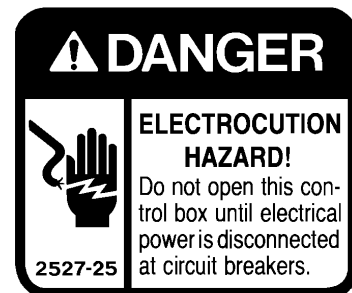
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

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.



## *Capacities and Specifications*

The MULTI-LIFT Winch System consist of a Drive Unit, and in some installations, a Remote Drum.

The MULTI-LIFT Winch may be used as a stand-alone winch to raise and lower a single line of feeders or waterers (i.e. Male Feeders, etc.).

The MULTI-LIFT Winch and the Remote Drum may be used together to raise and lower multiple lines of feeders or waterers (i.e. ULTRAFLO or ULTRAPAN loops, etc.).

The MULTI-LIFT Winch is designed for center mount applications only. Do not use as an end mount winch.

The maximum weight capacity of the MULTI-LIFT Winch is 3,000 pounds (1,361 kg). Use the chart, below, to estimate the weight of your system. The winch speed is approximately 5 feet (1.5 m) per minute.

	<b>Model C, C2, &amp; H2</b>	<b>Model ATF</b>
<b>Tube, Auger, Feed, &amp; Pan</b>	5.0 lb./ft 7.5 kg./m	7.0 lb./ft 10.5 kg./m
<b>Power Units</b>	35 lbs. (15.88 kg)	35 lbs. (15.88 kg)
<b>100# Hoppers</b>	140 lbs. (63.50 kg.)	- - - -
<b>200# Hoppers</b>	250 lbs. (113.4 kg)	250 lbs. (113.4 kg)
<b>300# Hoppers</b>	360 lbs. (163.30 kg)	360 lbs. (163.30 kg)

Chore-Time recommends using 3/16" (5 mm) 7x19 wire rope with a 4,200 pound (1905 kg) minimum break strength as the main winch cable.

The Motor used to drive the winch is a 3/4 H.P., 220 V., 50/60 Hz., single phase motor.

## *Planning the MULTI-LIFT Winch Installation*

Carefully plan the system prior to beginning the installation process. This will save you time and effort.

The Feeding System Installation Manual, supplied with your feeding system, includes the installation instructions for the suspension system. The Feeding System Installation Manual may be used in conjunction with MULTI-LIFT Winch System Installation Manual.

Note: Install the MULTI-LIFT Winch, as specified in this instruction, in place of the Power Winch shown in the Feeding System Installation Manual.

Refer to the MULTI-LIFT Winch System Overview diagram on page 5.

