INST-31000

OWNER'S MANUAL

VENTURO LOGIC CONTROLS (-H)

SYSTEM MANUAL

Included in this manual:

VENTURO LOGIC CONTROLS (VLC-H)

- Venturo Logic Controls (VLC)™ system provides safe crane operations, allowing more control of capacities throughout the load operation.
- 6.5° - 8.5° CHASSIS TILT

VENCO VENTURO INDUSTRIES LLC
12110 BEST PLACE | CINCINNATI, OHIO 45241
800-226-2238

This manual also available online at www.venturo.com.

VLC SYSTEM

INST-31000 - 10/22/2026 (Rev: A3)

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12-00073_VNT1 WARRANTY PAGE

Dear Venturo VLC Purchaser,

Thank You!

Thank you for your purchase of the Venturo Logic Controls (VLC) Crane. This crane was carefully engineered to provide excellent performance when properly installed, operated and maintained.

Please read all pertinent manuals entirely prior to installing and operating the equipment. Our manuals instruct you how to safely and easily install, set up and operate your crane. Please be sure that you, and any other person who will operate the crane, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

The information in our manuals relate to the most recent product information available at the time of printing. Review all manuals for proper installation and to familiarize yourself with the crane's features and operations. We reserve the right to change product specifications, designs and equipment without notice and without incurring obligation.

If you have any problems or questions, please call Venco Venturo Industries LLC directly. We want to ensure your complete satisfaction at all times.

Sincerely,

Venco Venturo Industries LLC

Record Product Information

Before installing, setting up and operating your new crane, please locate the serial plate on the crane and record the information provided to the right. This information is helpful when seeking technical support assistance. Typical locations for serial plates are on either side of the mechanism near the main boom pivot.

Model:

_____

Serial Number:

_____

Product Registration and Customer Support

Please register your product on our website, **www.venturo.com/warranty-policy/**.

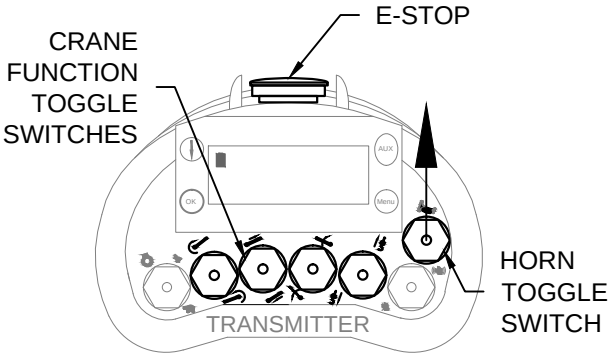
If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this crane, you can seek help from our expert customer support. Choose from the options below:

- Visit us on the web at www.venturo.com
  - Download our manuals at **www.venturo.com/owner-manuals/**
- Call a Customer Support Representative or Technical Support at (800) 226-2238
- Locate the nearest Venturo Distributor in your area (800) 226-2238 or info@venturo.com

VLC SYSTEMS QUICK START GUIDE

OPERATE CRANE

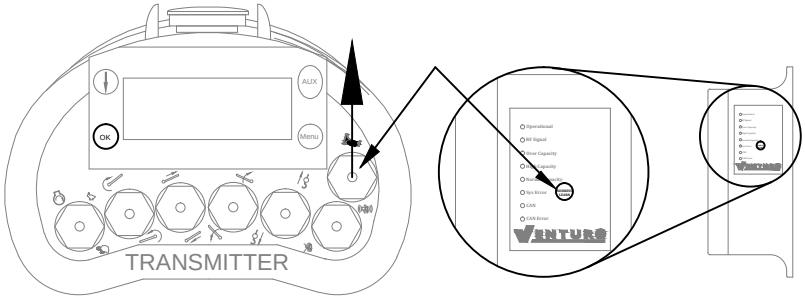
- Verify the transmitter battery is charged.
- Make sure E-STOP is disengaged ("up")
- Actuate the HORN toggle switch to connect the transmitter and receiver.
- Select the crane function toggle switch to be actuated.
- Pull the proportional trigger to control the speed of the selected crane function.
- NOTE: Push E-STOP to turn OFF the transmitter and stop the crane.
- NOTE: For safety reasons, the crane function must be selected *before* pulling the trigger or the crane will not operate.



PAIR A REPLACEMENT TRANSMITTER TO AN EXISTING RECEIVER

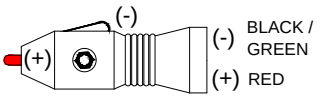
- Locate the ***address learn button*** on the receiver (see below.)
- Press and hold the ***Address Learn button*** on the ***receiver,*** then press and hold the ***Horn toggle switch UP*** on the ***transmitter***.
- After a second or two, the Horn will sound on the crane and the transmitter will vibrate, indicating that the transmitter & receiver are now paired.

•• Antenna must be connected to receiver for pairing process to be successful.



CHARGING BASE WIRING OPTIONS

Please see page 30018 for more information.



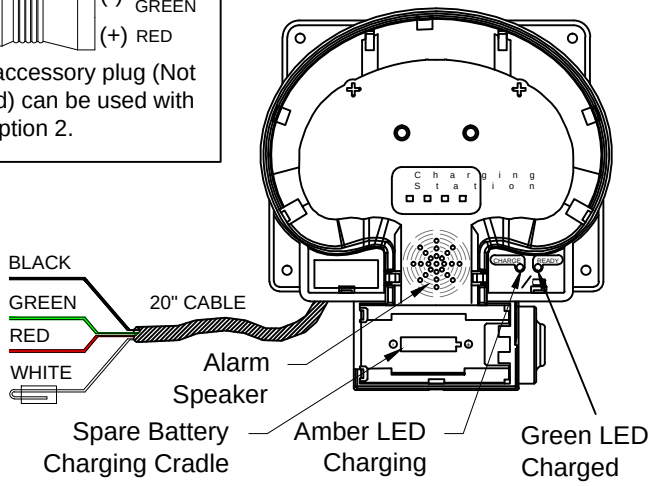
12-volt accessory plug (Not Supplied) can be used with wiring option 2.

OPTION 1) ACTIVATE MISSING TRANSMITTER ALARM

- ***BLACK WIRE*** to negative ground terminal.
- ***GREEN WIRE*** to the vehicle ***PARK INPUT***.
- ***RED WIRE*** to +12-volt (or +24-volt) positive terminal.
- ***WHITE WIRE*** for 'optional' external alarm. ***FOLD-BACK AND STOW IF NOT USED.***

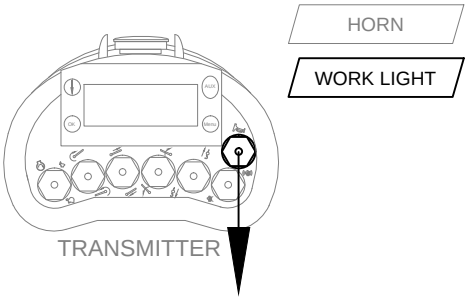
OPTION 2) DEACTIVATE MISSING TRANSMITTER ALARM

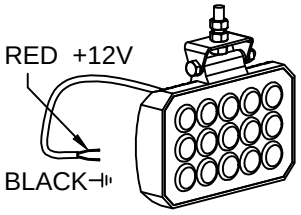
- ***BLACK WIRE*** to negative ground terminal.
- ***GREEN WIRE*** to negative ground terminal.
- ***RED WIRE*** to +12-volt (or +24-volt) positive terminal.
- ***WHITE WIRE*** for 'optional' external alarm. ***FOLD-BACK AND STOW; NOT USED FOR OPTION 2.***



OPTIONAL WORK LIGHT CONTROLS

If your crane is equipped with the work light, turning it on can be achieved by pressing the horn toggle in the down direction. Light will remain on until toggle is pressed down again, or a condition causes the main contactor to open.



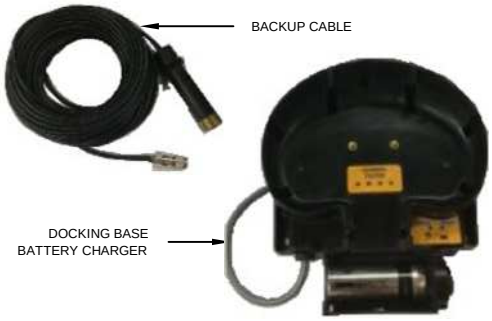


GENERAL INFORMATION
VENTURO LOGIC CONTROL SYSTEM, OWNER'S MANUAL

Venturo Logic Controls (VLC)™ system provides safe crane operations, allowing more control of capacities throughout the load operation. Features include vehicle stability/grade indications, overload protection, wireless or CAN communication, and multiple alerts and displays using the following components:

The pistol-grip controller offers more comfort and less fatigue.

- Over 60 hours of battery life
- 4-line 20 character display
- [7] 2-way toggle switches
- [4] momentary push buttons
- Emergency stop
- Trigger for proportional control
- ▲• Wireless or Wired operation (45' back-up cable included)
- Vibration and LCD display alerts
- Dual processor decoding on 2.4GHz radio frequency



The receiver is the main processing unit and Communications Area Network (CAN) master for the system.

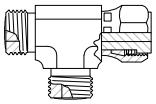
- IP65 Environmental protection
- Tri-color LED diagnostic indicators
- RF or cable-controlled communication (back-up cable included)
- Compact and lightweight
- Controls Valve Control Module (VCM)
- Quantity: 1
- Location: Right side of Mechanism

The Valve Control Module (VCM) drives the hydraulic valves and other crane controls.

