

HRBABF-P***

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PARTS & INSTALLATION MANUAL HT40KXP-25

Included in this manual:

HT40KXP-25

- 6,000 lb Hydraulic Telescopic Service Crane
- 25 ft Fully-Powered, Two-Stage Boom Extension

VENCO VENTURO INDUSTRIES LLC 12110 BEST PLACE | CINCINNATI, OHIO 45241

VENCO VENTURO INDUSTRIES LLE D

HT40KX-25', PROP INST-26911 - 4/25/2024 (Rev: A3)

SECTION 100: DESCRIPTION & SPECIFICATIONS 7607100A

INSTALLATION DIMENSIONS 26893

26892 MOUNTING DIMENSIONS: BASE PLATE CAPACITY CHART; HT40KX (25' BOOM) 23061

SECTION 150: SAFETY 7607150A

15394 VEHICLE & CRANE ELECTRICAL HAZARD INFORMATION

920612 SAFETY & HAZARDS, GENERAL WINCH SAFETY WARNINGS 19217 SAFETY DECALS DRAWING & LIST SAFETY DECALS DRAWING & LIST 22181A 22181B SAFETY DECALS DRAWING & LIST 22181C SAFETY DECALS DRAWING & LIST 28524

DECALS: BOOM CAPACITY 24196

7607200A SECTION 200: INSTALLATION 26895 CRANE INSTALLATION, PG. 1

CRANE INSTALLATION PG. 2 22173 ROTATION STOP LOCATION STABILITY PROCEDURE 20051 20906-40b

STABILITY CHART 20907

22825 22785 HYDRAULIC TANK DIMENSIONS CONNECTIONS GUIDE (PAGE 1 OF 2) CONNECTIONS GUIDE (PAGE 2 OF 2) 23015 23014

22883 PTO INSTALLATION 22913 COMPARTMENT DRAWING 22245 WIRE ROPE INSTALLATION

SECTION 300: OPERATION & MAINTENANCE 7607300B

MAINTENANCE OVERVIEW INFORMATION 23203

CRANE OPERATION & MAINTENANCE INSTRUCTIONS (PAGE 1 OF 3) 22345A CRANE OPERATION & MAINTENANCE INSTRUCTIONS (PAGE 2 OF 3) 22345B 22174 CRANE OPERATION & MAINTENANCE INSTRUCTIONS (PAGE 3 OF 3)

22168 SAFETY SHUTOFF INSTRUCTIONS WIRE ROPE & HOOK SPECIFICATIONS 23231

7607400A

SECTION 400: REPLACEMENT PARTS HT40/50KX CRANE REPLACEMENT PARTS DRAWING HT40/50KX CRANE REPLACEMENT PARTS LIST 26890 26891 26905 HT40/50KX CRANE FASTENERS DRAWING

26906 HT40/50KX CRANE FASTENERS LIST

23107 BOOM REPLACEMENT PARTS DRAWING (COMPACT A2B) 23107 BOOM REPLACEMENT PARTS LIST (COMPACT A2B) 24190 24191 COMPACT A2B CUT-OUT CAM INSTALLATION / ADJUSTMENT 28239

28199

26896

WORK LIGHT INSTALLATION W/ 3-WIRE CORD REEL (FOR NON-VLC CRANES)
TI1 & TI2 WINCH REPLACEMENT PARTS DRAWING & LIST
PROP HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS DRAWING
PROP HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS LIST 22978 22979 22940 22736H HYDRAULIC VALVE MANIFOLD REPLACEMENT PARTS DRAWING & LIST

27352

HYDRAULIC VALVE MANIFOLD REPLACEMENT PARTS DRAWING & LIST HYDRAULIC SYSTEM SCHEMATIC - PROPORTIONAL CONTROL 40/50KX ELECTRICAL SCHEMATIC; PROPORTIONAL W/ HORN ELECTRICAL SCHEMATIC; 16 PIN SOCKET WIRING 21987 PENDANT; REPL PARTS DWG / LIST (PROP, ENG CNTRLS, E-STOP, HORN) 21988 PENDANT; REPL PARTS DRAWING / LIST (PROP, E-STOP, HORN) 26897 22125

