

KRAMBLE INDUSTRIES INC.

Remote Control Swing Auger Mover **Installation and Operating Manual**



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Installation Instructions

Mechanical Installation

The Swing Auger Mover is designed to clamp directly onto the swing auger tube at the lowest point. Using the six 7/16 x 2-1/2" bolts provided, tighten the clamp around the tube such that the main beam is horizontal when the hopper is on level ground and the auger is at its normal working height. Clamps are available for 10", 12", 13", 14" and 16" Augers.

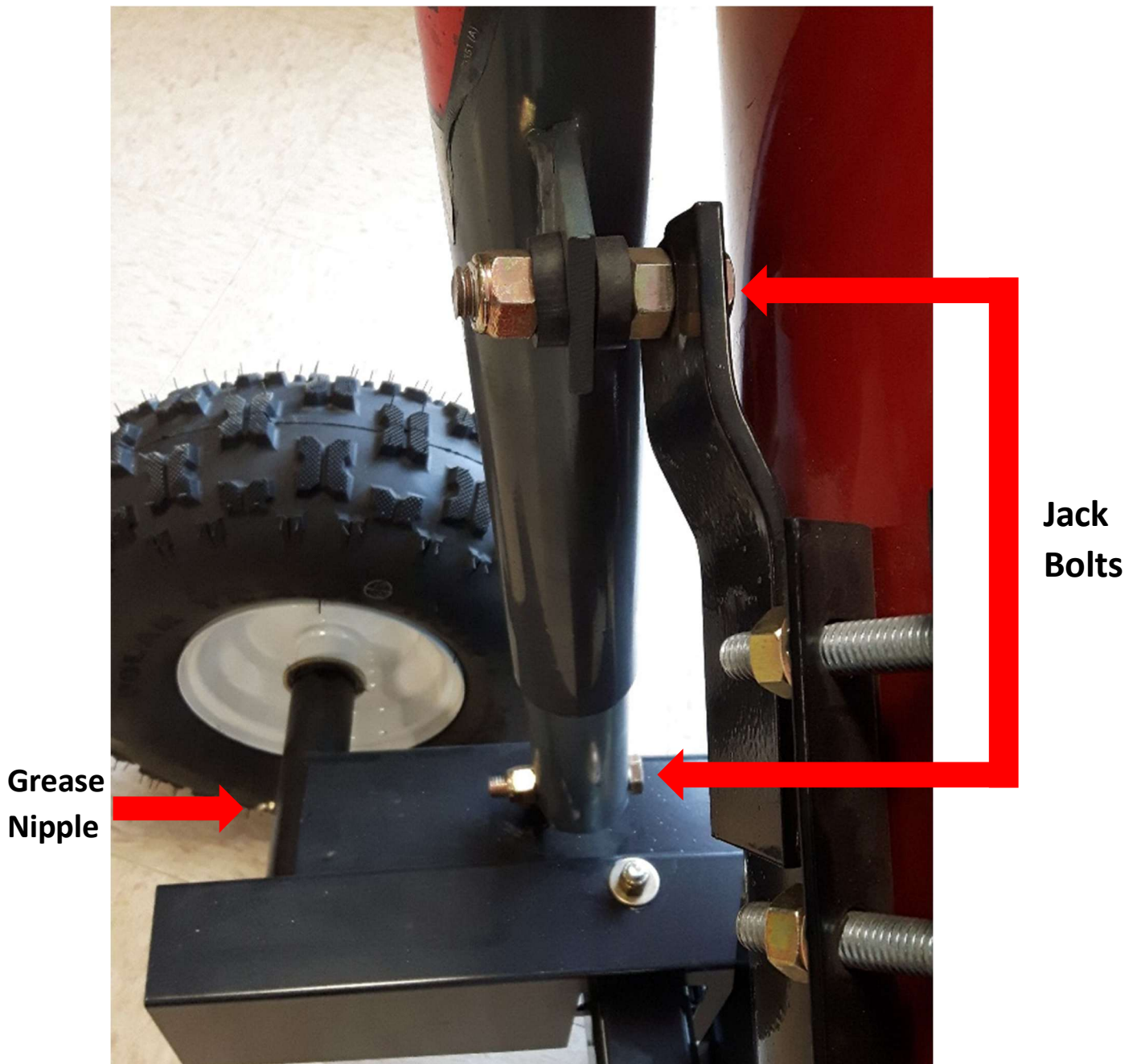
Figure 1 Mechanical Assembly



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Figure 2 Mounting Position

There is a grease nipple located on each axle sleeve. Grease before first operation and thereafter, thereafter, as needed.