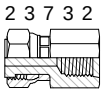
- IP65 Environmental protection
- [16] Digital outputs
- Quantity: 1
- Location: Right side of Rear Cover

The Pressure Transducer senses the pressures from the elevation cylinder.

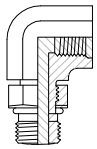
- Quantity: 2
- Location 1: Pressure port of Elevation Cylinder (Right side)
- Location 2: Inline with Boom Down (Inside Housing)
- •• Fittings: [1] 23731, [1] 23732, and [1] 23733



2 3 7 3 1



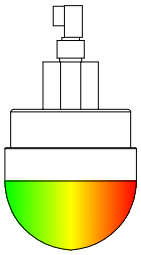
2 3 7 3 2



2 3 7 3 3

The dual-axis Inclinometers will sense truck level and boom angle.

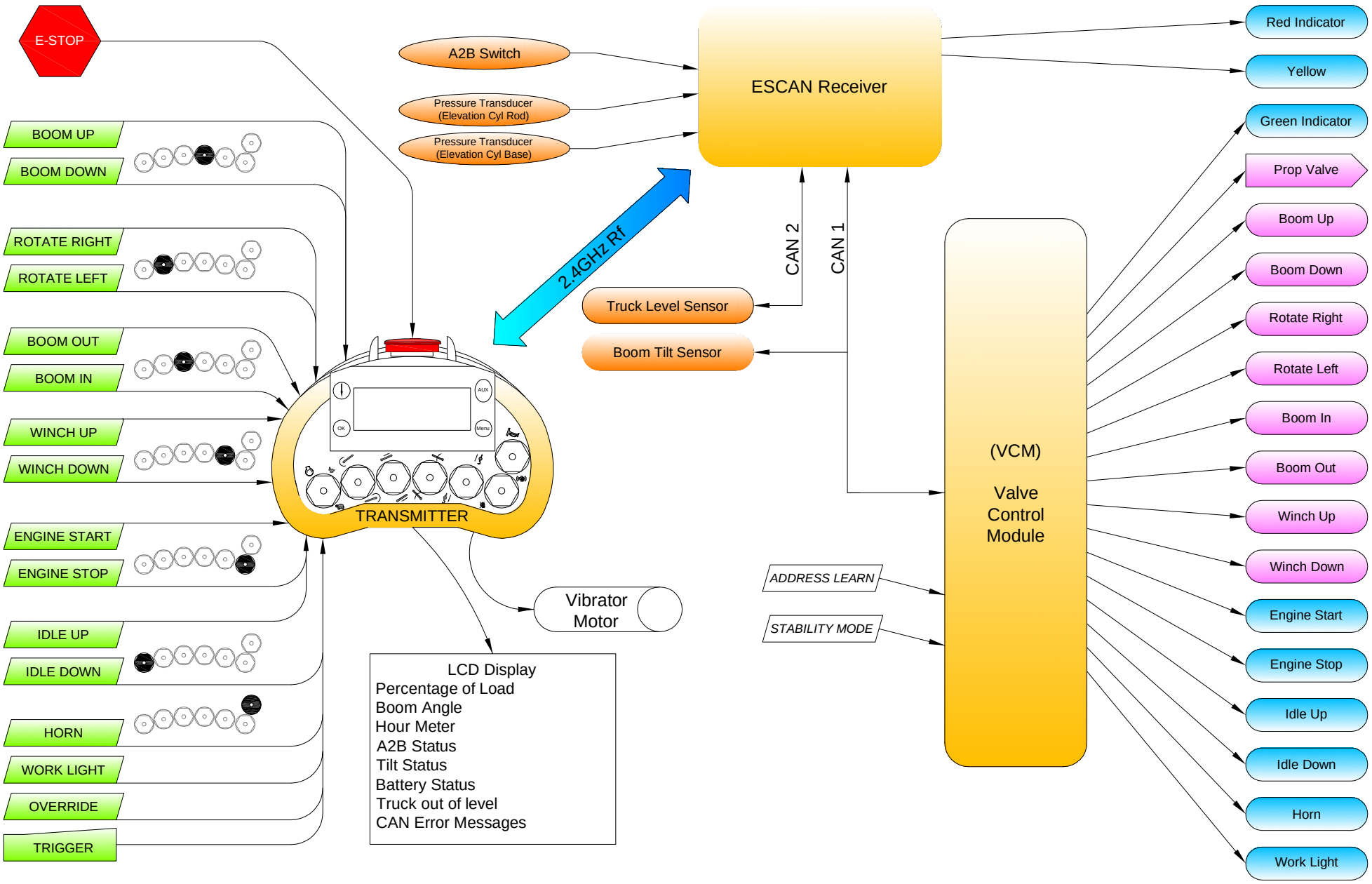
- Quantity: 2
- Location 1: Inside housing near Center of Rotation
- Location 2: Underneath boom near Tri-color LED Warning Light



The Tri-Color LED Warning Light works in conjunction with the receiver's diagnostic LEDs. The colors and patterns warn the operator of system conditions.

- Quantity: 1
- Location: Underneath boom near Elevation Cylinder rod pivot and inclinometer

VLC SYSTEM BLOCK DIAGRAM

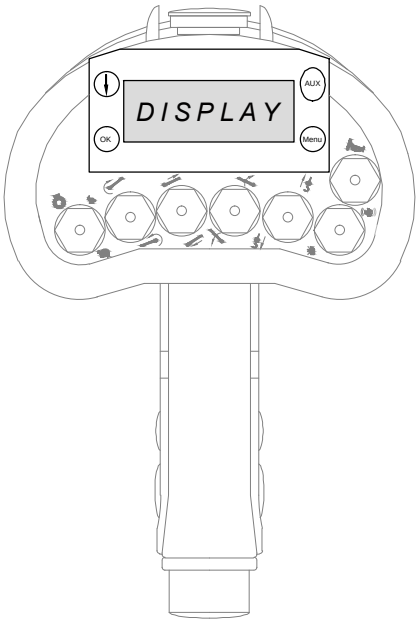


VENTURO®

VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

TITLE	DATE	SECTION
SYSTEM BLOCK DIAGRAM	04-25-19A	-
VLC CONTROLLER SYSTEM	SUPERSEDES 11-28-18	30002

VLC SYSTEM MESSAGES



VLC SYSTEM CONDITIONS

The transmitter communicates the system's status during operation, and warns the operator of any conditions influencing the manipulation of a load.

- If the home screen information is needed after a condition occurs, pressing the 'OK' button will remove the error on the screen.
  - All other warning features will remain until the conditions are cleared.
  - Screen may include inverted colors and error icons in bottom left of home screen.
- When all conditions are cleared, the system will return to normal operation.

50% LOAD
25° ANGL

HOME SCREEN (DEFAULT SCREEN)
Shown during normal operation with battery indicator.

Hour Meter = 1235 h
A2B Status = Normal
Boom Angle = 70°
Press Snsr = 1500PSI

DIAGNOSTIC SCREEN
Shown after pressing menu button. Usnig down arrow will display additional screens. Press Menu button to return to Home Screen.

Level X = 1.3°
Level Y = 0.7°

STOP

EMERGENCY STOP
The system will go into E-Stop mode by pressing the Emergency Stop button, communication is lost for more than 0.5 seconds, or loss of power to either the receiver or VCM.

ANTI 2-BLOCK CONDITION

ANTI 2-BLOCK ERROR
A tripped sensor will show display on left. Pressing the OK button will display screen on right.

A2B
50% LOAD
25° ANGL

SPD 75%
50% LOAD
25° ANGL

OVER 80% LOAD CONDITION
Detecting a load greater than 80%, the load and angle text flashes and speed is displayed in the bottom left corner of the display.

OVERLOAD
LIMITED FUNCTIONS
SPEED REDUCED

OVERLOAD ERROR
An overload condition inverts the display colors as shown on the left. Pressing the OK button will return to the home screen with inverted shading, as shown to the right.

SPD 75%
100% LOAD
25° ANGL

OUT OF LEVEL 6.5°
SPEED REDUCED

OUT OF LEVEL 6.5° - 8.5° WARNING
Displays when level sensors sense 6.5°-8.5°. Pressing the OK button returns to the home screen with speeds reduced to 75%. The screen to the right will be displayed.

SPD 75%
30% LOAD
25° ANGL

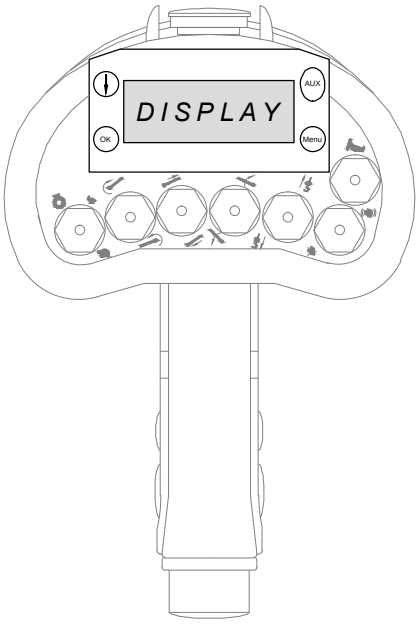
OUT OF LEVEL > 8.5°
LIMITED FUNCTIONS
SPEED REDUCED

OUT OF LEVEL GREATER THAN 8.5°
Displays when level sensors sense greater than 8.5°. Pressing OK button will clear the condition on the display, but with inverted colors, flashing text, and limited functions: Winch Down, Boom Up, Boom In, and Rotation at 75% speed - all others prevented.