# MULTI-LIFT Winch System Overview

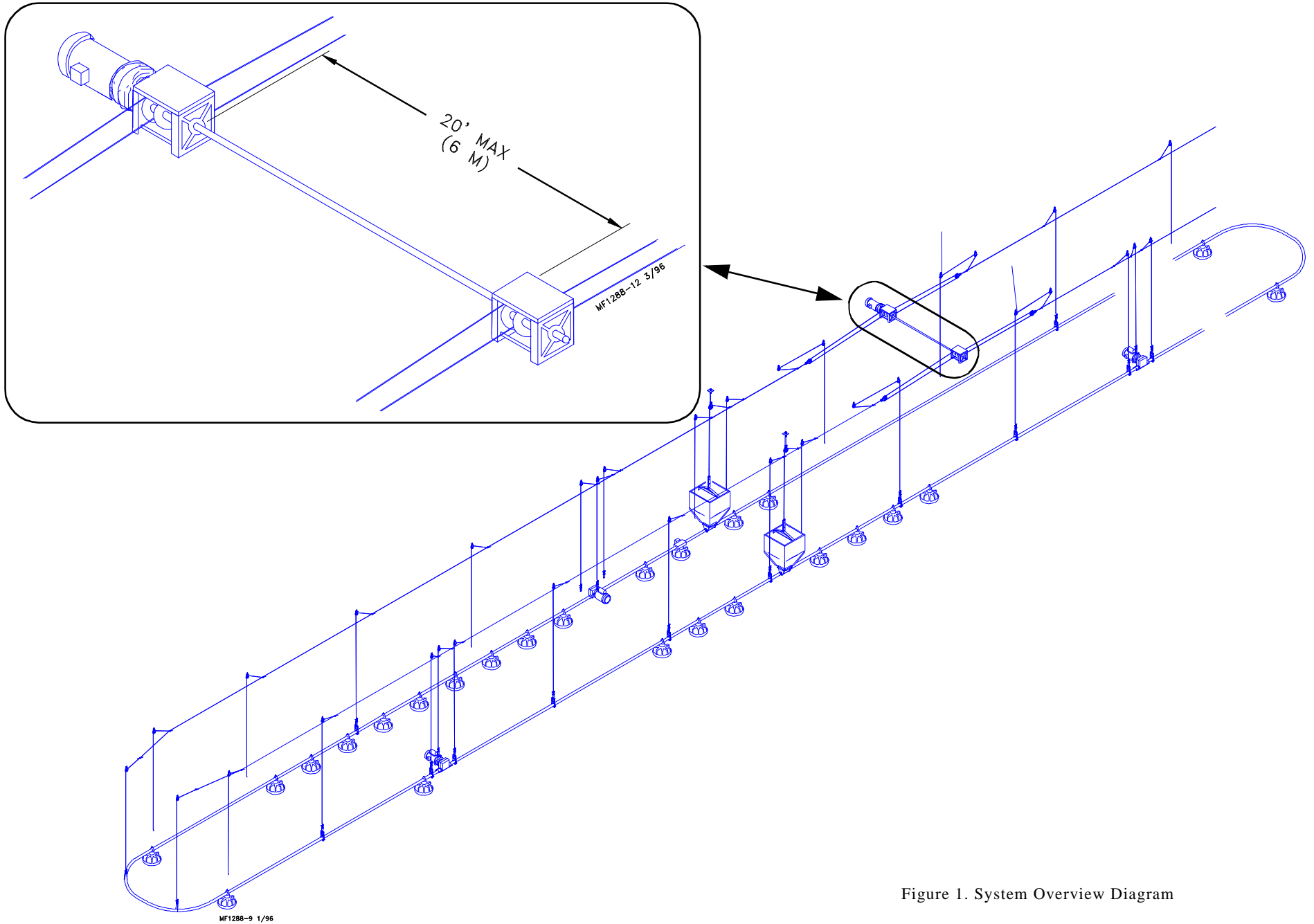


Figure 1. System Overview Diagram

# MULT-LIFT Winch Installation

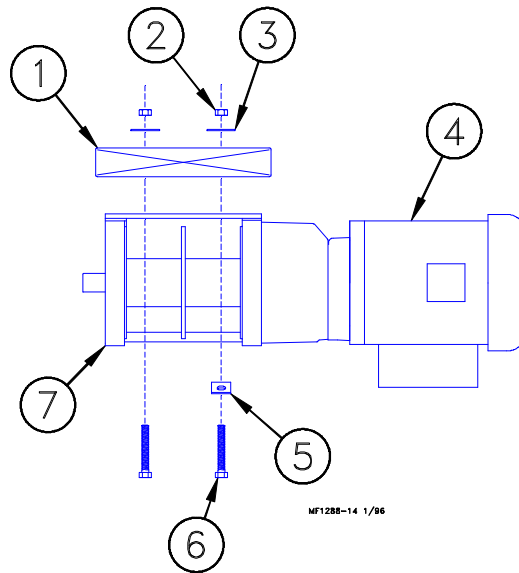
Position the Winch on the mounting board.

Mark the (4) holes in the Base of the Winch. Drill the holes for the 3/8" hardware.

Secure the Winch to the 2" x 10" (50 x 250 mm), using (4) 3/8-16 x 2-1/2" Grade 5 hex bolts, flat washers and hex nuts. Be sure to install (1) Cable Hook on each side of the Winch, using the 2-1/2" bolt as shown in Figure 1.

Locate the mounting board and Winch so that the Winch Drum is directly in line with the feeder/waterer line to be raised. The Winch should be positioned in the center of the house, if possible.

Secure a 2" x 10" (50 x 250 mm) board to the ceiling at the winch location, using lag screws (not supplied). The mounting board should span at least 3 trusses.



Key	Description
1	2" x 10" (50 x 250 mm) Mounting Board
2	3/8" Patch Lock Nut
3	3/8" Flat Washer
4	Winch Motor
5	Cable Hook
6	3/8-16 x 2-1/2" Hex Bolt
7	Winch Drum

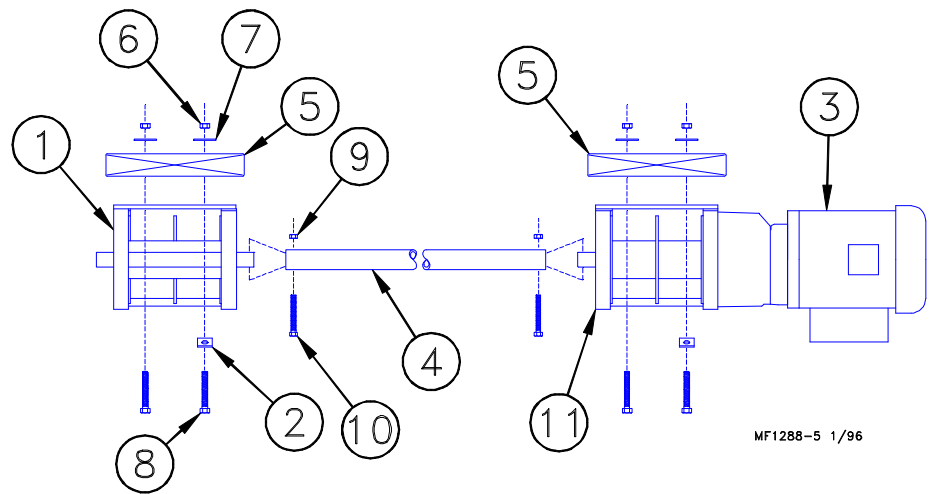
Figure 1. Winch Installation (side view)

If a Remote Drum is to be used, install it similar to the Winch specified above.