Figure 3 Jack Installation

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Electric Cable Installation

The Swing Auger Mover is provided with pre-cut wire lengths with color-coded connectors attached.

Cable Schedule:

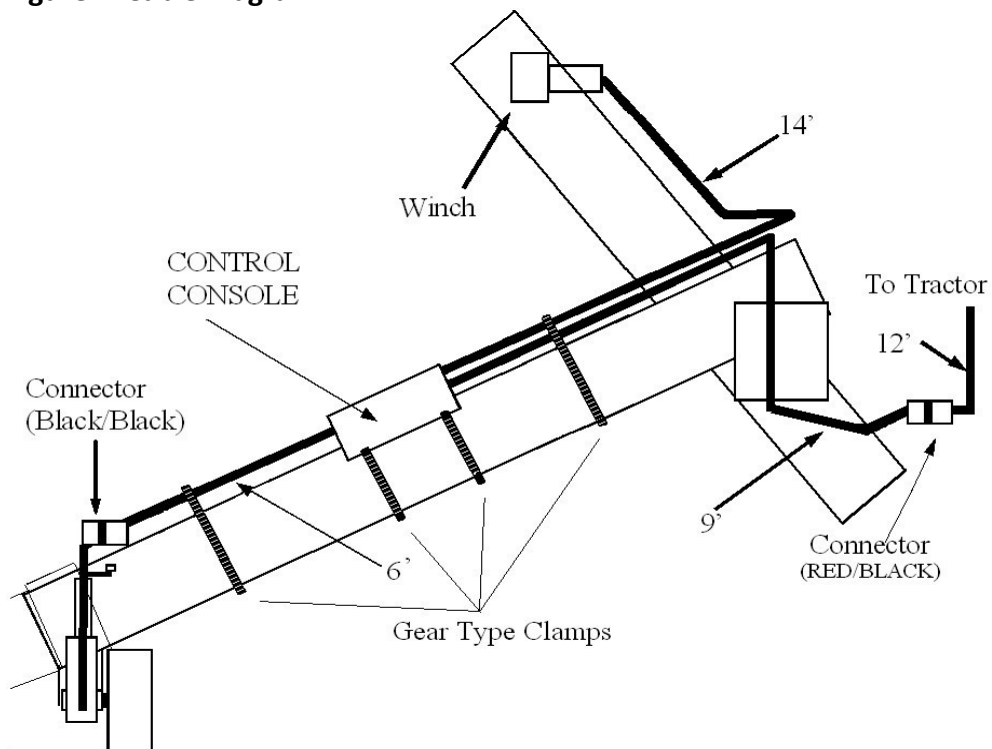
Tractor Power Cable - 15' c/w Red/Black PowerPole Connector.