VCM
CAN COMM. LOST

VCM ERROR
Displays when CAN communication is lost to the VCM module. Check all connections, or call 1-800-226-2238 for technical support.

VLC SYSTEM MESSAGES, SPECIAL FUNCTIONS



BOOM ANGLE SENSOR
CAN COMM. LOST

ANGLE SENSOR ERROR
Displays when CAN communication is lost to the boom angle sensor.

LEVEL SENSOR
CAN COMM. LOST

LEVEL SENSOR ERROR
Displays when CAN communication is lost to the level sensor.

PRESSURE SENSOR 1
ERROR

PRESSURE ERRORS
Displays when either pressure sensor is outside of normal operating range.

PRESSURE SENSOR 2
ERROR

STBL 50% LOAD
25° ANGL

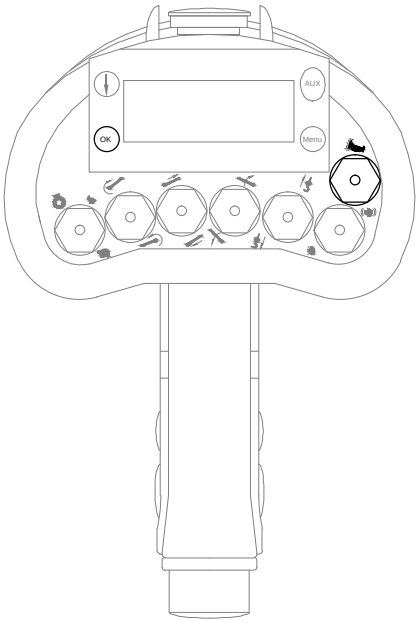
STABILITY MODE
Shown while in Stability Mode. STBL icon has lowest priority and is overridden by any other fault message or icon.

SPECIAL FUNCTIONS - LOAD LIMITING				
% OF LOAD	CRANE RESPONSE	INDICATOR LIGHTS	TRANSMITTER LCD	TRANSMITTER VIBRATOR
0 - 80%	Normal operation	Green Solid	load xx% Angle xx%	none
80% - 100%	All functions reduced to 75% speed	Yellow flashing	load xx% Angle xx% flashing text SPD 75% icon	3 quick vibrations when 80% threshold is exeeded
> 100%	WD, BI, BU, & Roatation @ 75% speed - all others prevented	Red flashing	Overload limited functions speed reduced flashing text/inverted color - or after pressing OK button, Home screen, flashing text/inverted color, SPD 75% icon	Continuous vibration for 4 seconds when 100% threshold is exceeded

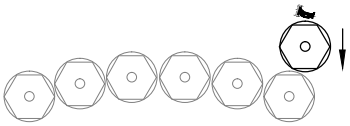
SPECIAL FUNCTIONS - OUT OF LEVEL DETECTION				
LEVEL READING	CRANE RESPONSE	INDICATOR LIGHTS	TRANSMITTER LCD	TRANSMITTER VIBRATION
< 6.5°	Normal operation			none
6.5° - 8.5°	All functions reduced to 75%	Yellow flashing	Out of Level xx° Speed reduced - or after pressing OK button, Home screen, SPD 75% icon	3 quick vibrations when 6.5° threshold is exceeded
> 8.5°	WD, BI, BU, & Rotation @ 75% speed - all others prevented	Red flashing	Out of Level xx° Limited functions Speed reduced flashing text / inverted color	Continuous vibration for 4 seconds when 8.5° threshold is exceeded

SPECIAL FUNCTIONS - A2B CONDITION				
A2B STATUS	CRANE RESPONSE	INDICATOR LIGHTS	TRANSMITTER LCD	TRANSMITTER VIBRATION
Closed	Normal operation			none
Open	BD, BO, and WU functions prevented	Red flashing	Anti-2-block condition - or after pressing OK button, Home screen, with A2B icon	Continuous vibration for 4 seconds when A2B open is detected

SPECIAL FUNCTIONS



WORK LIGHT (*OPTIONAL*)
If your crane is equipped with the optional work light, turning on the work light is achieved by pressing the horn toggle in the down direction. The light will remain on until the toggle is pressed down again, or an E-Stop condition occurs.



E-STOP CONDITION
When the transmitter's E-Stop button is pressed, communication is lost for more than 0.5 seconds, or power is lost to either the receiver or valve control module (VCM) the system will go into E-Stop mode where the system's main contact and all outputs shut down.

HOUR METER
When power is applied to the receiver, an internal clock tracks operating time in minutes. The time is saved in non-volatile memory, and can be displayed on the transmitter's LCD screen.

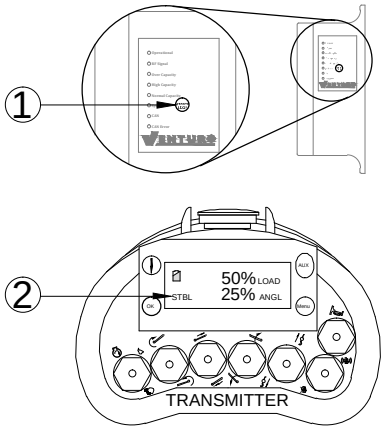
DATA LOG
The receiver has a built-in data logger that saves data on a removable microSD card. Data on the microSD card can be opened with a text editor. When card reaches maximum capacity it begins to overwrite the oldest data. The following information will be recorded to the data log along with a date/time stamp:

- Boom Up On
- Boom Up Off
- Boom Down On
- Boom Down Off
- Rotate Left On
- Rotate Left Off
- Rotate Right On
- Rotate Right Off
- Boom Extend On
- Boom Extend Off
- Boom Retract On
- Boom Retract Off
- Winch Up On
- Winch Up Off
- Winch Down On
- Winch Down Off
- Engine Start On
- Engine Start Off
- Engine Stop On
- Engine Stop Off
- Idle Up On
- Idle Up Off
- Idle Down On
- Idle Down Off
- Horn On
- Horn Off
- Aux On
- Aux Off
- Trigger Position *xxx*
- Emergency Stop Pressed
- System Power On
- System Power Off
- Load > 60%
- Load < 60%
- Load > 80%
- Load < 80%
- Load > 100%
- Load < 100%
- A2B On
- A2B Off
- Out of Level > 6.5°
- Out of Level < 6.5°
- Out of Level > 8.5°
- Out of Level < 8.5°

Universal Time Coordinated (UTC) time and date are kept by a real-time clock (RTC) powered by a button battery.

ADDRESS LEARN
The address learn feature allows a transmitter to be quickly and easily connected with a receiver. Simultaneously holding the Address Learn button on the receiver and Horn toggle switch (Up) on the transmitter for a few seconds will synchronize the address and RF channels of the transmitter to the receiver.

STABILITY MODE
Stability Mode will allow the crane to operate at 118% of its maximum capacity. The system will enter Stability Mode by pressing the Address Learn button [1] on the side of the RX-MFS-ESCAN-HS1 five times in less than 5 seconds while it is communicating with a transmitter. When Stability Mode is first activated the Normal, High, and Over Capacity receiver LEDs and Boom Indicator Lights will blink three times. Then the High and Over Capacity lights will return to their normal functions but the Normal Capacity LED and Boom Light will continue to blink as long as the system is in Stability Mode. Also, the transmitter vibration motor will activated for three quick pulses and a STBL icon will appear in the lower left corner of the transmitter screen [2] unless another icon overrides it. The system will exit Stability Mode when power is shut off to the RX-MFS-ESCAN-HS1 receiver.



OPERATION GUIDE, 1/4

W A R N I N G

- FAILURE TO FOLLOW OPERATING, MAINTENANCE, OR SAFETY INSTRUCTIONS CAN RESULT IN DEATH OR SERIOUS INJURY.
- VENTURO CRANE OPERATORS MUST CONFORM TO QUALIFICATIONS SPECIFIED IN ANSI B30.5 - CHAPTER 5-3 OPERATION. TRAINEES OR UNTRAINED PERSONS SHALL BE UNDER THE DIRECT SUPERVISION OF QUALIFIED PERSONS.

NOTE: A copy of this manual is provided with every VLC crane, and shall remain with the crane at all times. The operation section provides guidelines to the safe and proper use of the crane - it is not intended to be used as training material.

! PLEASE READ & UNDERSTAND THE VENTURO CRANE SAFETY MANUAL BEFORE OPERATING THIS EQUIPMENT !

PRE-OPERATION INSPECTION

Before operating the equipment, make sure regular maintenance has been completed, and check the following:

Standard vehicle checks	Condition of lifting devices
Parking Brake operation	Switches
Hydraulic reservoir level	Harnesses
Hoses / Gearboxes for leaks	Anti-two block for operation
Decal legibility / placement	Wire rope
Condition of crane controls	Safety guards

Replace/repair as necessary before operation. Please refer to the VENTURO Safety Manual for the detailed crane checklist.