23072

23073

22615 ENGINE START & STOP / THROTTLE CONTROLS

28522 **DECAL PLACEMENT**

RESERVOIR KITS; REPLACEMENT PARTS DRAWING & LISTS 23224

22920 FIELD SERVICE LABEL KITS

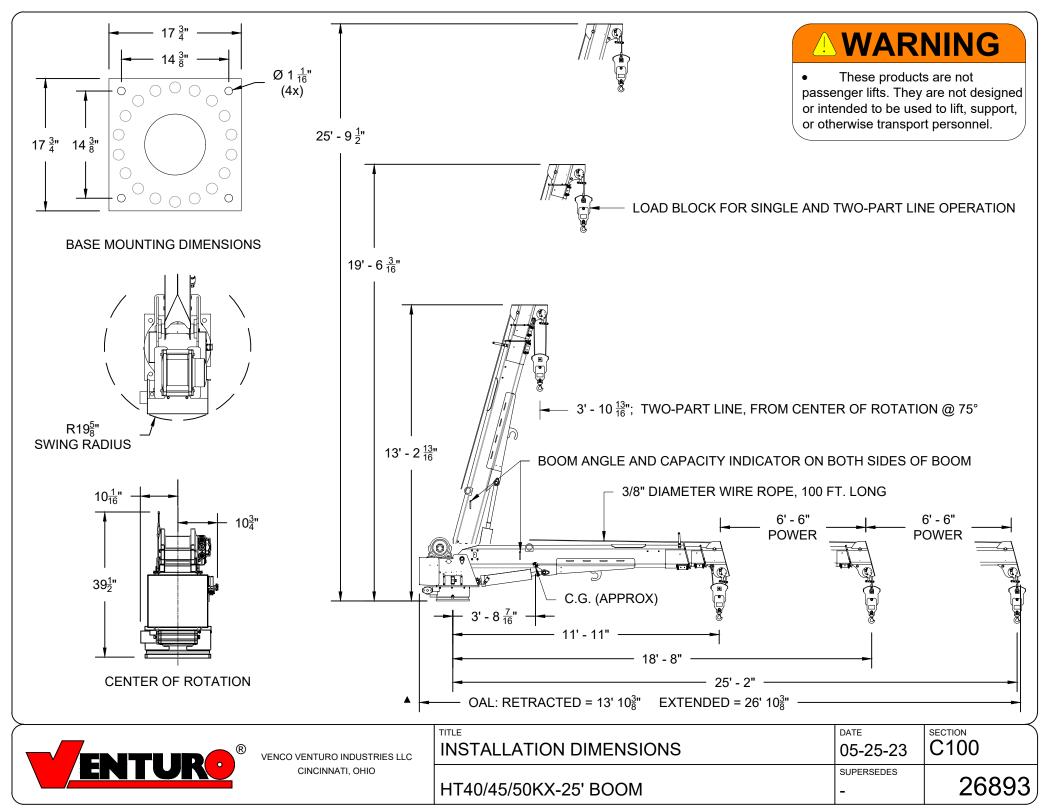
WARRANTY PAGE 12-00073_VNT1

22922

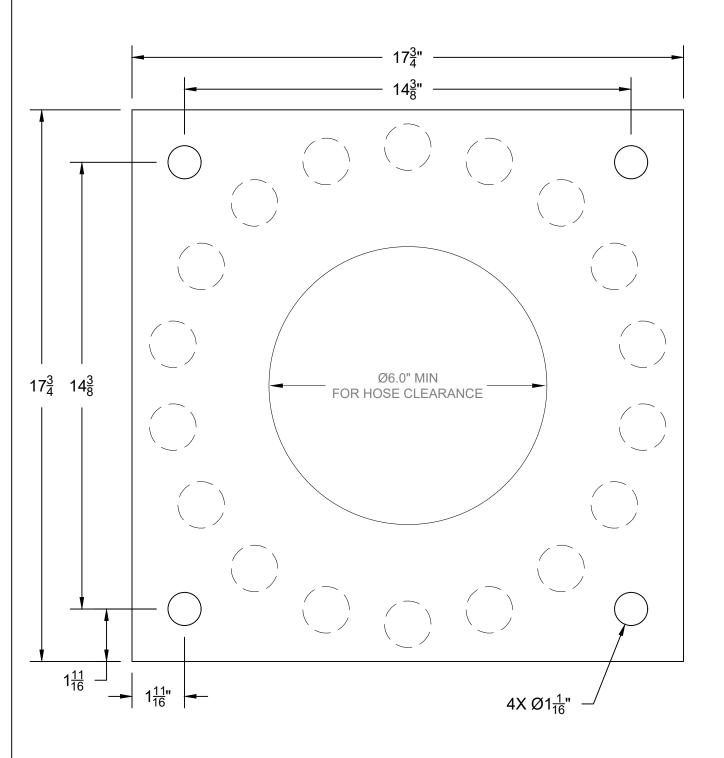
SECTION 100

DESCRIPTION & SPECIFICATIONS





HT40/45/50KX SERIES MOUNTING DIMENSIONS

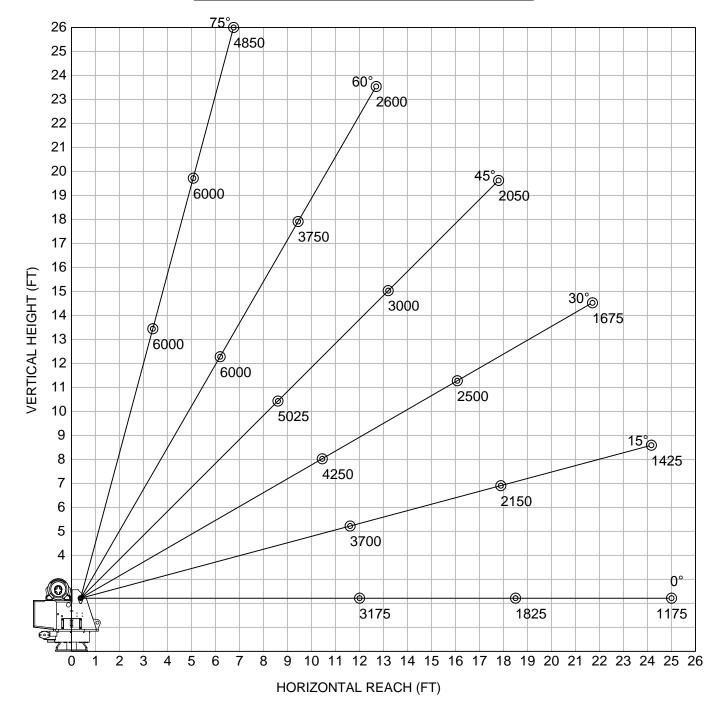


FNTURO®	VENCO VENTURO INDUSTRIES LLC	MOUNTING DIMENSIONS	05-25-23	C100	
ENION	CINCINNATI, OHIO	HT40/45/50KX SERIES	SUPERSEDES	26892	

HT40KX, 12'-18.5'-25' BOOM

▲ CRANE SERIAL NUMBER: _____

MAXIMUM LOAD CAPACITY CHART



WEIGHT OF LOAD HANDLING DEVICES ARE PART OF THE LOAD AND MUST BE DEDUCTED FROM THE GROSS CAPACITY.

LOAD BLOCK USAGE

1 PART LINE FOR LOADS LESS THAN 3000 LBS 2 PART LINE FOR LOADS OF 3000 LBS AND GREATER

WEIGHT OF LOAD BLOCK = 51 LBS



С	MAXIMUM LOAD CAPACITY	05-03-16A	C100
	HT40KX, 12'-18.5'-25' BOOM	04-23-14	23061

SECTION 150

SAFETY



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

VEHICLE & CRANE MOUNTED ELECTRICAL HAZARD SIGN APPLICATION & INFORMATION





SIGN NO. 15393 DISPLAYS THE INTERNATIONAL SYMBOL FOR ELECTRICITY AND WARNS OF DANGER FROM AN ELECTRICALLY CHARGED VEHICLE, CRANE, OR LOAD. FOUR ARE RECOMMENDED (ONE FOR EACH SIDE AND ONE FOR EACH END OF VEHICLE) TO BE APPLIED IN LOCATIONS WHICH ARE READILY VISIBLE TO GROUND PERSONNEL.

UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN 20 FEET OF HIGH-VOLTAGE LINES OF 350,000 VOLTS OR LESS.

FOR MINIMUM CLEARANCES OF HIGH-VOLTAGE LINES IN EXCESS OF 350,000 VOLTS, REFERENCE OSHA 1926.1408. CRANE'S SAFETY MANUAL, AND CAL-OSHA ARTICLE 37, TITLE 8, HIGH-VOLTAGE ELECTRICAL SAFETY ORDERS.

SIGN NO. 15401 PROVIDES ADDITIONAL WARNING OF LEGAL REQUIREMENTS WHEN OPERATING NEAR HIGH VOLTAGE LINES. THIS SIGN IS PLACED ON THE CONTROL PENDANT SIDE OF BOOM.

Table A - Minimum Clearance Distances

Voltage (nominal, kV, alternating current)	Minimum clearance distance (feet) *
Up to 50	10 15 20 25 35 45 (as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

Voltage (nominal, kV, alternating current)	While traveling - minimum clearance distance (feet) *				
0 - 0.75	4				
over 0.75 - 50	6				
over 50 - 345	10				
over 345 - 750	16				
over 750 - 1000	20				
Over 1000	(as established by the utility owner/operator or registered				
	professional engineer who is a qualified person with respect to				
	electrical power transmission and distribution).				

NOTE: ENVIRONMENTAL CONDITIONS SUCH AS FOG, SMOKE, OR PRECIPITATION MAY REQUIRE INCREASED CLEARANCES

CINCINNATI, OHIO



SECTION HAZARD APPS & INFO C150 02-21-14M SUPERSEDES 15394 ET/HT CRANES 12-20-13L

CRANE SAFETY AND HAZARDS HT SERIES CRANES

CAUTIONS

- 1. INSPECT VEHICLE AND CRANE, INCLUDING OPERATION, PRIOR TO USE DAILY.
- 2. DO NOT USE THIS EQUIPMENT EXCEPT ON SOLID, LEVEL SURFACE WITH CRANE MOUNTED ON FACTORY-RECOMMENDED TRUCK.
- 3. BEFORE OPERATING THE CRANE, REFER TO MAXIMUM LOAD (CAPACITY) CHART ON CRANE FOR OPERATING (LOAD) LIMITATIONS.
- 4. DO NOT OPERATE, WALK, OR STAND BENEATH BOOM OR A SUSPENDED LOAD.
- 5. ATTACH PENDANT CORD SUPPORT SNAP TO ATTACHMENT POINT BEFORE PLUGGING IN PENDANT.
- 6. UNPLUG PENDANT AND DISENGAGE PTO SYSTEM WHEN CRANE NOT IN USE.
- 7. FOR TRAVEL, BOOM MUST BE IN STOWED POSITION.

DANGER

- THIS CRANE IS NOT A PASSENGER LIFT
- IT IS NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.

YOU MUST NOT OPERATE THIS CRANE UNLESS

- YOU HAVE BEEN TRAINED IN THE SAFE OPERATION OF THIS CRANE AND
- 2. YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONS CONTAINED IN THE MANUFACTURER'S MANUALS, YOUR EMPLOYER'S WORK RULES, AND APPLICABLE GOVERNMENT REGULATIONS. AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND OTHERS TO DEATH OR SERIOUS INJURY.