Console Power Cable - 9' c/w Red/Black PowerPole Connector

Console/Swing Cable - 6' c/w Black/Black PowerPole Connector

Console/Winch Cable - 14' c/w ¼" Ring Terminals

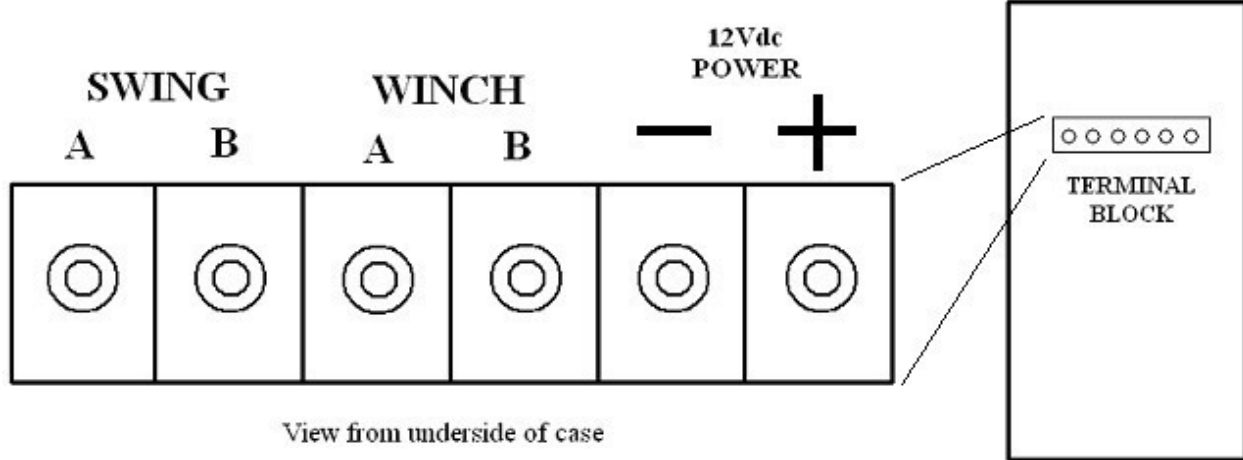
Figure 4 Cable Diagram



The polarity must be correct as follows: **+12v on the RED STRIPE wire on the POWER CABLES FROM THE TRACTOR TO THE CONTROL CONSOLE.** The RED /BLACK connector shells **MUST MATCH.**

WARNING: DO NOT ATTEMPT TO POWER THE CONSOLE OR DRIVE FROM A BATTERY CHARGER ALONE AS DAMAGE MAY OCCUR. CONNECT TO A PROPERLY MAINTAINED BATTERY SYSTEM ONLY.

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Figure 5 Underside of Case Diagram

Connect the 6' Console/Swing cable, the Console/Winch cable and the 9' Console/Power cable to the terminal block on the underside of the Swing Auger Mover Console. For the Console/Winch cable, connect the Blue wire to Winch terminal A and the Yellow wire to Winch terminal B. Attach the Winch power wires to the +/- 12V power terminals of the Swing Auger Mover Console, then fasten all cables to the terminals using the lock washers and ¼"-20 nuts supplied. Attach the Swing Auger Mover Console at a convenient height on the swing auger tube using the gear type clamps provided through the console holes. Connect the free end of the Console/Winch cable to the matching connector on the Winch.

Install the 15' Tractor Power cable onto the 12V tractor battery terminals, using the pre-crimped 3/8" ring terminals and the 80A self-resetting fuse assembly included. The fuse assembly must be installed between the positive battery terminal and the Red conductor of the 15' Tractor Power cable to protect against the possibility of a short circuit. Be sure to install the fuse assembly observing the correct polarity as indicated by the engraved "BATT" label on the aluminum fuse bar.

Connect the 6' Console/Swing cable to the Swing Auger Mover wheel assembly motor cable.

The polarity for the Swing A/B terminals will reverse during normal operation. If the Wheel Drive is running in the wrong direction when operated, exchange the Swing A and B wires. Similarly, the Winch directions can be reversed by exchanging its A and B wires.

Connect the 9' Console/Power cable to the 15' Tractor Power cable.

Secure cables to the swing auger tube using the supplied gear type clamps as shown.

WARNING: DO NOT CONNECT THE TRACTOR POWER CABLES TO THE CONTROL CONSOLE OUTPUT TERMINALS AS AN ELECTRICAL SHORT AND SERIOUS DAMAGE OR INJURY COULD RESULT!

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Figure 6 Console Diagram

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General Operation

Control Console

The Control Console contains the radio Receiver and power control circuits. The Control Console is equipped with a Master Power On/Off switch on the outside of the case. When the switch is ON, the Red LED should be lit indicating normal operation. Press and release to turn On and Off.

Each of the Swing Auger Drive and Winch may be operated independently from the Control Console by pressing the desired momentary switch. The Green “Output” LED will come on and the selected device will operate.

The Control Console also has built-in fault status indicators. For ease of troubleshooting, if a “low voltage” status occurs to the Control Console, the green Fault States Indicator will blink approximately twice per second. Check all connections to ensure they are clean and tight. Make sure that the tractor battery is fully charged, and the engine is running. If a “control circuit high temperature” status occurs the green Fault States Indicator will flash rapidly, blinking approximately four times per second. Allow the unit to cool before resuming operation.

Each Swing Auger Mover has its own RF receiver located in the control console, which is channel selectable to operate in multi-component environments e.g. remote control trailer chutes on Channels 1 & 2, and the Swing Auger Mover on Channel 3. The user can select the desired channel using the 2-position dip-switch. All Swing Auger Movers are set to Channel 1 at the factory.