PLANNING

Plan the lift by completely understanding the equipment, the work site, and the load(s) before positioning the vehicle. Below are some helpful suggestions for job site setup:

- Make sure all pre-operation inspections are completed
- Vehicle positioned on firm level ground as close to the job as possible, or
  - Vehicle parked with the grade as close to the job as possible - use wheel chocks
  - Cross-grade parking will require decreasing load capacity to prevent tipping
- Vehicle positioned in area free from bystanders and overhead obstructions
- Walk around the vehicle and identify any possible areas that may have limited visibility
- Follow OSHA guidelines for barricading the crane's swing radius
- Know where to make pickups, lifts, and turns
- Know where to place the load before it is lifted
- Warn personnel before starting
- Be alert! Do not eat, drink, or use your phone while operating the equipment
- Obey all rules, laws, and regulations

The following section contains instructions regarding the safe operation of VENTURO manufactured telescopic cranes and should be read and completely understood by persons working with or near the crane before putting the unit into operation.

OPERATION GUIDE, 2/4

! PLEASE READ & UNDERSTAND THE VENTURO CRANE SAFETY MANUAL BEFORE OPERATING THIS EQUIPMENT !

1. DISENGAGE DRIVE AXLE / SET PARKING BRAKE
   a. The drive axle must be disengaged and the parking brake must be set before operating any of the equipment.

2. ENGAGE HYDRAULIC POWER SOURCE
   a. Transmission must be in neutral/park
   b. Engage PTO, and allow system to warm up before operating equipment.

3. CHECK SELECTOR VALVE
   a. Handle should be in the position where outrigger / stabilizer circuit is selected.

4. POSITION OUTRIGGERS / STABILIZERS
   a. Remove all security pins from each outrigger / stabilizer.
   b. Using the control levers - completely extend the rear outriggers out, and the stabilizers down.
   c. Using the control levers - completely extend the front outriggers out, and the stabilizers down.

W A R N I N G

- MAINTAIN SAFE DISTANCE FROM OUTRIGGER / STABILIZER LEGS DURING OPERATION.
- DO NOT RAISE VEHICLE TIRES OFF THE GROUND. CONFIRM OUTRIGGER / STABILIZER LEGS ARE POSITIONED ON FIRM LEVEL GROUND, AND VEHICLE IS AS LEVEL AS POSSIBLE.

5. TURN ON MASTER DISCONNECT SWITCH
   a. Find the mounting bracket inside the compartment underneath the crane.
   b. On the lower right side of the bracket, flip the master switch to 'ON'.

6. CHANGE SELECTOR VALVE
   a. Move handle to the position where the crane circuit is selected.

7. POWER UP THE VLC SYSTEM ▲
   a. Disengage the E-STOP.
   b. Actuate the HORN toggle switch.
   c. Check the handheld transmitter's display for home screen.
   d. NOTE: Crane function toggle switch must be selected *before* pulling proportional trigger or crane will not operate.

OPERATION GUIDE, 3/4

! PLEASE READ & UNDERSTAND THE VENTURO CRANE SAFETY MANUAL BEFORE OPERATING THIS EQUIPMENT !

8. UNSTOW THE CRANE

a. Winch down slightly.

b. Raise the boom so it clears the boom rest and any other obstruction(s).

c. Rotate the crane to the side of the vehicle so there is enough clearance to perform the next step.

d. Winch down enough to release the load block from its stowed position.

9. ATTACHING THE LOAD

a. Determine whether 1-part line or 2-part line lifting will be used, and adjust load block if necessary.

b. Position the crane so that the load block is directly over the center of the load.

c. Attach the load to the hook by means of slings or other approved devices.

W A R N I N G

- NEVER USE ANYTHING LARGER THAN THE HOOK THROAT THAT PREVENTS SAFETY LATCH FROM CLOSING.
- DO NOT WRAP WIRE ROPE AROUND LOAD.
- NEVER EXCEED MANUFACTURER'S CAPACITY CHARTS AND RATINGS.

d. Maintain a minimum of 5 full wraps of wire rope on the winch drum at all times.

10. LIFTING THE LOAD

a. Lift the load slightly off the ground to check the safety of the cargo.

! DO NOT ATTEMPT TO LIFT FIXED LOADS !

11. MOVING THE LOAD

a. Ensure the stability of the crane and load before moving the load.

W A R N I N G

- NEVER OPERATE THE CRANE WITH PERSONNEL UNDER ANY PART OF THE BOOM OR LOAD.
- DO NOT EXTEND OR ROTATE A LOAD OVER ANYONE.
- NEVER ALLOW PERSONNEL TO PLACE THEMSELVES UNDER ANY PART OF THE BOOM OR LOAD.
- NEVER LEAVE A CRANE LOAD SUSPENDED OR UNATTENDED.

b. Be alert! Always look for changes in the surroundings of your job site.

c. Avoid sudden starts and stops.

d. Do not use boom to push downward onto anything.

e. Do not use boom or winch to drag a load.

OPERATION GUIDE, 4/4

! PLEASE READ & UNDERSTAND THE VENTURO CRANE SAFETY MANUAL BEFORE OPERATING THIS EQUIPMENT !

12. STOW THE CRANE

a. Completely retract the boom extensions.

b. Rotate crane to a position that allows you access to the boom tip.

c. Winch up to bring load block within proper distance of stow hook.

d. Lower boom to where load block is within comfortable reach.

e. Hook load block to stow hook under the main boom.

W A R N I N G

- MAINTAIN CONTROL OF LOAD BLOCK TO AVOID PERSONAL INJURY OR DAMAGE TO EQUIPMENT.
- NEVER USE THE STOW HOOK FOR ANYTHING OTHER THAN STOWING THE LOAD BLOCK.

f. Slowly winch up to remove some of the slack leading to the load block. ***Do Not Tighten Wire Rope & Avoid activating the Anti-Two System.***

g. Raise the boom so it clears the boom rest and any other obstruction(s).

h. Rotate the crane to where the center of the boom is directly over the center of the boom rest. ***Maintain <u>some</u> slack in the wire rope while lowering the boom into the boom rest to avoid over tightening & damaging the wire rope.***

i. Gradually lower the boom until it rests gently onto the cradle of the boom rest. ***Stop Boom Down once contact is made with the boom rest to avoid damaging the service body.***

13. POWER DOWN THE CRANE

a. Hit the E-STOP button on the transmitter.

b. Charge and stow transmitter.

c. Locate the mounting bracket inside the compartment underneath the crane.

d. On the lower right side of the bracket, flip the master switch to 'OFF'.

14. STOW OUTRIGGERS / STABILIZERS

a. Change selector valve handle to the position where outrigger / stabilizer circuit is selected.

b. Using the control levers (locations may vary), completely retract the rear outriggers / stabilizers.

d. Using the control levers (locations may vary), completely retract the front outriggers / stabilizers.

e. Reattach all security pins

15. DISENGAGE HYDRAULIC POWER SOURCE / PARKING BRAKE

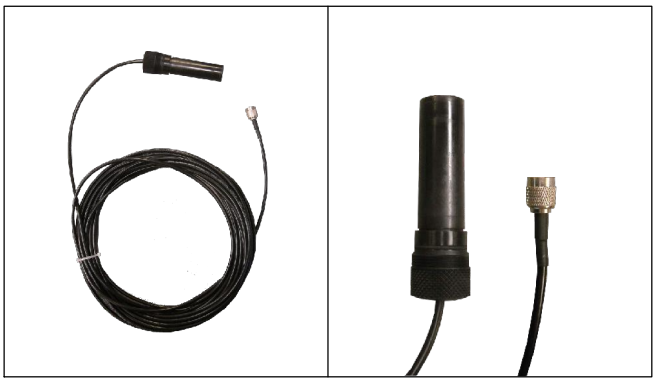
a. Disengage PTO.

b. Release parking brake.

W A R N I N G

- BEFORE MOVING THE VEHICLE, DISSIPATE ALL OTHER PERTINENT POWER SOURCES.

CAN CABLE BACK-UP, CONNECTION PROCEDURE



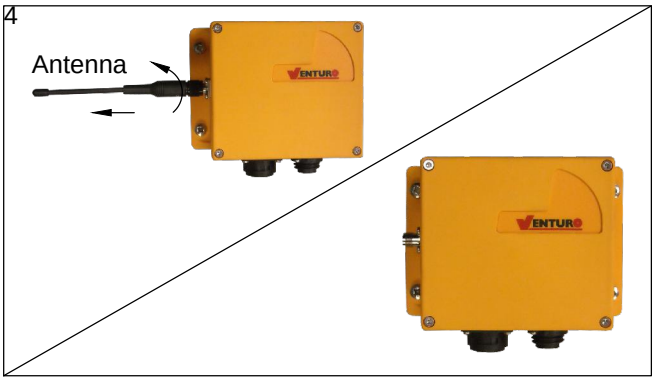
Locate '45 CAN cable back-up.

2

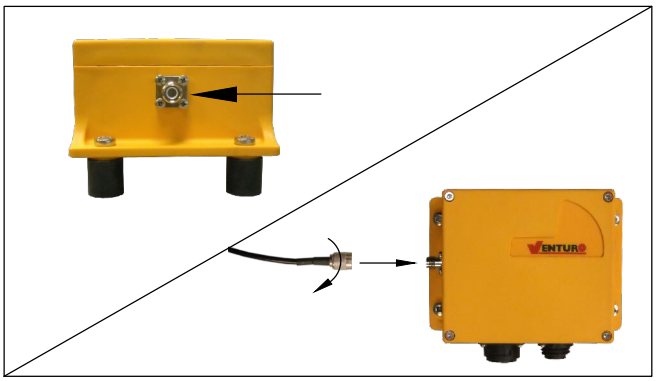
Unscrew cap from Transmitter handle, remove Transmitter battery and set aside.