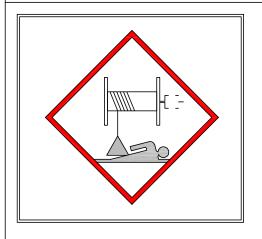
ELECTROCUTION HAZARD

- THIS MACHINE IS NOT INSULATED.
- MAINTAIN SAFE CLEARANCES FROM ELECTRICAL LINES AND APPARATUS.
- YOU MUST ALLOW FOR BOOM SWAY, ROCK OR SAG, AND ELECTRICAL LINE AND LOADLINE SWAYING.
- THIS LIFTING DEVICE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.
- YOU MUST MAINTAIN A CLEARANCE OF AT LEAST 20 FEET BETWEEN ANY PART OF THE CRANE, LOADLINE, OR LOAD, AND ANY ELECTRICAL LINE OR APPARATUS CARRYING UP TO 350 kV (SEE NEW CHART). ADDITIONAL CLEARANCES ARE REQUIRED FOR VOLTAGES IN EXCESS OF 50,000 VOLTS. REFER TO DRAWING 15394 FOR ADDITIONAL INFORMATION.
- DEATH OR SERIOUS INJURY WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCE.



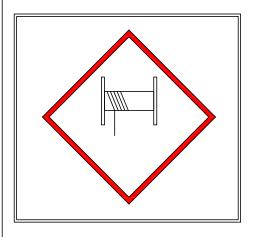
CRANE SAFETY & HZRDS	l
	Ī

WINCH SAFETY WARNINGS



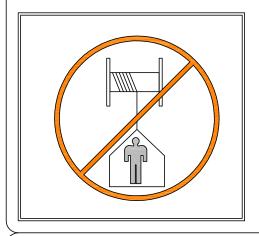
DANGER

DO NOT DISENGAGE WINCH UNDER LOAD



⚠ DANGER

THE LAST [5] (DEAD) WRAPS OF WIRE ROPE MUST BE LEFT ON TO **ASSIST WIRE ROPE** CLAMP IN HOLDING LOAD



. WARNING

Winches are not to be used to lift, support, or otherwise transport personnel



CINCINNATI, OHIO

		·
TITLE	DATE	SECTION
WINCH SAFETY	02-21-14D	C150
	SUPERSEDES	40047
HT CRANES	04-04-12C	19217

PART NO.: 15398

DECAL: UNPLUG REMOTE CONTROL

FUNCTION: To inform the operator to

unplug remote control when

not being used.

QUANTITY: 1

PLACEMENT: Right side of housing.

PART NO.: 15401

DECAL: UNLAWFUL TO OPERATE

FUNCTION: To inform the operator of proper

operation in vicinity of power lines.

QUANTITY: 1

PLACEMENT: Right side of housing.

PART NO.: 19314-1 [LEFT] & -2 [RIGHT]

DECAL: MANUAL OVERRIDE (NON-PROP)

FUNCTION: To inform the operator of

manual override locations.

QUANTITY: 1 EACH

PLACEMENT: Inside of rear cover.

PART NO.: 22768-1 [LEFT] & -2 [RIGHT]

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To inform the operator of

manual overide locations.

QUANTITY: 1

PLACEMENT: Inside of rear cover.

UNPLUG

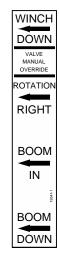
REMOTE CONTROL
PENDANT WHEN
NOT IN USE

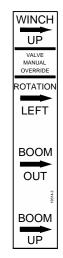
15398-F

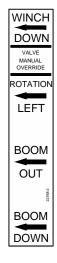
A DANGER

UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN 20 FEET OF HIGH-VOLTAGE LINES OF 350,000 VOLTS OR LESS.

FOR MINIMUM CLEARANCES OF HIGH-VOLTAGE LINES IN EXCESS OF 350,000 VOLTS, REFERENCE OSHA 1926.1408, CRANE'S SAFETY MANUAL, AND CAL-OSHA ARTICLE 37, TITLE 8, HIGH-VOLTAGE ELECTRICAL SAFETY ORDERS.











TITLE

DECAL DRAWING & LIST

11-30-22E

DATE

C150

SECTION

HT40/50/60/66 SERIES

SUPERSEDES
02-21-14D

22181A

PART NO.: 23068-1 [LEFT] & -2 [RIGHT]

DECAL: MANUAL OVERRIDE

(HT66KXX w/ TH-2 Winch ONLY)

FUNCTION: To inform the operator of

manual overide locations.

QUANTITY:

PLACEMENT: Inside of rear cover.

ÙΡ VALVE MANUAL OVERRIDI ROTATION **LEFT BOOM** OUT **BOOM** DOWN

WINCH



PART NO.: 19315-1

DECAL: SHUT OFF (NON-PROPORTIONAL)

FUNCTION: To show the operator how to

override master shut off valve.

QUANTITY:

PLACEMENT: Inside rear cover.

PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show the operator how to

override proportional valve.

QUANTITY: 1

PLACEMENT: Inside rear cover.

WARNING!

KEEP VALVE IN NORMAL POSITION. **OVERRIDE POSITION IS INTENDED** FOR EMERGENCY USE ONLY.



NON-PROPORTIONAL VALVE

PUSH IN STEM AND ROTATE

WARNING!

KEEP VALVE IN NORMAL POSITION. **OVERRIDE POSITION IS INTENDED** FOR EMERGENCY USE ONLY.



PROPORTIONAL

ROTATE STEM

PART NO.: 20834

DECAL: MANUAL OVERRIDE NOTICE

FUNCTION: To inform the operator of

manual override locations.

QUANTITY:

PLACEMENT: Inside rear cover.

NOTICE FOR MANUAL OVERRIDE OF CRANE FUNCTIONS. REMOVE REAR COVER AND SEE INSTRUCTIONS INSIDE.



CINCINNATI, OHIO

DECAL DRAWING & LIST

04-14-23H

C150

HT40/50/60/66 SERIES

SUPERSEDES 11-30-22G

PART NO.: 15390

DECAL: CAUTION - INSPECT VEHICLE & CRANE

FUNCTION: To inform the operator of key

operating requirements.

QUANTITY: 1

PLACEMENT:Left side of rear cover.

PART NO.: 15391

DECAL: DANGER - NOT PASSENGER LIFT

FUNCTION: To inform the operator not to lift,

support or transport personnel, and to ensure that crane operator is adequately trained.

QUANTITY: 1

PLACEMENT:Left side of rear cover.

PART NO.: 15392

DECAL: DANGER - ELECTROCUTION HAZARD

FUNCTION: To inform the operator that the

machine (crane) represents an electrocution hazard should it come

too near or in contact with electrical voltage source.

QUANTITY: 1

PLACEMENT:Left side of rear cover.

PART NO.: 22499

DECAL: KNOW YOUR SIGNALS

FUNCTION: To inform the operator of

proper signals.

QUANTITY: 1

PLACEMENT: Right side of rear cover.





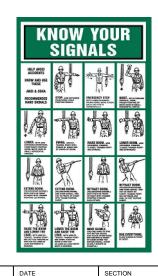
YOU MUST NOT OPERATE THIS CRANE UNLESS:

YOU HAVE BEEN TRAINED IN THE SAFE

YOU HAVE BEEN IN TAINED IN THE SAFE OPERATION OF THIS CRANE; AND YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONS CONTAINED IN THE MANUFACTURER'S MANUALS, YOUR EMPLOYER'S WORK RULES, AND APPLICABLE GOVERNMENT REGULATIONS.

AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND OTHERS TO DEATH OR SERIOUS INJURY.







DECAL DRAWING & LIST

11-30-22F

C150

HT40/50/60/66 SERIES

SUPERSEDES 02-21-14E

22181

PART NO.: 17389

DECAL: MEDIUM VENTURO

FUNCTION: Branding.