Auxiliary Output (option)

The Control Console Auxiliary Output provides a remote control power output capable of delivering **10A (120 watts)**. This feature is intended for the operation of a remote control light for illuminating the work area when approaching at night, or for operation of a camera or other device. The output can be activated and deactivated from the transmitter by pressing the centre button on the RF transmitter (marked AUX), or from the Control Console by pressing the two “Aux” control buttons on the face of the Control Console simultaneously. The auxiliary output is protected by a thermal fuse that automatically resets when cooled. The auxiliary output is automatically shut off when the fuse trips to prevent a repeating cycle of the fuse tripping and resetting and must be reactivated using the transmitter or Console controls.

Transmitter/Receiver Matching

To match the transmitter to the receiver console:

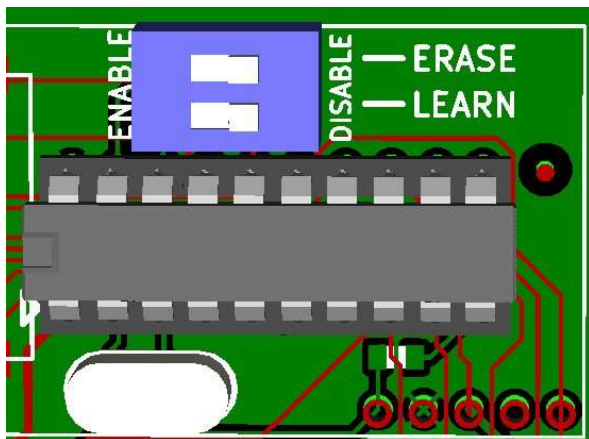
- Shut off power
- Hold the learn button (swing left)
- Turn power on while still holding the learn button; the receiver light learn light should come on
- Release learn button
- Press any button on remote to have the receiver learn that remote.

Your receiver can learn up to 8 remotes. If you add a ninth remote the first one will be

To erase all stored security codes, turn the receiver power ON while holding the LEARN button, and continue holding the button until the Receive/LEARN light begins to rapidly flash. Release the button, and the light will flash more slowly for three seconds, then turn off to indicate that the erase operation has succeeded. If the LEARN button is pressed while the Receive/LEARN light is slowly flashing, the erase operation is aborted and the receiver retains the stored transmitter security codes.

The Receiver is equipped with a two-position switch to enable or disable the learn and erase functions. To enable or disable a function, open the case and locate the switch as illustrated below. The switches and their positions are labeled on the circuit board. Factory default systems are set by default so that the Learn function is Enabled and the Erase function is Disabled.

Figure 7 Receiver Matching



Channel Select Settings

The Swing Auger Mover comes with a 2-position DIP Switch to match the Drive to the desired transmitter channel. In multi-component environments, be sure that each drive is set to a different channel so that devices do not operate simultaneously. Select the switch settings as follows:

	Switch 1	Switch 2
Channel 1	OFF	OFF
Channel 2	ON	OFF
Channel 3	OFF	ON
Channel 4	ON	ON

The Swing Auger Mover and Winch can be operated using the Transmitter, or alternatively, by operating the UP/DOWN momentary switches on the Control Console. Whenever the Swing Auger Mover drive or Winch is operated by remote control the Yellow "Receive Data" LED will be lit along with the Green LED indicating power output to the drive.

The Swing Auger Mover has two automatically resetting fuses. Fuse F1 (1 Amp) inside the control console is intended to protect the RF receiver and data circuitry, and Fuse F2 (80 Amp) at the battery is intended to protect against a short circuit in the cables. These fuses will automatically reset when cooled.

The Control Console power switch should be turned Off when not in use to prevent undesired operation.

Transmitter

The Transmitter is powered by a 9V battery which, when installed, should light the red "power" light when a switch is pressed. If the battery does not exceed 7 volts the Power light will not come On, indicating battery replacement is required.

The Transmitter is also equipped with an Off/Standby switch to prevent accidental operation. In the OFF position the transmitter Red LED will not light and the transmitter will not activate even when a function button is pressed. To operate, slide the switch to STANDBY. The transmitter remains off until a function button is pressed, at which time the Red LED will light and the transmitter will emit signal. No battery power is used when simply in Standby mode with no function buttons pressed.

Each transmitter contains a unique identifying security code that is transmitted to the receiver during RF operation. Up to eight Transmitters can "talk" to the same Receiver as long as the receiver has learned the transmitters' security codes. See page 9 for Security Code Matching Instructions.

To access the battery, remove the 4 screws in the back of the Transmitter case and open the case.