Insert end of CAN cable into Transmitter handle and tighten in place.

4



Unscrew and remove antenna from the Receiver and set aside.



Attach other end of CAN cable to Transmitter and tighten in place.

6

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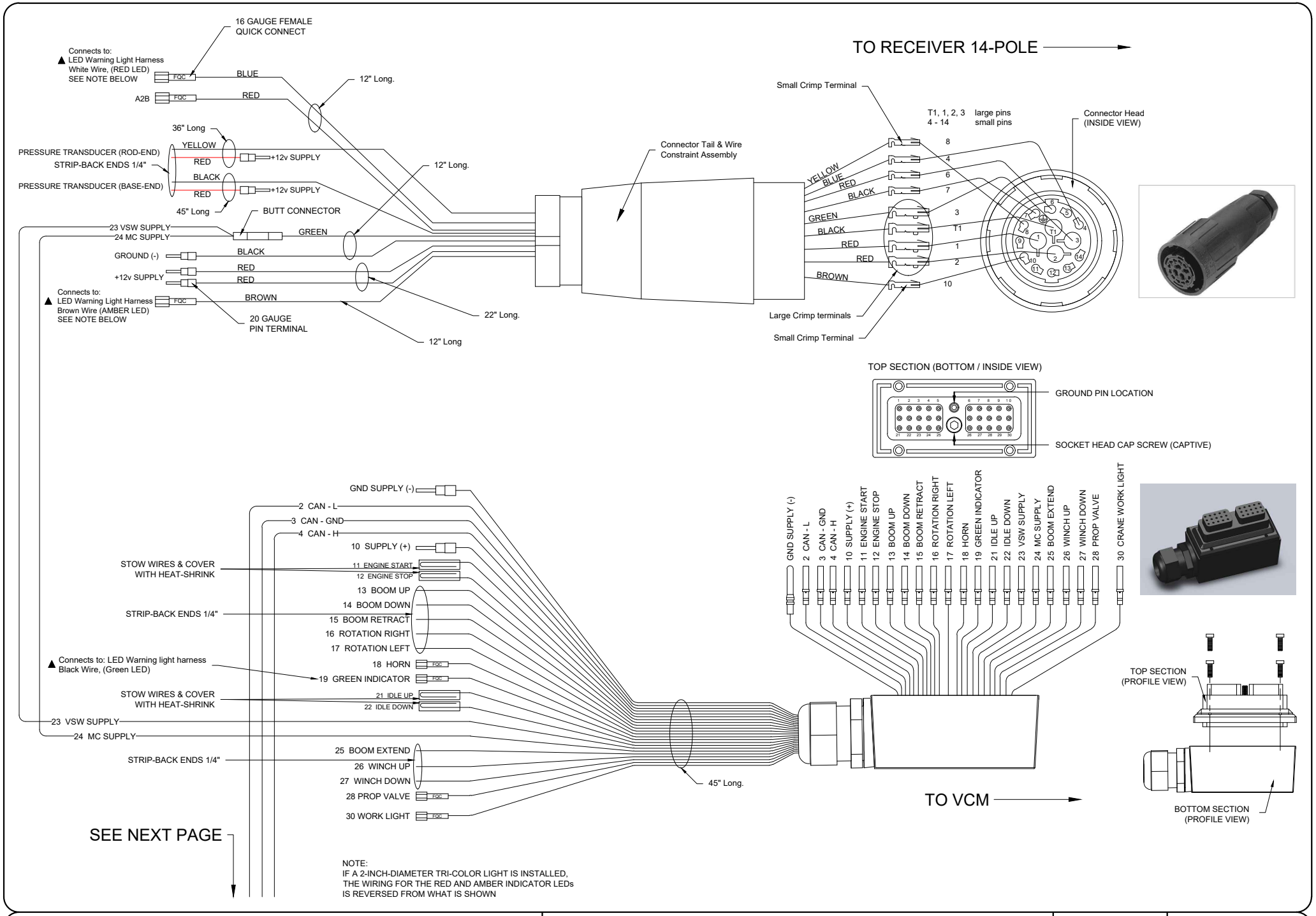
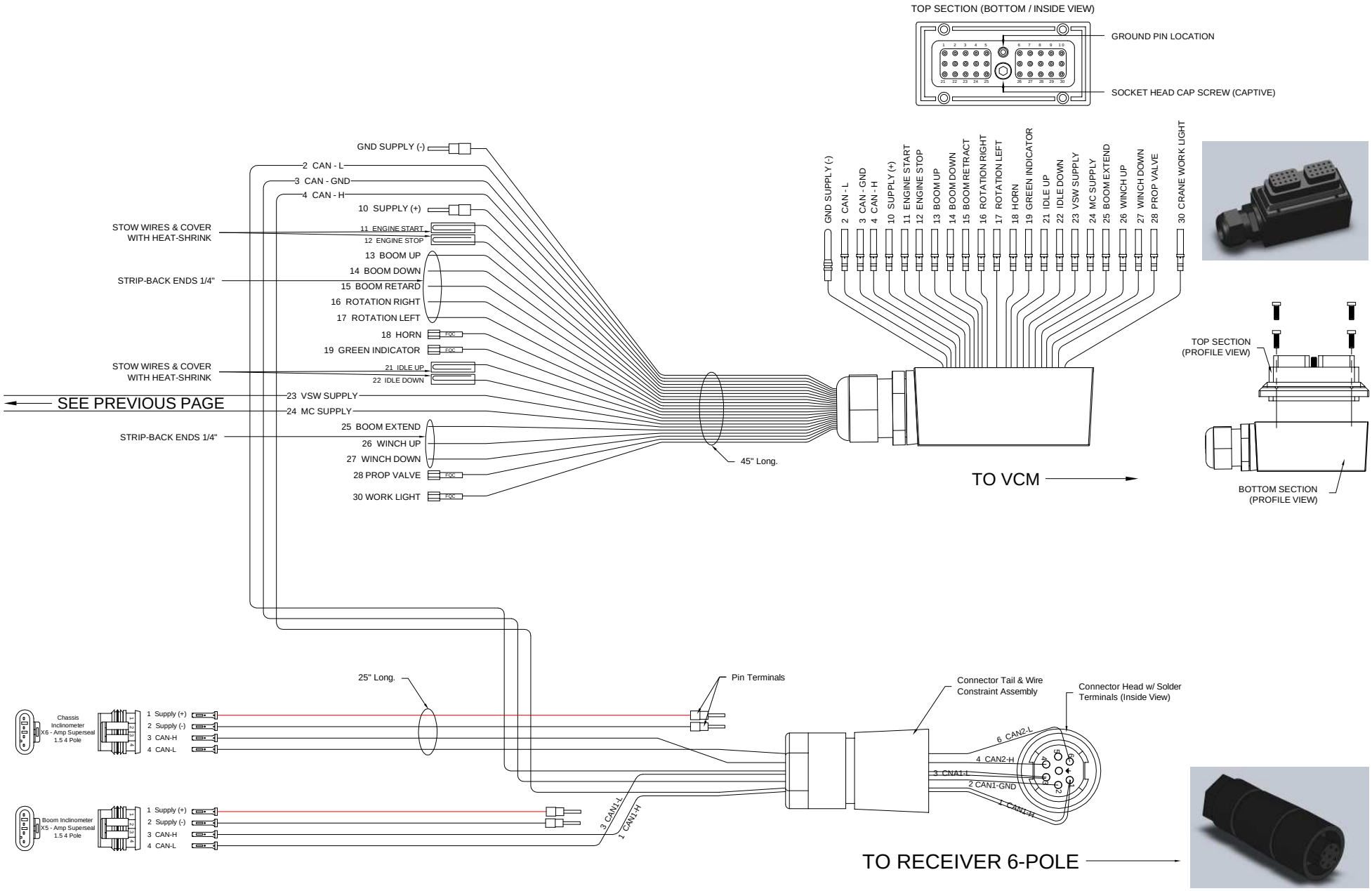


VENTURO®

VENCO VENTURO LLC
CINCINNATI, OHIO

TITLE	DATE	SECTION
23435 VLC HARNESS WIRING DIAGRAM, 1/2	09-23-26A	-
VLC CRANES	SUPERSEDES 11-28-18	30015



VENTURO®

VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

TITLE	DATE	SECTION
23435 VLC HARNESS WIRING DIAGRAM, 2/2	11-28-18	-
VLC CRANES	SUPERSEDES -	30016

MISSING TRANSMITTER ALARM FEATURE - EXPLAINED

The charging base has a built-in alarm that will alert the operator that the radio transmitter is NOT in the charging base when the vehicle is taken out of the **PARK** position. **This will reduce the risk of loosing / misplacing the transmitter.**

The charging base can be wired **WITH** or **WITHOUT** the missing transmitter alarm feature. **See wiring options 1 & 2 below**:

OPTION 1) ACTIVATE MISSING TRANSMITTER ALARM

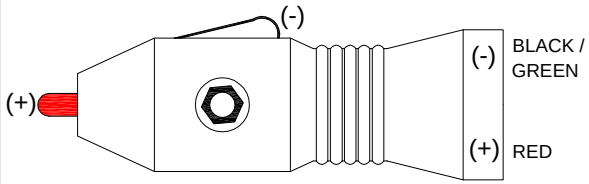
- ***BLACK WIRE*** to negative ground terminal of battery.
- ***GREEN WIRE*** must be connected to the ***PARK INPUT***. *Note that this is a **vehicle-specific** connection. Consult your vehicle electrical systems information and or vehicle manufacturer for specific instructions.*
- ***RED WIRE*** to +12-volt (or +24-volt) positive terminal of battery.
- ***WHITE WIRE*** for 'optional' external alarm. ***FOLD-BACK AND STOW IF NOT USED.***

OPTION 2) DEACTIVATE MISSING TRANSMITTER ALARM

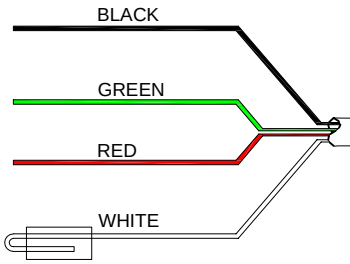
- ***BLACK WIRE*** to negative ground terminal of battery.
- ***GREEN WIRE*** to negative ground terminal of battery.
- ***RED WIRE*** to +12-volt (or +24-volt) positive terminal of battery.
- ***WHITE WIRE*** for 'optional' external alarm. ***FOLD-BACK AND STOW; NOT USED FOR OPTION 2.***

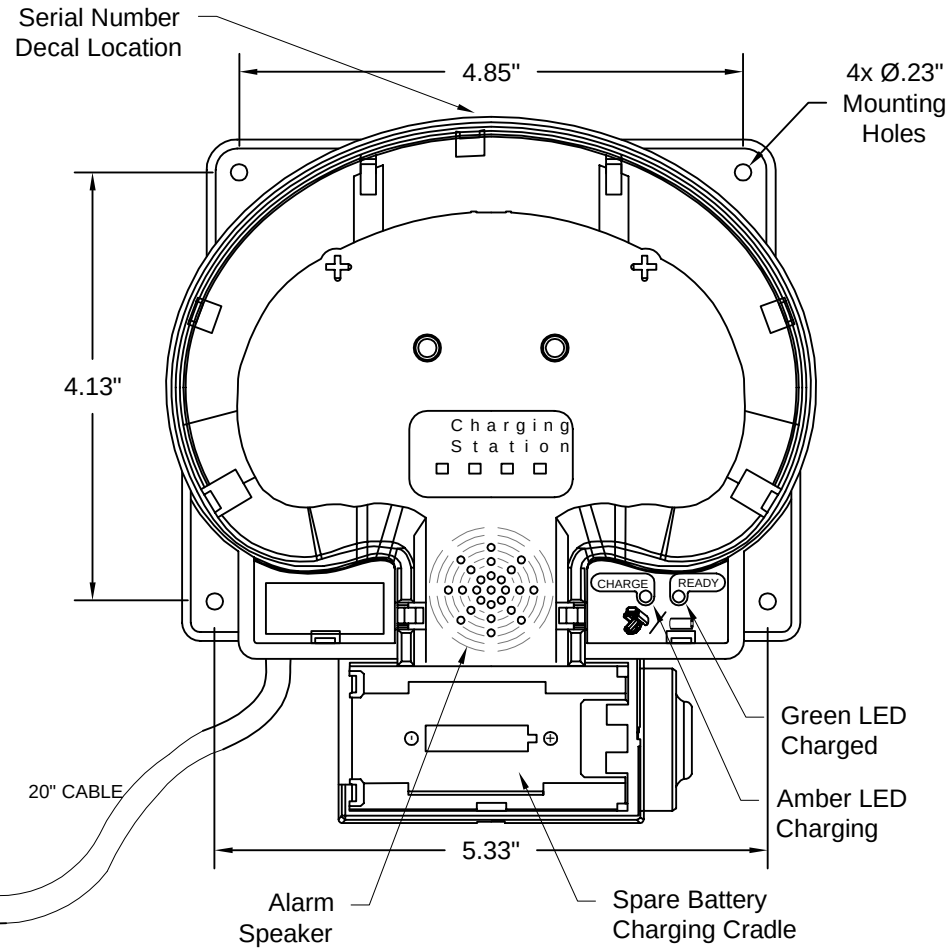
⚠ CAUTION

- Do not charge the transmitter unit with any device other than the supplied docking station or damage to the unit may occur.



12-volt accessory plug (Not Supplied) can be used with wiring option 2 above.

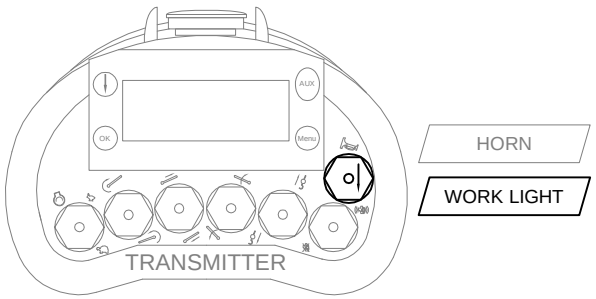


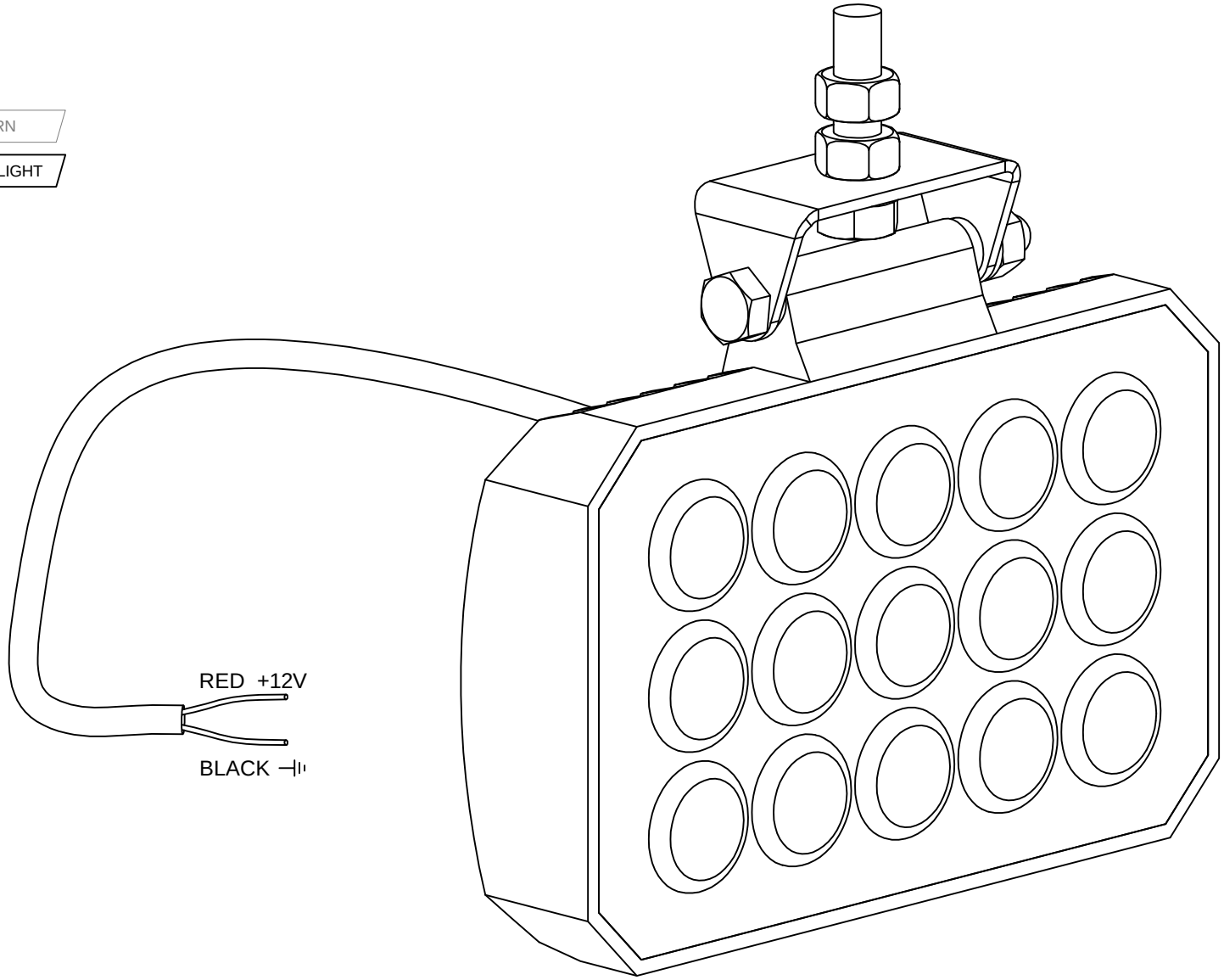


VENTURO® VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	TITLE DOCKING / CHARGING STATION DIAGRAM	DATE 04-10-19B	SECTION -
	VLC SYSTEMS	SUPERSEDES 11-28-18	30018