QUANTITY: 1

PLACEMENT: Rear cover.



PART NO.: 28523

DECAL: MODEL HT40KX

FUNCTION: Branding.

QUANTITY: 2

PLACEMENT: Boom.

PART NO.: 20927

DECAL: CRANE STABILITY

FUNCTION: To inform the operator of the crane's lifting capacity

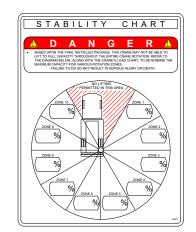
throughout the entire rotation.

QUANTITY: 1

PLACEMENT: In prominent location, so it is easily seen and readily

identifiable.







DECAL DRAWING & LIST

DATE 06-16-23

SECTION C150

HT40KX

SUPERSEDES 2852

LEFT SIDE OF BOOM

RIGHT SIDE OF BOOM

PART NO.: 23065 & 23064

DECAL: HT40-25' CRANE CAPACITY

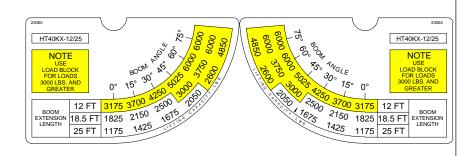
FUNCTION: To show the operator the

operating capacities of the crane

QUANTITY: 1 each

PLACEMENT: Right side of boom, Left side of

boom



23065 23064

LEFT SIDE OF BOOM

RIGHT SIDE OF BOOM

PART NO.: 22342-2 & 22342-1

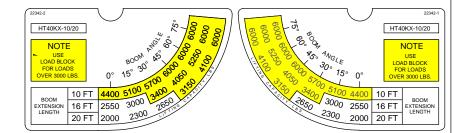
DECAL: HT40-20' CRANE CAPACITY

FUNCTION: To show the operator the operating

capacities of the crane

QUANTITY: 1 each

PLACEMENT: Right side of boom, Left side of boom



22342-2 22342-1

SPACE INTENTIONALLY LEFT BLANK

SPACE INTENTIONALLY LEFT BLANK



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO BOOM CAPACITY DECALS

11-11-20

SECTION C150

HT40 SERIES

SECTION 200

INSTALLATION



CRANE INSTALLATION, PAGE 1 HT40/50KX

BODY REINFORCEMENT

The truck body must be reinforced and outriggers provided to withstand the combined loads resulting from lifting and the weight of the crane and boom.

The maximum combined overturning moment for the HT40KX is 45,000 ft. lbs. and for the HT50KX is 55,000 ft. lbs.

The maximum vertical loads for the HT40/50KX are listed based on the boom length:

	HT40KX		HT5	50KX
BOOM LENGTH (FT)	20'	25'	20'	25'
MAX VERTICAL LOAD (LBS)	7900	8050	9900	10050

CRANE MOUNTING

The crane base plate or mounting pedestal must be bolted to the body reinforcing plate with four [4] grade eight (8) bolts of 1" dia. with coarse threads, torqued to 680 foot pounds.

A 6" dia. hose clearance hole must be cut in this plate to allow the hoses to swing and coil freely.

ROTATION POSITIONING

The HT cranes are shipped with the boom rotated as shown on drawing 20051. It can be in any position that pleases the user since the boom can always reach the storage and travel position by rotating one way or the other.

HYDRAULIC CONNECTIONS

The crane is furnished with a pressure, return and a case drain hoses that come down through the center of the housing. The pressure and return hoses connect to two hydraulic swivels to prevent damage while rotating the crane right and left.



 THE CASE DRAIN HOSE MUST BE A DEDICATED RETURN HOSE UNRESTRICTED TO TANK / RESERVOIR.
 DO NOT 'T' INTO ANOTHER EXISTING RETURN HOSE OR DAMAGE TO THE HYD. WINCH FROM BACK-PRESSURE WILL OCCUR. BACK-PRESSURE IN EXCESS OF 200 PSI WILL DAMAGE THE HYD. WINCH.

Arrange the pressure & return hoses in the compartment below the crane so that they are connected in a relaxed position while the crane is at the midpoint of the 400 degree rotation range -- regardless of the final position of the boom during storage/travel. See installation pages 22913 for more information on hose connections.

® VENCO VENTURO INDUSTRIES LLC	CRANE INSTALLATION	05-26-23	C200
CINCINNATI, OHIO	HT40/50KX	SUPERSEDES	26895

CRANE INSTALLATION, PAGE 2 HT40/50 SERIES CRANES

▲ ELECTRICAL CONNECTIONS

A 9 ft. electrical power lead - intended for 12V DC only - comes down through the center of the crane base plate along with the hoses. This power lead should be slacked in the compartment so that it remains relaxed throughout the 400 degree rotation of the crane.

A 20 amp circuit breaker is mounted on the crane and protects the crane's internal wiring and solenoid coils. The 20 amp circuit breaker does not protect the 9 ft. power lead. For added protection, the 9 ft. lead can be connected to a 20 amp protected circuit that, if possible, is powered only when the vehicle engine is running.

HYDRAULIC FLUID

Average Climate Type of Oil

Cold to Moderate ISO Grade AW 46 Warm to Hot ISO Grade AW 68

The fluid should have the highest anti-wear characteristics and treated to inhibit rust and oxidation.

▲ HYDRAULIC HOSES & LINES

The minimum sizes for lines and hoses are as follows:

HYDRAULIC LINES	NON-PROPORTIONAL	PROPORTIONAL
PRESSURE	3/8"	5/8"
RETURN	1/2"	3/4"
SUCTION	3/4"	1-1/4"

RESERVOIR

The PTO reservoir should have a capacity of 10 gallons (non-proportional) or 25 gallons (proportional) fitted with 100 mesh suction screen, 10 micron return line filter, and filler/breather cap.

▲ PTO PUMP

The PTO pump should be sized to allow an engine idle speed range that will deliver approximately 2.5 GPM for the HT40 non-proportional, 12.0 GPM for the HT40 proportional, 3.0 GPM for the HT50 non-proportional, or 12.0 GPM for the HT50 proportional. These cranes' relief pressures are all set at 3000 psi.

▲ PTO START-UP

Before connecting the PTO system to the crane pressure and return hoses, connect the PTO pressure and return lines together at the bulkhead. Operate the PTO system for about two (2) minutes per gallon of reservoir capacity (10 gallon reservoir = 20 minutes / 25 gallon = 50 minutes) to flush out the lines and filter all the fluid several times.

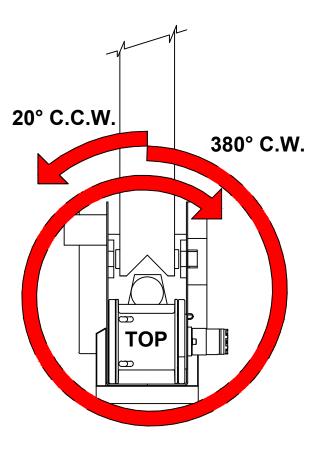
ENGINE START/STOP & THROTTLE CONTROL

If your crane was purchased with optional engine start/stop and throttle control, refer to drawing 22615 in the replacement parts section for further information.