Connect the Winch to the Remote Drum, using a 1" (25 mm), schedule 40 steel pipe (not supplied), as shown in Figure 2. Be sure to install (1) Cable Hook on each side of the Remote Drum, using the 2-1/2" bolt as shown in Figure 2.

Additional Remote Drums may be attached together to raise/lower several lines at once.

Note: Make sure the total load on the system is within the recommended load specification. See Page 4.



Key	Description
1	Remote Drum
2	Cable Hook
3	Winch Motor
4	1" Pipe (not supplied)
5	2" x 10" (50 x 250 mm) Mounting Board
6	3/8" Patch Lock Nut
7	3/8" Flat Washer
8	3/8-16 x 2-1/2" Hex Bolt
9	5/16-18 Patch Lock Nut
10	5/16-18 x 2-1/2" Hex Bolt
11	Winch Drum

Figure 2. Remote Drum Installation (side view)

## *Cable Routing*

Extend the main cable the full length of the feeder/waterer line. Temporarily attach the cable to the ceiling with nails, staples, or some type of fastener. Refer to the Feeder Installation Manual for additional cable installation information.

Route the cable through the notch in the center divider of the winch drum, as shown in Figure 3.

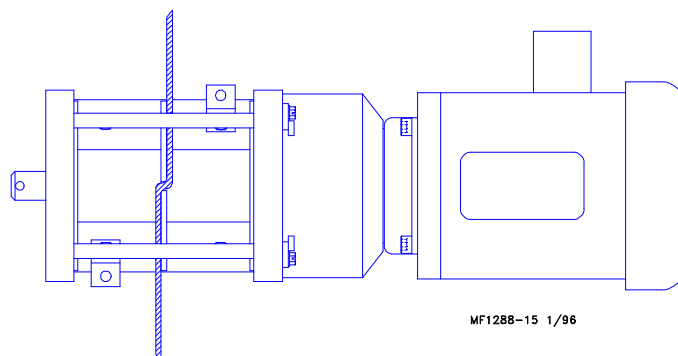


Figure 3. Cable routing through Winch Drum (side view)

Wrap the cable around the drum five complete wraps, as shown in Figure 4, by hand.

Make sure the cable does not wrap on top of itself.

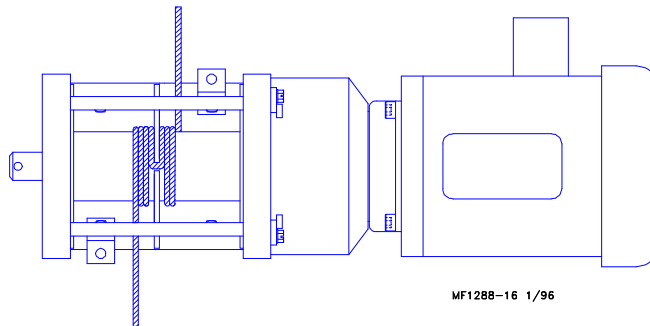
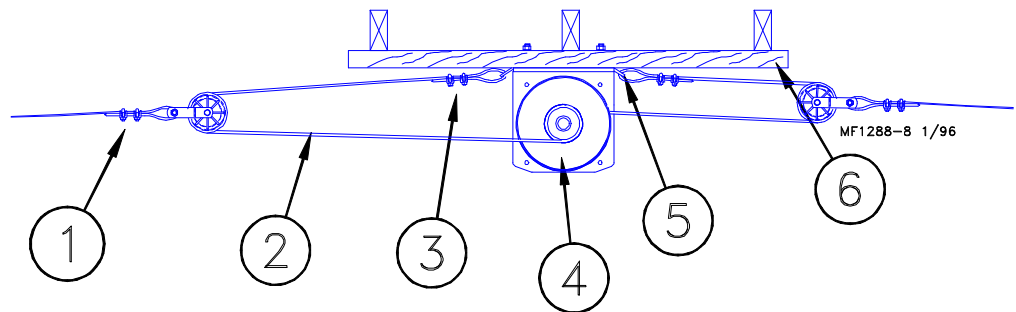


Figure 4. Cable wrap on the Winch Drum (side view)

Lines over 300' (91 m) require using a double-back cable arrangement, as shown in Figure 5.