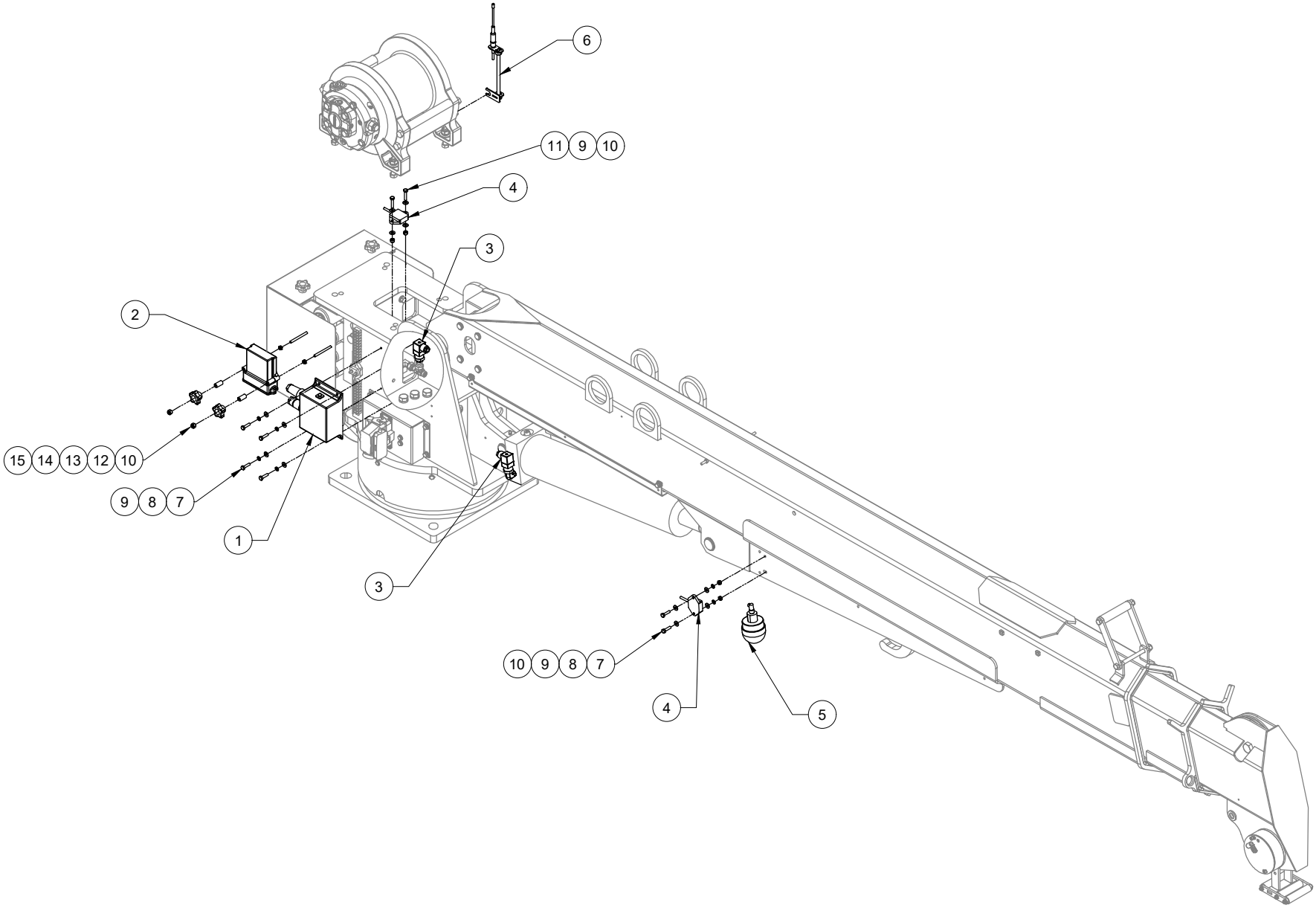
The optional work light contains [15] LEDs that provide over 4000 lumens of bright light to your work area. With an adjustable mounting bracket, you can easily adjust the alignment to illuminate key focal points.

If your crane is equipped with the work light, turning it on can be achieved by pressing the horn toggle in the down direction. Light will remain on until toggle is pressed down again, or a condition causes the main contactor to open.





VENTURO® VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	TITLE 27483 - OPTIONAL WORK LIGHT	DATE 11-28-18	SECTION -
	CRANES W/ COMPACT A2B SYSTEM	SUPERSEDES -	30019



REFERENCE 30031 FOR REPLACEMENT PARTS LIST

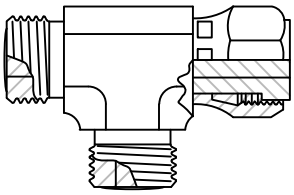
VENTURO® VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	TITLE REPLACEMENT PARTS DWG	DATE 06-24-25	SECTION C400
	VLC-H SYSTEM	SUPERSEDES -	30030

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	23720-RX	RECEIVER; ESCAN, 2.4GHz
2	1	23720-VCM	VALVE CONTROL MODULE
3	2	23720-PTD	PRESSURE TRANSDUCER; VLC SYSTEM
4	2	23720-INC	UNIVERSAL INCLINOMETER
5	1	23438	WARNING LIGHT; TRI-COLOR, LED
6	1	28450	REMOTE ANTENNA
7	6	!HHCS02520100S	HHCS; 1/4-20 X 1-1/4" LG, S/S
8	6	!LWSH-025S	LOCK WASHER; 1/4", S/S
9	12	!FWSH-025S	FLAT WASHER; 1/4", S/S
10	4	!LNUT-02520S	NYLOCK HEX NUT 1/4-20, S/S
11	2	!HHCS02520125S	HHCS; 1/4-20 X 1-1/4" LG, S/S
12	2	28327	HAND KNOB
13	2	28328	NYLON SPACER
14	2	!JNUT-02520NS	JNUT, NYLON INSERT, 1/4-20, S/S
15	2	!HHCS02520275S	HHCS; 1/4-20 X 2.75" LG, S/S

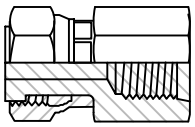
REFERENCE 30030 FOR REPLACEMENT PARTS DRAWING

VLC SYSTEM REPLACEMENT PARTS

23731



23732



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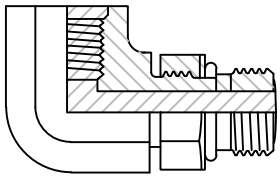


TRANSMITTER
23720-TX

DOCKING STATION/
BATTERY CHARGER
23720-DOC

BATT. PLUG
23720-BP
O-RING
23720-OR

BATTERY
23720-BAT

TRANSDUCER
23720-PTD

45' BACKUP CABLE
23720-CAN

ANTENNA
23720-ANT

RECEIVER
23720-RX

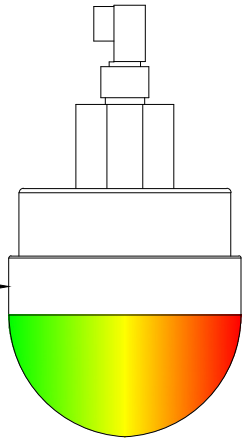
TOGGLE W/ BOOT
23720-TOG

HALF BOOT ONLY
23720-TOGBT

INCLINOMETER
23720-INC

VALVE CONTROL MODULE
23720-VCM

TRI-COLOR WARNING LIGHT
23438

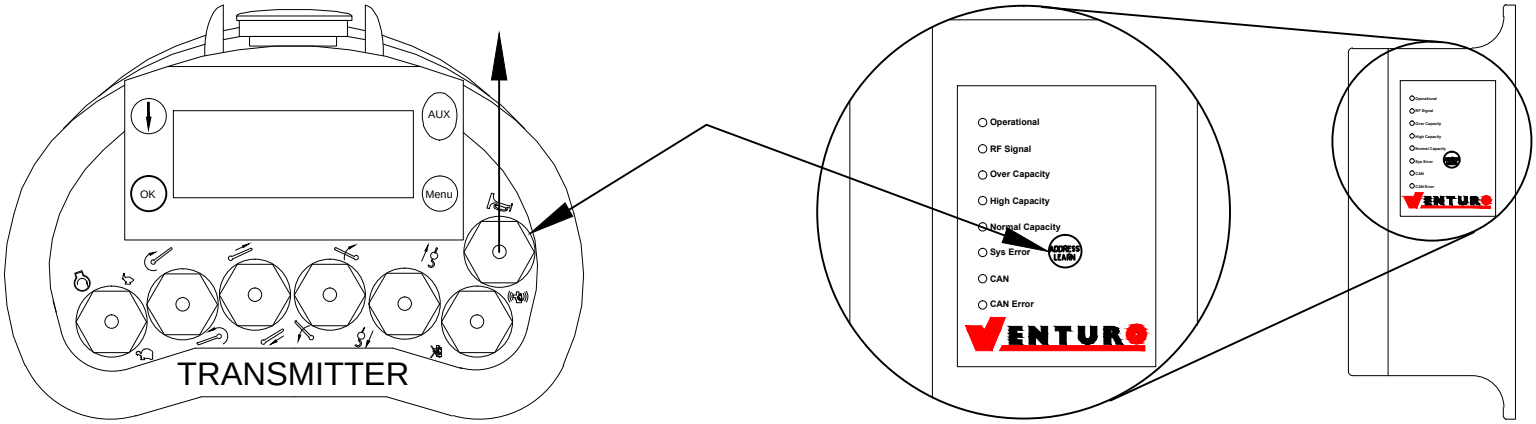


FOR FURTHER ASSISTANCE, PLEASE CALL 1-800-226-2238

VENTURO® VENCO VENTURO LLC CINCINNATI, OHIO	TITLE REPLACEMENT PARTS	DATE 06-24-26D	SECTION -
	VLC SYSTEM	SUPERSEDES 11-05-25C	30020