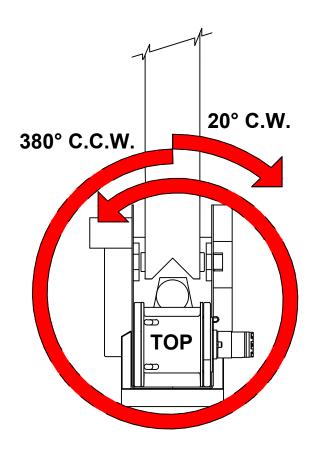
1	_		TITLE	DATE	SECTION	١
	ENTLIR®) VENCO VENTURO INDUSTRIES LLC	CRANE INSTALLATION	05-10-21G	C200	
l	ENION	CINCINNATI, OHIO		SUPERSEDES	00470	Ì
			HT40/50 SERIES CRANES	07-31-15F	22173)

400° ROTATION STOP LOCATION

CURBSIDE



STREETSIDE





T	TITLE	DATE	SECTION
	ROTATION STOP LOCATION	03-09-23F	C200
t		SUPERSEDES	00054
	400° ROTATION CRANES	05-20-20E	20051

STABILITY TEST - HT40-25' SERIES

Overview

Venturo follows the guidelines of ANSI B30.5 in defining stability. Generally speaking, a truck is considered stable as long as it is not on the verge of tipping - i.e. with the truck level, at least one tire on each corner of the truck must remain in contact with the ground.

It is important to note that nearly every installation is unique and will, therefore, typically require stability testing.

The procedure outlined below follows ANSI's (B30.5 - 5-1.1.1) specified "maximum load rating" of 85% of truck stability.

Testing Procedure

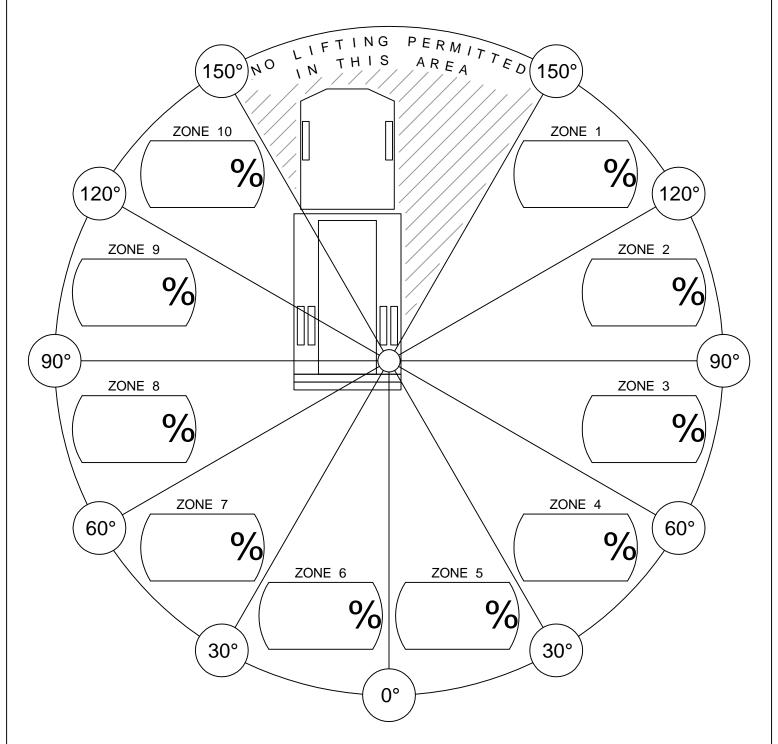
- 1. Locate the truck on firm, level ground and set parking brake.
- 2. Fully deploy stabilizers, making sure they are firmly in contact with supportive ground; use stabilizer pads as required. The tires of the truck should remain in full contact with the ground.
- 3. Inspect wire rope and other key components of crane (consult owners manual for more information).
- 4. Conduct an operational check of all crane functions.
- 5. Locate the Overload Pressure Switch at the base of the elevation cylinder
- Disconnect the black & white wires from the housing and then connect the black & white wires together to 5.1. by-pass the Overload Pressure Switch for the stability test. Note: The black & white wires MUST be reconnected to the Overload Pressure Switch after the stability test has be completed.
- Use a *test weight* weighing a *minimum* of *1382 lbs*, (includes load block weight of 51 lbs.) to a *maximum of 1450* 6.
- 7. Position the boom level and fully retracted.
- 8. Referring to the Stability Chart (drawing 20907) rotate the crane to a position between 1 and 2 o'clock (truck cab is facing 12 o'clock) to begin testing.
- 9. Use the winch to lift the Test Weight; DO NOT allow the weight to be more than 6" off the ground at any time during testing (for safety).
- Using the test weight, extend the boom slowly, until one of the two conditions occur: 10.
 - Full extension is reached Mark the ZONE in question 100% 10.1.
 - 10.2. The truck becomes unstable i.e. a tire lifts off the ground
 - 10.2.1. Retract the boom until at least one tire on each corner of the truck is making contact with the ground
 - 10.2.2. Use the formula below to determine the allowable % of Rated Capacity for the ZONE in question:
- Note: The "Max Stable Reach in inches" is measured from the center of rotation of the crane housing to the lifting load hook.

"Max Stable Reach" in inches" % Rated Capacity = X 100 300

- Record the % of Rated Capacity in the appropriate blank (region) on the Crane Stability page (ref. 20907) and 12. decal.
- 13. Repeat Steps 7 through 12 for each ZONE on the stability page.

® VENCO VENTURO INDUSTRIES LLC	STABILITY TEST	03-01-23D	C200
CINCINNATI, OHIO	HT40-25' SERIES	11-24-21C	20906-40B

CRANE STABILITY



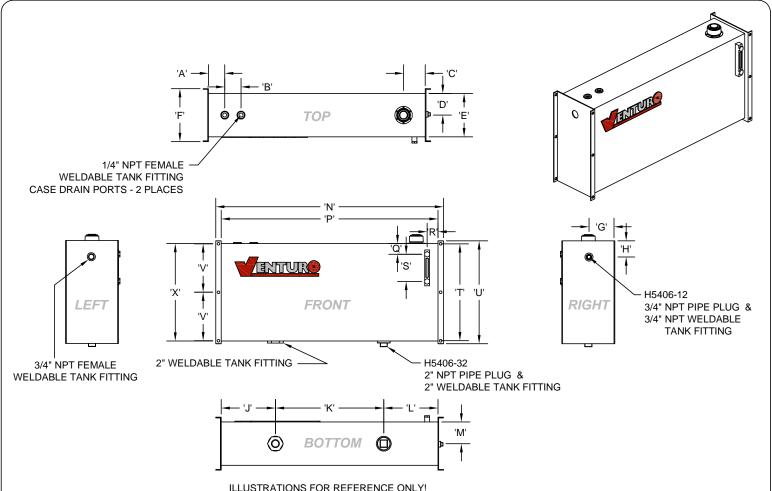
% of Rated Capacity for each of the 10 regions are provided above.

CONDITIONS:

 STABILIZERS FULLY EXTENDED & DOWN, ON FIRM LEVEL GROUND.



TITLE	DATE	SECTION
STABILITY CHART	05-11-17F	C200
	SUPERSEDES	00007
VENTURO CRANES	02-21-14E	20907



ILLUSTRATIONS FOR REFERENCE ONLY! - COMPONENT LOCATIONS MAY DIFFER -

HYD. TANK DIMENSION (HTD) CHART		
PART NO.	22786 (25 GAL.)	22999 (40 GAL.)
'A'	3"	3"
'B'	3"	3"
'C'	4"	4"
'D'	4"	5.5"
'E'	8"	11"
'J' 5" 'K' 30" 'L' 5"		6"
		30"
		6"
'M'	4"	5.5"
'P'	40"	42"
'Q'	2"	2"
'R'	2"	2"
'S'	5"	5"
'X'	18"	20"

MOUNTING DIMENSION (TMD) CHART			
PART NO.	22786 (25 GAL.)	22999 (40 GAL.)	
'F'	9.75"	12"	
'G'	4.875"	6"	
'H'	3"	3"	
'N'	42"	44"	
'T'	17.875"	19.875"	
'U'	19"	21"	
'V'	8.938"	9.938"	