Key	Description
1	Use (2) clamps to secure the main cable.
2	Winch Cable
3	Use (2) clamps to secure the winch cable to the Cable Hook.
4	MULTI-LIFT Winch
5	Cable Hook
6	2" x 10" Mounting Board

Figure 5. Double-back cable arrangement on the Winch Drum (side view)



If a Remote Drum is used, route the cable as specified above. Make sure the cable arrangement is the same for Drive Unit Winch Drum and the Remote Drum. See Figure 6.

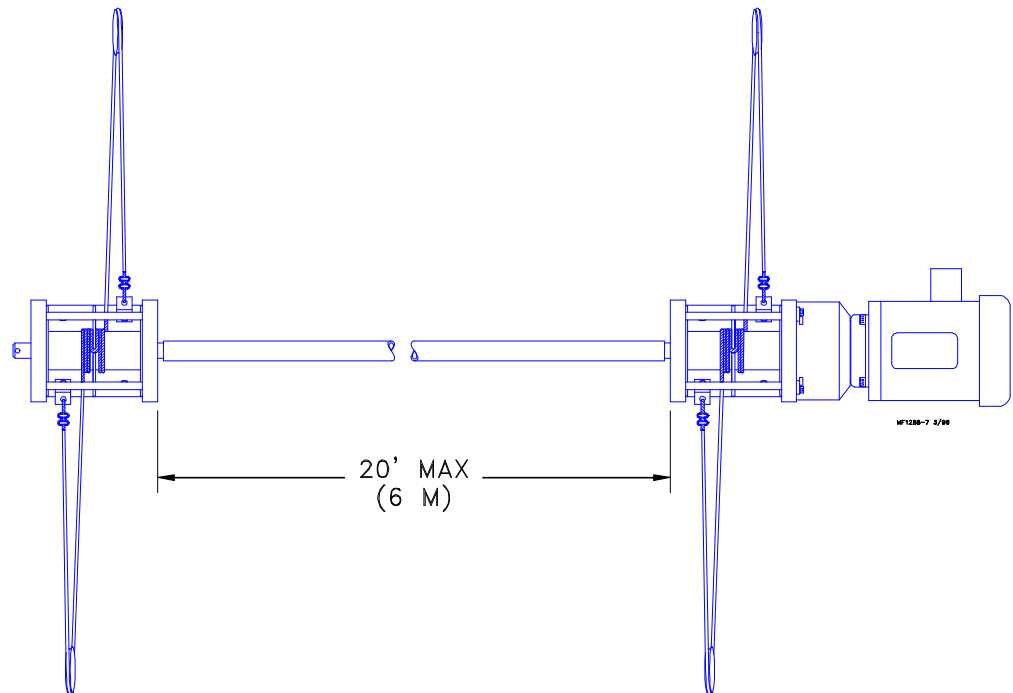


Figure 6. Drive Unit and Remote Drum cable routing (side view)

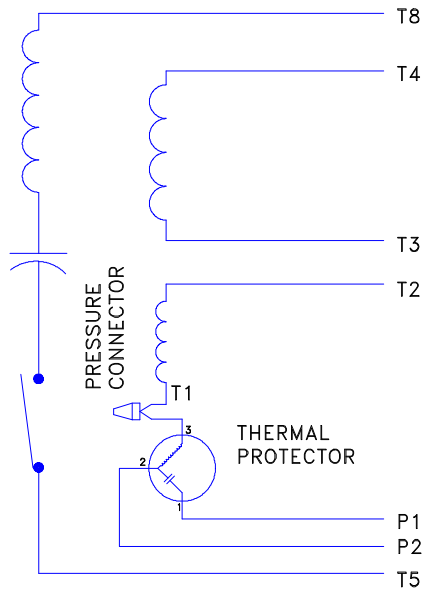
## *Wiring Information*

Note: Remove and discard the chain connecting Switch 1 & 2 together on the Limit Switch Assembly.

Remove the (2) bolts securing the Pipe Clamp Bracket and Clamp Strap from the bottom of the Limit Switch Assembly. Slide the Switches off the 2" PVC Tube and rearrange them in the order specified in the Tower Switch Layout detail included with the wiring diagram on page 11.

Wire the MULTI-LIFT™ Winch and Winch Control as specified in the diagrams in this manual.