VLC TROUBLESHOOTING GUIDE, 1/4

CONDITION: WILL NOT OPERATE		
PROBABLE CAUSES	SOLUTION(S)	
SEE E-STOP CONDITION		
SEE LOST CAN COMMUNICATION CONDITION		
NO POWER - RECEIVER / VCM	VALVE CONTROL MODULE (VCM)	
	1	CHECK 30-PIN PLUG, #10 FOR +12V
	2	TRACE & CHECK VCM SUPPLY PIN TO TERMINAL BLOCK (RED)
	3	CHECK TERMINAL BLOCK CONNECTION TO CIRCUIT BREAKER <CB>
	4	CHECK CONNECTION FROM <CB> TO MASTER DISCONNECT
	5	CHECK 30-PIN PLUG, GROUND PIN (CENTER)
	6	TRACE & CHECK VCM GROUND TO TERMINAL BLOCK
	7	TRACE & CHECK GROUND CONNECTIONS FROM TERMINAL BLOCK
	ESCAN RECEIVER	
	1	CHECK SUPPLY CONNECTION TO <CB>
	2	CHECK <CB> CONNECTION TO TERMINAL BLOCK (+12V)
	3	CHECK 28116 JUMPER CONNECTION(S)
	4	CHECK GROUND CONNECTIONS
TRANSMITTER	CHECK / CHARGE / CHANGE BATTERY	
	ADDRESS LEARN	
	1	LOCATE ADDRESS LEARN BUTTON ON RECEIVER (SEE BELOW)
	2	SIMULTANEOUSLY PRESS THE ADDRESS LEARN BUTTON WHILE ACTUATING THE HORN TOGGLE SWITCH UP ON THE TRANSMITTER.
	3	AFTER A FEW SECONDS, THE HORN WILL SOUND, INDICATING THAT THE TRANSMITTER AND RECEIVER ARE NOW PAIRED.



NEED HELP? PLEASE CALL TECHNICAL SUPPORT AT 1-800-226-2238

VLC TROUBLESHOOTING GUIDE, 2/4

CONDITION: E-STOP		
PROBABLE CAUSES	SOLUTION(S)	
HITTING E-STOP BUTTON	1	RELEASE E-STOP BUTTON
	2	INITIALIZE TRANSMITTER
	3	OBSERVE DISPLAY FOR HOME SCREEN
LOST COMMUNICATION (>0.5 SECONDS) "FEEDBACK TIMEOUT" EXAMPLE: OPERATOR WALKS TOO FAR AWAY	1	TRY RE-ESTABLISHING COMMUNICATION
		WALK TOWARD RECEIVER
		WATCH FOR NORMAL OPERATING SCREEN
	2	RE-INITIALIZE TRANSMITTER TO RESET MAIN CONTACT
LOSS OF POWER TO EITHER RX OR VCM	SEE NO POWER SOLUTION(S) ABOVE	

CONDITION: A2B ERROR		
PROBABLE CAUSES	SOLUTION(S)	
TRIPPED COMPACT A2B SENSOR	1	PRESS 'OK' BUTTON IF NECESSARY
	2	LOWER THE LOAD AWAY FROM COMPACT A2B

CONDITION: OVER 80% LOAD (REDUCED SPEED - ALL FUNCTIONS)		
PROBABLE CAUSES	SOLUTION(S)	
LOAD IS GREATER THAN 80%	1	CHECK LOAD CHART FOR LOAD-TO-ANGLE
		♦ INCREASE BOOM ANGLE
		♦ LOWER LOAD, REPOSITION VEHICLE, LIFT WITH ...
		♦♦ SHORTER BOOM
		♦♦ INCREASED BOOM ANGLE
	2	CONTINUE TO OPERATE CRANE AT REDUCED RATE (75%)
BOOM ANGLE TOO LOW TO LIFT LOAD	SEE LOAD IS GREATER THAN 80% SOLUTION(S) ABOVE	
BOOM LENGTH TOO LONG FOR LIFT	SEE LOAD IS GREATER THAN 80% SOLUTION(S) ABOVE	

NEED HELP? PLEASE CALL TECHNICAL SUPPORT AT 1-800-226-2238

VLC TROUBLESHOOTING GUIDE, 3/4

CONDITION: OVER ERROR (REDUCED SPEED - WD, BI, BU, & ROTATE FUNCTIONS ONLY)		
PROBABLE CAUSES	SOLUTION(S)	
LOAD IS GREATER THAN 100%	SEE LOAD IS GREATER THAN 80% ABOVE, SOLUTION #1	
	SEE LOAD IS GREATER THAN 80% ABOVE, SOLUTION #2	
	NOTE: ONLY THE FUNCTIONS BELOW ARE ALLOWED FOR SOLUTION #2	
		WINCH DOWN (WD)
		BOOM IN (BI)
		BOOM UP (BU)
		ROTATE LEFT / ROTATE RIGHT

CONDITION: OUT OF LEVEL 6.5° - 8.5° (REDUCED SPEED - ALL FUNCTIONS)		
PROBABLE CAUSES	SOLUTION(S)	
VEHICLE OUT OF LEVEL	1	CONTINUE TO OPERATE CRANE AT 75% SPEED
	2	TO OBTAIN FULL SPEED, SEE OUT OF LEVEL >8.5° BELOW

CONDITION: OUT OF LEVEL >8.5° (REDUCED SPEED - WD, BI, BU, & ROTATE FUNCTIONS ONLY)		
PROBABLE CAUSES	SOLUTION(S)	
VEHICLE OUT OF LEVEL >8.5°	1	IF NOT IN STOWED POSITION, STOW CRANE
	2	TURN OFF CRANE / VLC SYSTEM
	3	COMPLETELY RETRACT STABILIZERS / OUTRIGGERS
	4	DISENGAGE PTO
	5	DISENGAGE PARKING BRAKE
	6	REPOSITION VEHICLE TO SOLID LEVEL GROUND
	7	ENGAGE PARKING BRAKE
	8	ENGAGE PTO
	9	DEPLOY OUTRIGGERS / STABILIZERS
	10	TURN ON CRANE / VLC SYSTEM
	11	NOTE MESSAGE ON TRANSMITTER DISPLAY

NEED HELP? PLEASE CALL TECHNICAL SUPPORT AT 1-800-226-2238

VLC TROUBLESHOOTING GUIDE, 4/4

CONDITION: LOST C-A-N COMMUNICATION		
PROBABLE CAUSES	SOLUTION(S)	
VCM BOOM ANGLE SENSOR LEVEL SENSOR	1	CHECK CONNECTIONS OF VCM AND SENSORS
	2	TRY RE-ESTABLISHING COMMUNICATION
		APPROACH RECEIVER & WATCH FOR NORMAL OPERATING SCREEN
		PRESS HORN TOGGLE UP TO RESET MAIN CONTACT

CONDITION: PRESSURE SENSOR ERROR		
PROBABLE CAUSES	SOLUTION(S)	
PRESSURE SENSOR 1 PRESSURE SENSOR 2	1	REMOVE DINS AND CHECK CONNECTIONS
	2	CHECK FOR HYDRAULIC LEAKS

NEED HELP? PLEASE CALL TECHNICAL SUPPORT AT 1-800-226-2238

VENTURO CRANES LIMITED WARRANTY POLICY

Venturo products are built to last…we guarantee them.
As a purchaser of any new Venturo product covered by warranty, you will receive 1 year of the most complete coverage available…and, at no added cost to you.

1-Year Limited Warranty Policy

This limited policy warrants new products of Venturo to be free from defects in material and workmanship for a period of one (1) year from date of original installation. OEM products or accessories purchased by Venturo as part of or offered with our product will carry the OEM manufacturer's respective warranty. Our warranty covers:

- ***Repair or replacement of product***
- ***Labor to repair or replace product***
- ***Freight to return and/or replace product***

We shall not be liable for any contingent liabilities arising out of the improper function of any products. Warranty shall become void if the product is improperly installed, modified, damaged, abused or used for application other than intended use. There is no warranty of merchantability, fitness for a particular purpose, warranty arising from course of dealing or usage of trade, or any other implied or expressed warranty, except as made specifically herein. This warranty supersedes all previous warranties, written or implied.

Warranty Claims

Venco Venturo Industries LLC will make a good faith effort for prompt correction or other adjustment with respect to any product, which proves to be defective after our inspection and within the warranty period. Before any repairs are attempted or before returning any product, your Venturo Distributor is required to obtain a warranty claim number. This number is necessary for any claim to be considered. To obtain a warranty claim number, Venturo requires the model and serial number. Only authorized Venturo Distributors can perform warranty. For the name and address of your local Venturo Distributor call the **Warranty Claim Department - 513-772-8448.**

WARNING - It is the responsibility of the installer to ensure the installation is completed according to the manufacturer's recommendations, ensure the ultimate user understands how to operate product in a safe manner, and understands the need for regular service and maintenance by an authorized Venturo Distributor. No modifications or alterations may be made to any Venturo product without the expressed written consent of Venco Venturo Industries LLC. Installation of any Venturo product must be done by an authorized Venturo Distributor, to the standards of the industry; including maintenance, service and affixing of all instruction, safety and warning decals. Users should be instructed as to the safe operation at time of delivery. Maintenance, service, operation and safety warning decals are available on request from Venco Venturo Industries LLC.

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