MEASUREMENTS INCLUDE MOUNTING APARATUSES

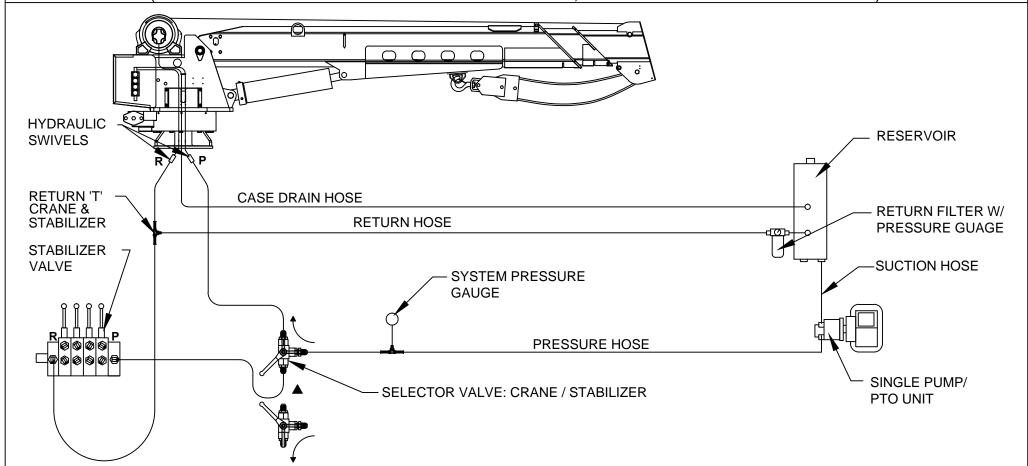
MEASUREMENTS EXCLUDE MOUNTING APARATUSES

CINCINNATI, OHIO



HYD. TANKS (25/40 GAL.)	supersedes 06-04-13D	22825
RESERVOIR DIMENSIONS	02-21-14E	C200
TITLE	DATE	SECTION

HYDRAULIC CIRCUIT CONNECTION GUIDE - SINGLE PUMP (NO COMPRESSOR) (REFER TO SECTION 200 FOR MORE INFORMATION, INCLUDING HOSE SPECIFICATIONS)



CAUTION

SELECTOR VALVE MUST BE 'NON-CLOSED CENTER TRANSITION' TYPE.



CAUTION

 THE CASE DRAIN LINE FROM THE WINCH MUST HAVE AN UNRESTRICTED PATH TO TANK/ RESERVOIR.



VENCO VENTURO INDUSTRIES LLC
CINCINNATI. OHIO

TITLE	
CONNECTION GUIDE, PAGE 1 / 2	

08-09-23C C200

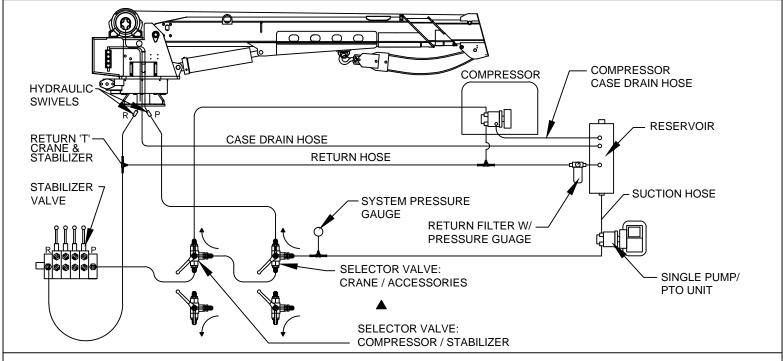
SUPERSEDES C200

SECTION

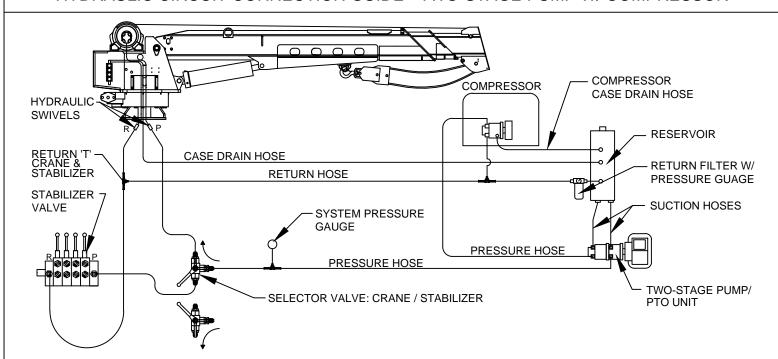
HT CRANES

02-21-14B 23015

HYDRAULIC CIRCUIT CONNECTION GUIDE - SINGLE PUMP W/ COMPRESSOR



HYDRAULIC CIRCUIT CONNECTION GUIDE - TWO-STAGE PUMP W/ COMPRESSOR



CAUTION

 SELECTOR VALVE MUST BE 'NON-CLOSED CENTER TRANSITION' TYPE. REFER TO SECTION 200
FOR MORE
INFORMATION,
INCLUDING HOSE
SPECIFICATIONS

CAUTION

 THE CASE DRAIN LINE FROM THE WINCH MUST HAVE AN UNRESTRICTED PATH TO TANK/ RESERVOIR.



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO CNNCTN GDE, PAGE 2/2

08-08-23C

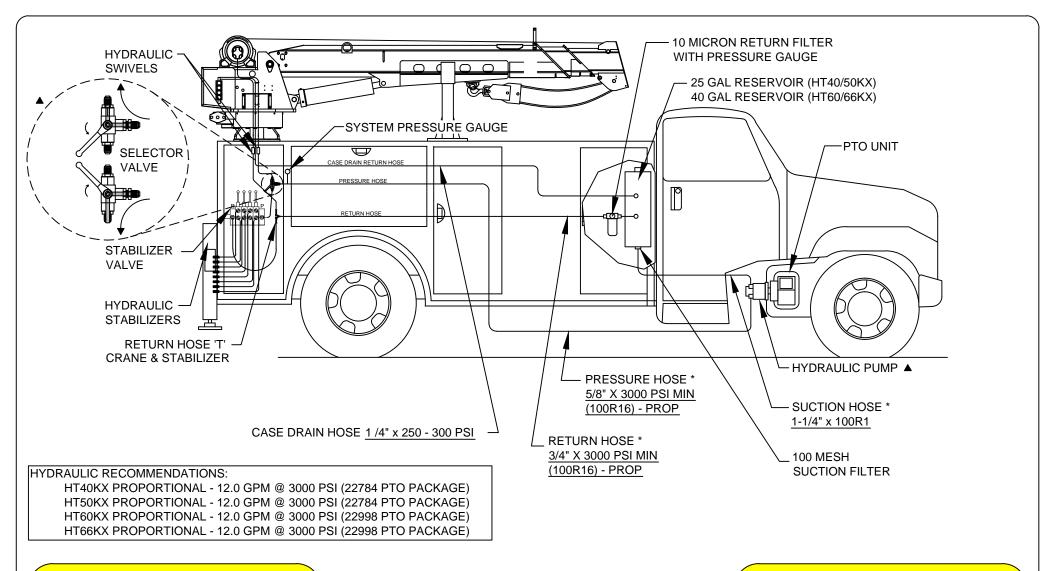
C200

SECTION

HT CRANES

02-21-14B

23014





 SELECTOR VALVE MUST BE 'NON-CLOSED CENTER TRANSITION' TYPE. REFER TO SECTION 200 FOR MORE INFORMATION ON INSTALLING HYDRAULIC COMPONENTS.

* HOSES AND FITTINGS BETWEEN PUMP, RESERVOIR, AND CRANE NOT INCLUDED.



CAUTION

 THE CASE DRAIN LINE FROM THE WINCH MUST HAVE AN UNRESTRICTED PATH TO TANK/ RESERVOIR.