# MULTI-LIFT Winch Motor Internal Wiring

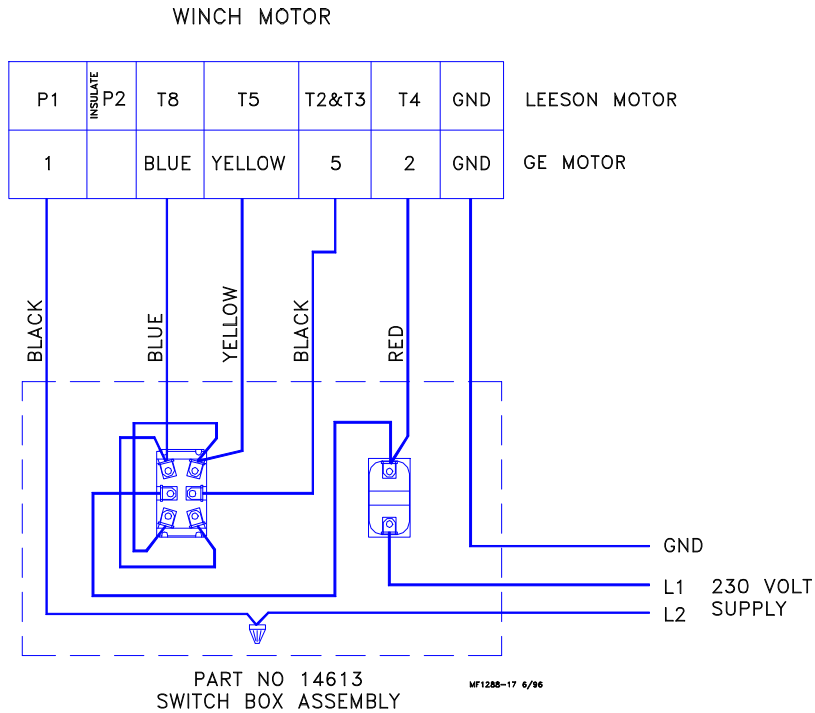


**NOTES:**

1. FOR WINCH IN OPERATION, MOTOR SHAFT TURN CCW VIEWED FROM SHAFT END. WINCH DRUM THEN TURNS CCW VIEWED FROM GEARBOX END.
2. MOTOR ROTATION DIRECTION CHANGED BY REVERSING WIRES T5 AND T8
3. WIRE IDENTIFICATION NUMBER ARE PRINTED ON LEAD WIRES IN MOTOR CONDUIT BOX.

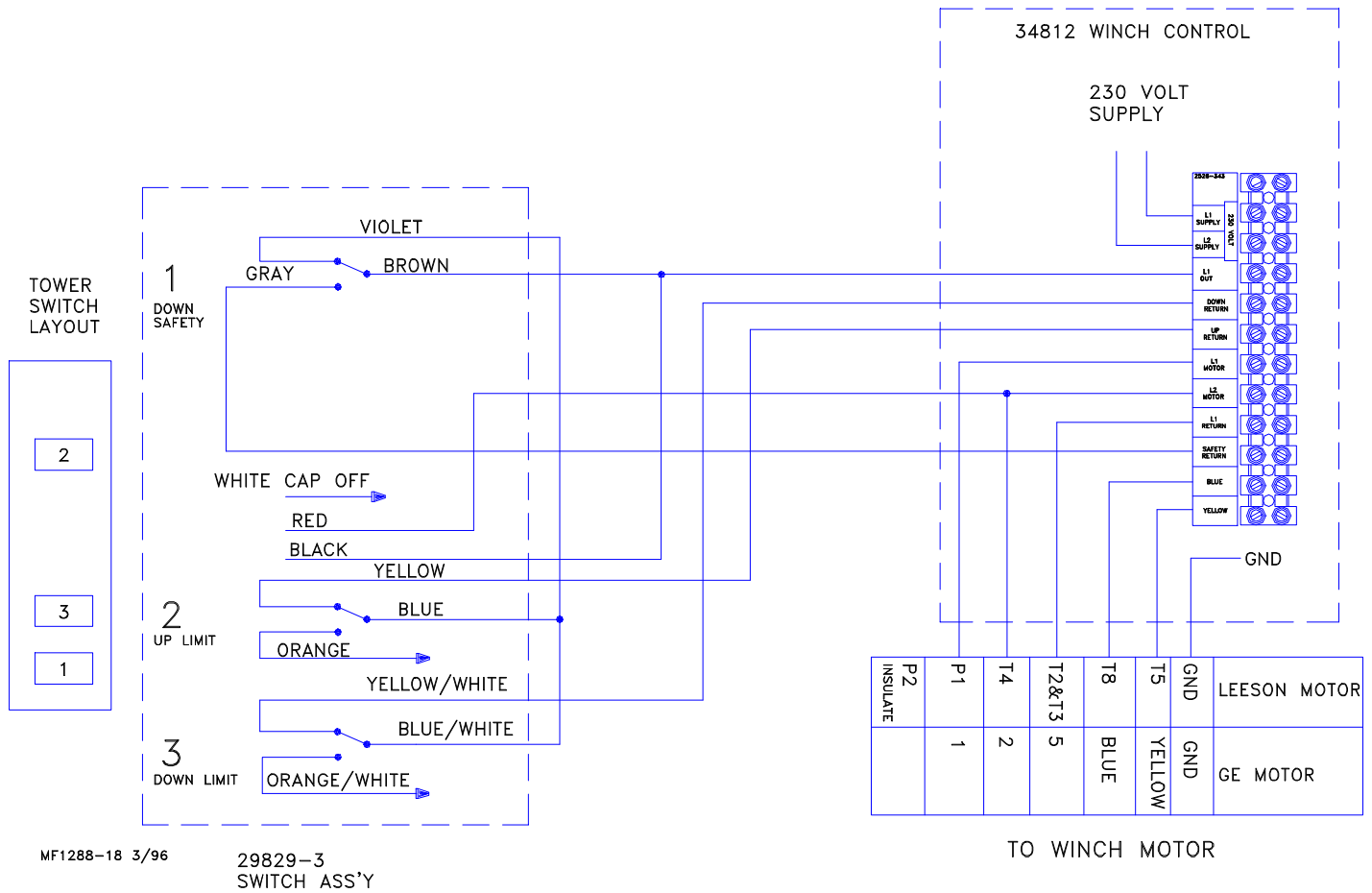
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# MULTI-LIFT Winch System Wiring Diagram (when used with manual winch control)