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Transport Winch (option)

The Transport Winch is provided for ease of lifting of the swing auger and hopper to and from the transport position. This electric winch operates on 12VDC power provided by the tractor battery and is controlled by manual switch on the Console, or by remote control.

The customer can decide the optimum mounting location and utilization for each application. The electric winch may be employed to replace the existing hand-crank winch or alternatively, to operate in addition to the hand-crank winch.

To install the winch on the mounting plate provided, the customer should unwind the cable to get access to the two mounting holes, which are located underneath the drum. Unwind the cable until you have enough space to drop a bolt through each hole then screw the nuts on from the bottom.

The Transport Winch option uses a 6000lb 12VDC electric winch.

It is imperative to follow all winching instructions as contained in the Owner's Manual.

See wiring diagram provided for proper connections.



Think Safety!

**STAND CLEAR WHILE OPERATING AND ALWAYS USE SAFETY CHAIN
WHEN RAISED**

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Specifications

Transmitter:

Power:	9 Volt DC Battery
Frequency:	916 MHz
Modulation:	FM
Indicators:	Power/Transmit Red LED
Case Size:	2.5" x 4.2" x .8"
Weight:	.25lb
Range:	300' + (depending on environment)
Antenna:	1.3" Fixed Mini Tuned
Security Code:	Unique in each Transmitter
Safety:	Off / Standby Slide Switch
Functions:	2 to 9 Button (depending on model)

Receiver:

Power in:	12 VDC
Power out:	12 VDC @ 100 amps max
Standby:	40mA
Power Input:	6ga 2conductor wire with "power pole" connectors
Indicators:	Power on red LED Channel active green LED Receive/Learn RF Data Yellow LED
Options:	Multi-Channel Operation (1-4) Main Power On/Off Switch Manual Switch Control
Antenna	3" Flexible Tuned

Electric Motor Drive

Electrical:	12VDC @ 100A Full Load
Torque:	1125 in-lb
Speed:	60 rpm no load
Output Shaft:	¾" keyed and drilled
Duty Cycle:	5%
Overall Size:	4" x 6" x 15"
Weight:	16lb

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FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Kramble Industries Inc.
20-3924 Brodsky Ave
Saskatoon, SK S7P 0C9
306-933-2655
sales@kramble.net
www.kramble.net

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Limited Warranty

Customer satisfaction is a fundamental policy at Kramble Industries Inc. All customers can rely upon and expect to receive prompt, efficient and courteous service on all Kramble Industries Inc. manufactured equipment from each and every employee of the organization.

Kramble Industries Inc. with its office at 20-3924 Brodsky Ave, Saskatoon, SK warrants:

To the Original Purchaser/User, each product manufactured by Kramble Industries Inc. to be free from defective material and workmanship, under normal use and service, for a period of 12 months subject to conditions outlined below. The obligation under this warranty is limited to repair, or replacement with a similar genuine company part, for any part of the product of the company's manufacture that is found to be defective.

Warranty period begins the day of purchase. During the first (1st) through the twelfth (12th) month, Kramble will furnish without charge, F.O.B. its plant, a similar genuine part to replace any part of a product of the company's manufacture which proves to be defective, in normal use and service, during this time. Labor to install or repair such parts will be absorbed by Kramble Industries Inc. If this work is to be done other than Kramble personnel, prior approval must be given by Kramble Industries Inc. as to rate and time.

This warranty shall bind the company only as follows:

1. The warranty shall be limited to the repair or replacement of defective parts, all other damage, loss, cost or obligation and claim whatsoever, statutory or otherwise, are hereby waived by the original purchaser/user, and again, the warranty hereby given covers only those labor charges specifically authorized by the company in advance.
2. The warranty shall not apply to any failure, or damage incurred through neglect, lack of maintenance, misuse, abuse, accident, improper installation, re-designing of assemblies, ignorance, or through any other cause beyond the control of the company.
3. The warranty does not cover products of other manufacturers beyond such warranty as may be made by such manufacturer.
4. The warranty shall not apply to normal maintenance services, or to deterioration of appearance of items due to normal use and exposure.
5. The warranty shall not apply when the original purchaser/user has allowed repair and/or service work to be conducted on the product without authorization from the company.

IMPORTANT NOTE:

Before any warranty work is done, contact Kramble Industries Inc. for authorization. Failure to do so may result in denial of warranty.

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