VENCO VENTURO INDUSTRIES LLC CINCINNATI. OHIO

TITLE	DATE	SECTION
HYDRAULIC COMPONENT INSTALLATION	08-08-23G	C200
	SUPERSEDES	00000
HT40-66, PROPORTIONAL	11-10-22F	22883 <i>)</i>

RECOMMENDED SUPPLY & RETURN HOSE CONNECTIONS **CRANE & STABILIZERS** 3" DIA. MIN. CLEARANCE FOR HOSES CRANE BASE PRESSURE HOSE-RETURN HOSE -HYD. SWIVELS -+12 VOLT PWR SUPPLY **CASE DRAIN** NOTE: NO HOSES ARE PROVIDED 'BELOW' THE TWO HYD. SWIVELS. SYSTEM PRESSURE STABILIZER VALVE -GAUGE (INCLUDED WITH HYD. PACKAGE) PRESSURE SELECTOR VALVE (INCLUDED WITH STABILIZER PACKAGE) * PRESSURE PATH TO CRANE SHOWN. **RETURN FROM CRANE & STABILIZER** RETURN HOSE 'T' **CRANE & STABILIZER** LOOP HOSES UNDER SWIVELS FOR PRESSURE & SUPPLY HOSES TO AUGMENT SWIVELS



 SELECTOR VALVE MUST BE 'NON-CLOSED CENTER TRANSITION' TYPE VALVE.

CAUTION

 CASE DRAIN MUST RETURN DIRECTLY TO RESERVOIR WITHOUT RESTRICTION.

DATE



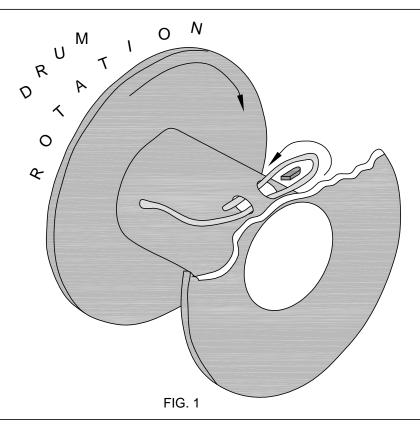
CONNECTIONS GUIDE	08-07-23G
	SUPERSEDES
HT CRANES	02-21-14F

TITLE

^{C200}

SECTION

WIRE ROPE INSTALLATION



STEP 1: UNWIND COIL OF WIRE ROPE BY 'ROLLING' ALONG THE FLOOR. THIS WILL PREVENT 'KINKING'.

STEP 2: INSERT WIRE ROPE END UP THROUGH ANTI-2-BLOCK (A2B) CAGE ASSEMBLY, BETWEEN CHEEK PLATES, OVER THE TOP SHEAVE, AND THROUGH WIRE ROPE GUIDE.

STEP 3: INSERT WIRE ROPE END INTO POCKET OPENING ON WINCH, WRAP AROUND WEDGE, AND BACK THROUGH POCKET OPENING AS SHOWN IN FIGURE 1.

CAUTION

 IF THE WIRE ROPE IS NOT INSTALLED FOR THE CORRECT DRUM ROTATION, THE WINCH BRAKE VALVE WILL NOT HOLD THE LOAD.

CAUTION

 THERE MUST ALWAYS BE AT LEAST [5] DEAD WRAPS OF WIRE ROPE ON THE WINCH DRUM WHILE UNDER LOAD.

NOTE: SOME WINCHES MAY BE SUPPLIED WITH A HEX NUT IN LIEU OF A WEDGE FOR INSTALLING THE WIRE ROPE.

1		TITLE	DATE	SECTION	١
	VENCO VENTURO INDUSTRIES LLC	WIRE ROPE INSTALLTN	02-21-14K	C200	
	CINCINNATI, OHIO		SUPERSEDES	00045	1
		ET6K & LARGER CRANES	12-26-13J	22245	

SECTION 300

OPERATION & MAINTENANCE



MAINTENANCE OVERVIEW INFORMATION

MAINTENANCE

The crane requires only periodic lubrication. As a standard procedure, this can be done at the time the vehicle is serviced.

GENERAL

Inspect wire rope for any evidence of kinks or fraying. Ensure that lifting hook of wire rope shows no evidence of damage and is functioning normally.

Inspect headache ball ("load block") for any signs of damage or excessive wear.

Service all grease fitting locations.

Inspect hydraulic hoses and hydraulic fittings for hydraulic leaks.

Inspect electrical connections for any looseness or corrosion.

Inspect bolts and verify all are tight, paying particular attention to winch, rotation system, and mounting base bolts.

Inspect all pins and snap rings for proper fit and function.

Inspect sheaves for excessive wear or play.

Perform a basic inspection of the winch with each use, monitoring for unusual noise or hydraulic leaks.

The winch planetary gearbox lube (SAE 90) should be maintained at the level plug (final base relief valve port) which is approximately half-full point.

To ensure optimal performance, the following oil change schedule should be followed:

Initial Change - after the initial 100 hours of operation or six months. Periodic Change - after every 300 hours of operation or two years.

Temp Range (°F) Winch Gear Oil

120° to 10° High quality SAE 90 gear lubricant oil Severe Duty Swepco #201 multi-purpose gear oil



MAINTENANCE INFO	
HT25/30/40/50/60/66KX(P)	
	l

DATE

SECTION

02-21-14C 23

CRANE OPERATION AND MAINTENANCE INSTRUCTIONS, PAGE 1 HT40/50KX

SAFETY

Before operating this crane, read and understand these instructions, the 920612 Crane Safety and Hazards Information Sheet, and review all safety & instruction labels on the crane .

CRANE INSPECTION

Before operating this crane, inspect for wear, damage, or oil leakage. After the wire rope has been run out, check for wear, kinks, and broken strands. Check the hook and safety latch for damage. Correct any problems before using the crane.

See Crane Safety Manual for proper inspection schedules and reports.

CAPACITY

Before operating this crane, review the capacity charts on the sides of the boom to relate the load to be lifted to the boom length and angle. The boom angle is shown by a gravity arrow.

LOAD BLOCK

If the load exceeds 3000 lbs.-HT40KX or 4000 lbs.-HT50KX or if reduced winching speed for better control of smaller loads is required, use the load block to rig the crane for two part line operation.

CONTROLS

This crane is operated by a remote control pendant. The pendant should be unplugged and stored in a compartment when the crane is not in use.

Before plugging the pendant in, inspect the plug, socket, cord, pendant head, and switches for damage. Actuate all four switches both ways to verify that they all have the same feel and sound and that they return to the center position.

Plug the pendant into the socket on the right side of the crane and secure with socket case handle.

PTO SYSTEM

Check the hydraulic fluid level in the PTO system reservoir. Engage PTO and set the engine idle speed to provide the desired hydraulic flow rate per the PTO system instructions. A lower idle setting may be used for more delicate spotting of loads if required.

CRANE OPERATION

Use "Winch Down" to release tension on the wire rope to unhook it from the storage tie down position.

Use "Boom Up" to elevate the boom from the boom rest position.

Avoid repeated rapid reversals of the control switches. This can cause the load to swing.

Check all control functions to see that they are working as described in the following section.



HT40/50KX

CRANE OPERATION AND MAINTENANCE INSTRUCTIONS, PAGE 2 HT40/50KX

CONTROL FUNCTIONS

WINCH "UP" and "DOWN" - Raises and lowers the load with the winch.

BOOM "UP" and "DOWN" - Raises and lowers the boom elevation angle. The boom elevates from 8 degrees below horizontal to 75 degrees above horizontal.

BOOM "OUT" and "IN" - Extends and retracts the boom. The boom hydraulic extension stroke is 6 ft. or 10 ft.

ROTATION "L" and "R" - Controls the left and right direction of the crane rotation. The crane rotation is limited to 400 degrees.

POWER - (Non Proportional Systems) Energizes safety shutoff valve. See page 22328 for detailed operations instructions and warnings.