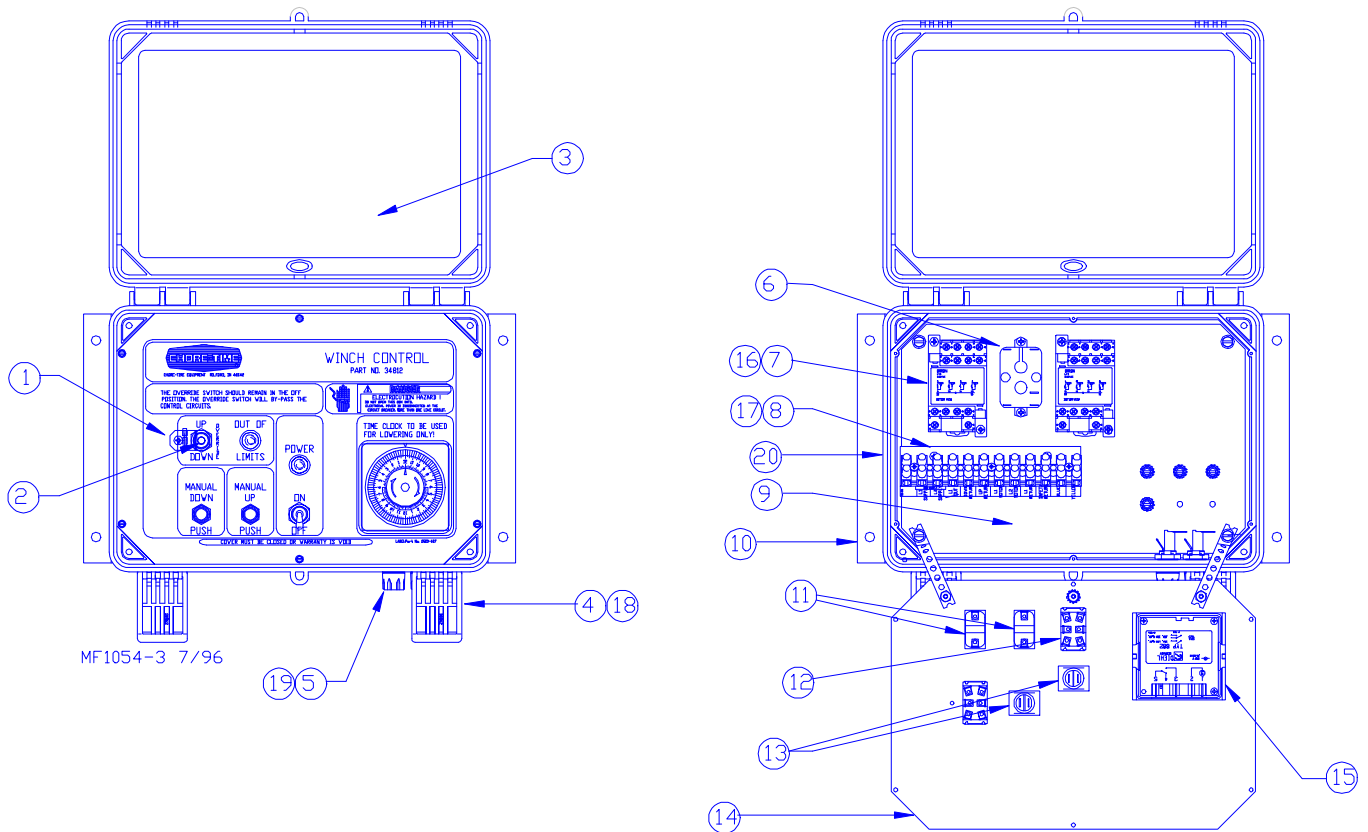


# ***MULTI-LIFT Winch System Wiring Diagram***

*(when used with Part No. 34812 Winch Control)*

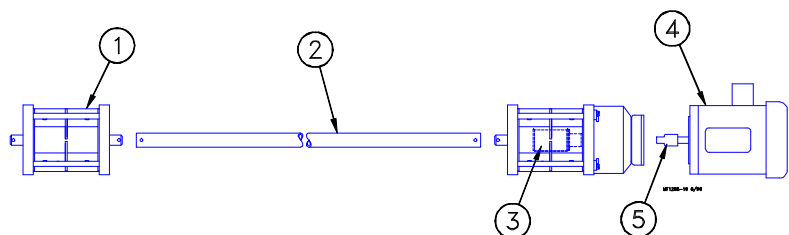


## Part No. 34812



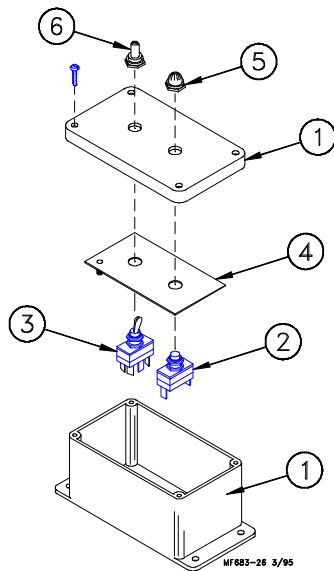
Key	Part No.	Description	Part No.
1		Switch Lock	5785
2	20135	Toggle Switch	
3		Clear Lid	7044
4	30862	Winch Control Panel	
6	5574	Fuse Holder	34912
8	34563	4 PDT Relay (230 V)	
10	34852	Track Mounting Socket	
11		Control Box Latch Pivot	63
12		10 Amp Fuse	34985

Key	Part No.
2	---
4	37380
--	40146



# Switch Box Assembly

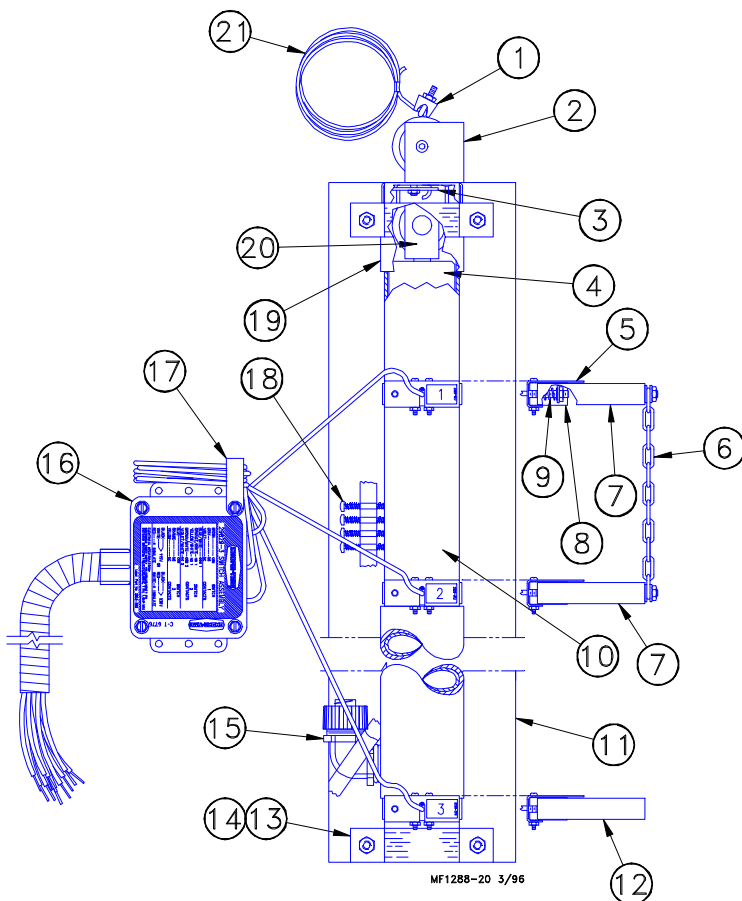
Part No. 14613



Item	Description	Part No.
1	Box and Cover	14611
2	Momentary Switch	5785
3	Toggle Switch	20135
4	Grounding Plate	14604
5	Push Button Boot	1739
6	Toggle Switch Boot	20784

# Limit Switch Assembly

Part No. 29820-3



Item	Description	Part No.
1	Cable Clamp	14898
2	Outer Pulley Assembly	29821
3	Cable Clamp Plate	29822
4	Weight	29825
5	Switch Mount	29828
6	Chain	30129
7	Switch Strap	29823-3
8	Switch (Replacement)	30110
9	Spring	7132
10	2" PVC Tube	29827
11	Support Plank	29826
12	Switch Strap	29823-2
13	Pipe Clamp Bracket	29830
14	Pipe Clamp Strap	29831
15	1/2" 90° Fitting	24726
16	Switch Assembly	29829-3
17	Cord Clip	21233
18	#8 x 3" S.S. Screw	30133
19	1" Tube Spacer	30131
20	Inner Pulley Assembly	29824
21	3/32-7 x 19 S. S. Cable	28377
--	1/2" PVC Conduit Fitting	7830

The 29820-3 Limit Switch Assembly and 34812 Winch Control may be ordered as a kit under Chore-Time Part No. 34913.

## *Trouble Shooting Guide*

<b>Symptom</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
Winch will not operate.	<ol style="list-style-type: none"> <li>1. No power.</li> <li>2. Thermal overload tripped.</li> <li>3. Faulty wiring or connections.</li> <li>4. Damaged or faulty motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check branch circuit.</li> <li>2. Press motor reset button.</li> <li>3. Check wiring.</li> <li>4. Replace motor.</li> </ol>
Thermal overload continually trips.	<ol style="list-style-type: none"> <li>1. Winch overloaded.</li> <li>2. Damaged or faulty motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use pulley block or reduce load.</li> <li>2. Replace motor.</li> </ol>
Winch runs backwards.	<ol style="list-style-type: none"> <li>1. Incorrect wiring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to wiring diagrams supplied.</li> </ol>
Winch will not reverse.	<ol style="list-style-type: none"> <li>1. Motor not stopped before reversing.</li> <li>2. Incorrect wiring.</li> <li>3. Damaged motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow motor to stop before reversing.</li> <li>2. Check wiring.</li> <li>3. Replace motor.</li> </ol>
Branch circuit breaker continually trips.	<ol style="list-style-type: none"> <li>1. Electrical short.</li> <li>2. Damaged motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check wiring.</li> <li>2. Replace motor</li> </ol>
Wire rope spooling unevenly.	<ol style="list-style-type: none"> <li>1. Insufficient tension on wire rope.</li> <li>2. Pulling at an angle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rewind rope under small load.</li> <li>2. Align winch for straighter pull.</li> </ol>
Winch does not pull rated load.	<ol style="list-style-type: none"> <li>1. Too much wire rope on drum.</li> <li>2. Damaged or faulty motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce amount of rope on drum.</li> <li>2. Replace motor.</li> </ol>
Drum does not turn, motor hums.	<ol style="list-style-type: none"> <li>1. Excessive load.</li> <li>2. Incorrect wiring.</li> <li>3. Damaged or faulty motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use pulley block or reduce load.</li> <li>2. Check wiring.</li> <li>3. Replace motor.</li> </ol>

## The 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.

Additional extended warranties are herewith provided to the original purchaser as follows:

1. TURBO™ and RLX™ Fans, less motors, for three years from date of installation.
- \*2. Poultry feeder pans that become unusable within five years from date of installation. Warranty prorated after three years usage.
3. MEAL-TIME® Hog Feeder pans that become unusable within five years of installation.
4. Rotating centerless augers, excluding applications involving High Moisture Corn (exceeding 18%), for ten years from date of installation. Note: MULTIFLO® and applications involving High Moisture Corn are subject to a one year warranty.
5. Chore-Time manufactured roll-formed steel auger tubes for ten years from date of installation.
- \*6. Laying cages that become unusable within ten years. Warranty prorated after three years usage.
- \*7. ULTRAFLO® Auger and ULTRAFLO® Feed Trough (except ULTRAFLO® Trough Liners) are warranted for a period of five (5) years from date of original purchase against repeated breakage of the auger or wear-through of the feed trough caused solely by the auger.

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.

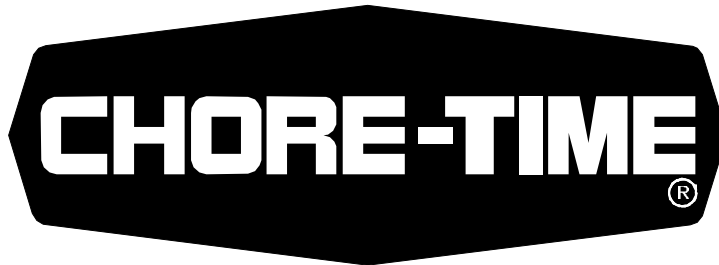
Chore-Time shall not be liable for any consequential or special damage which any purchaser may suffer or claim to have suffered as a result of any defect in the product. "Consequential" or "special damages" as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, 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.

\*See separate Chore-Time Cage Wire Warranty as to these products.

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



Made to work.  
Built to last.™

### Revisions to this Manual

<b>Page No</b>	<b>Description of Change</b>
--	Added more detailed installation information.
--	Added Part Number information.
--	Updated wiring information.

Contact your nearby Chore-Time distributor or representative for additional parts and information.  
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P.O. Box 2000, Milford, Indiana 46542-2000 U.S.A.  
Phone: 219-658-4101

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