TRIGGER (Proportional Systems Only) - Varies the flow rate delivered to the crane valve. The farther the trigger is pulled, the faster the selected crane function operates. See page 22168 for detailed operations instructions and warnings.

OVERLOAD SENSING SYSTEM

This crane is equipped with an Overload Sensing System. If the capacity of the crane is exceeded, the "Winch Up", "Boom Down", and "Boom Out" functions will be shut down. The "Winch Down", "Boom Up", and "Boom In" functions will continue to operate and can be used to relieve the overload condition. The "Rotation" function also will continue to operate.

TWO-BLOCK SENSING SYSTEM

This crane is equipped with an anti two-block device that is mounted at the tip of the boom. If the load block / overhaul weight contacts the device the "Winch Up", "Boom Down", and "Boom Out" functions are disabled. The "Winch Down", "Boom Up", and "Boom In" functions will continue to operate and can be used to relieve the two-block condition. Refer to Drawings 23024 or 27029 in this manual for replacement parts and configuration information, respectively.

TELESCOPIC HEXAGONAL BOOM

STANDARD LENGTH (10' - 20'); Double Stage

The hexagonal shaped boom shall telescope to provide a horizontal reach range of 10 ft. to 20 ft. using a hydraulic power extension cylinder with a 10 ft. stroke (See pages 24188 and 24189).

OPTIONAL LENGTH (12' - 25'); Double stage only

The hexagonal shaped boom shall telescope to provide a horizontal reach range of 12 ft. to 25 ft. using a hydraulic power extension cylinder with a 13 ft. stroke (See pages 24190 and 24191).

TRUCK SETUP & STABILIZERS

- 1. The truck should be parked on firm level ground.
- 2. The center of the crane should be positioned close enough to the job so that it can be operated at a reach that puts the load within the rated capacity of the crane.

CINCINNATI OHO	45B
** VENCO VENTURO INDUSTRIES LLC** TITLE TITLE DATE DATE DATE SECTION	

CRANE OPERATION AND MAINTENANCE INSTRUCTIONS, PAGE 3 HT40/50KX

- 3. Set the vehicle parking brake and put the vehicle transmission in "park" if it is an automatic.
- 4. Fully deploy stabilizers to help stabilize vehicle against rocking or overturning.
- 5. Use stabilizers to level vehicle only. Tires must maintain contact with ground.

PREPARATION FOR TRAVEL

- 1. Return the stabilizers to the stowed position. Install and secure all pins.
- 2. Stow the crane boom in the boom support.
- 3. Hook the winch line to a tie down point on the body or pedestal and apply tension.
- 4. Disengage the PTO pump and idle speed control.
- 5. Unplug the control pendant and store in a body compartment or the cab.

MAINTENANCE

The crane requires only periodic lubrication. As a standard procedure, this can be done at the time the vehicle is serviced.

The winch planetary gearbox lube should be maintained at the level plug.

To ensure optimal winch performance, the following lube schedule and lube specifications should be followed:

Initial Change - after 6 weeks or 10 hours of operation.

Periodic Change - on an annual basis or every 50 hours of operation.

Temp Range (°F) Winch Gear Oil

120° to 10° High quality SAE 90 gear lubricant oil Severe Duty Swepco #201 multi-purpose gear oil

Service grease fittings and rotation gear with molybdenum-disulfide graphite-filled lithium-based extreme pressure grease.

Grease fitting locations:

Boom pivot at rear of boom

Speed reducer (2 fittings)

Elevation cylinder tail clevis

Bottom of Swing Bearing (2 fittings)

Remove rear cover and check all hydraulic tube and hose fittings for tightness.

Check electrical connections for looseness and corrosion.

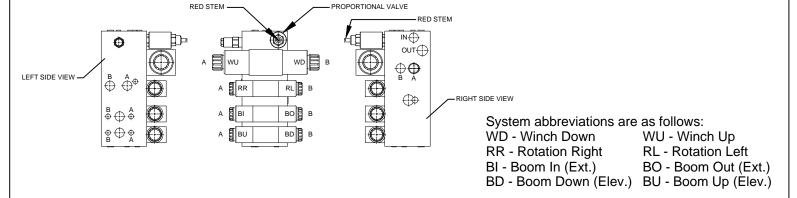
(<u> </u>		TITLE	DATE	SECTION	١
	VENCO VENTURO INDUSTRIES LLC	CRANE OP / MNTNC INST	02-21-14E	C200	
	CINCINNATI, OHIO		SUPERSEDES	00474	
		HT40/50KX	11-29-12D	22174	

EXPLANATION OF HYDRAULIC VALVE SYSTEM HT40/50/60/66KX, PROPORTIONAL ONLY

OVERVIEW

This proportional crane utilizes a proportional valve, which controls the rate at which the hydraulic fluid flows through the valve bank. When the proportional valve is fully closed, hydraulic fluid bypasses the valve bank and returns directly to the tank. When the proportional valve is fully open, hydraulic fluid cycles through the valve bank and allows the crane to function at full speed. When the proportional valve is at any setting between, a portion of the fluid is allowed through the valve bank, with the remainder returning to the tank.

The four [4] crane functions (winch, rotation, boom extension, and boom elevation) are controlled by four [4] separate valve sections. Each valve section has two [2] solenoid coils (and two [2] manual overrides) which control the direction that the function operates (e.g. winch up vs. winch down). For a given crane function and direction (e.g. winch up), the solenoid coil and associated manual override reside on the same side of the valve bank.



MANUAL OVERRIDE SYSTEM

Should an electrical failure occur, your Venturo crane can be operated manually.

The manual overrides are intended for emergency use only and should not be used for normal operation.

To operate in manual override mode:

- (1) Override the proportional valve by turning the red stem on the valve as stated below
 - For override operation, rotate stem clockwise (the farther the stem is turned the faster the crane will operate)
 - To return to normal operation, rotate the stem counter-clockwise until it stops
- (2) Determine the coil / override associated with the function you wish to operate, then insert a small diameter object (an
 - Allen wrench works well) into the detent on the end of the valve stem and firmly press inward. For example, pushing the stem labeled 'A' on the first bank (refer to illustration) will actuate winch up

• For normal crane operation, the proportional valve must be in the 'normal' position (as described above). To verify 'normal' operation, you may set the pendant (or radio) control aside and actuate a single crane function by pushing inward on any of the manual override pins, located at the ends of each function control valve. If that function operates, the proportional valve is still in manual override. Check the position of the proportional valve's red stem to insure that it is fully counter-clockwise.

EMERGENCY STOP

In the unlikely event that a function of the crane does not stop once the function's toggle switch is released, the proportional crane can be stopped by releasing the trigger on activating the red E-STOP button on the transmitter.

® VENCO VENTURO INDUSTRIES LLC	HYDRAULIC SYSTEM	11-10-22E	section C200
CINCINNATI, OHIO	HT40/50/60/66KX; PROP	supersedes 02-21-14D	22168

WIRE ROPE ASSEMBLY

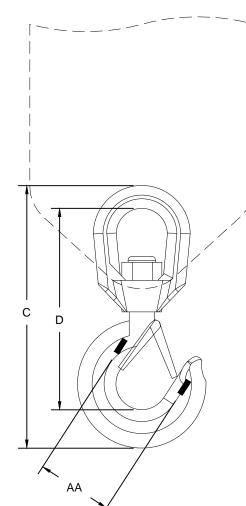
LOAD BLOCK ASSEMBLY

WIRE ROPE:

3/8" DIA, 100' LONG

▲ GAC 7X19 XIP-RHRL-IWRC, SB 14,400 LBS

TERMINATES IN THIMBLE NO HOOK



LOAD BLOCK HOOK:

RATING: 5 TONNE (11,023 LBS)

DIMENSIONS:

COLOR	BRAND	AA	С	D
GOLD	CROSBY	2.50"	9.69"	7.50"

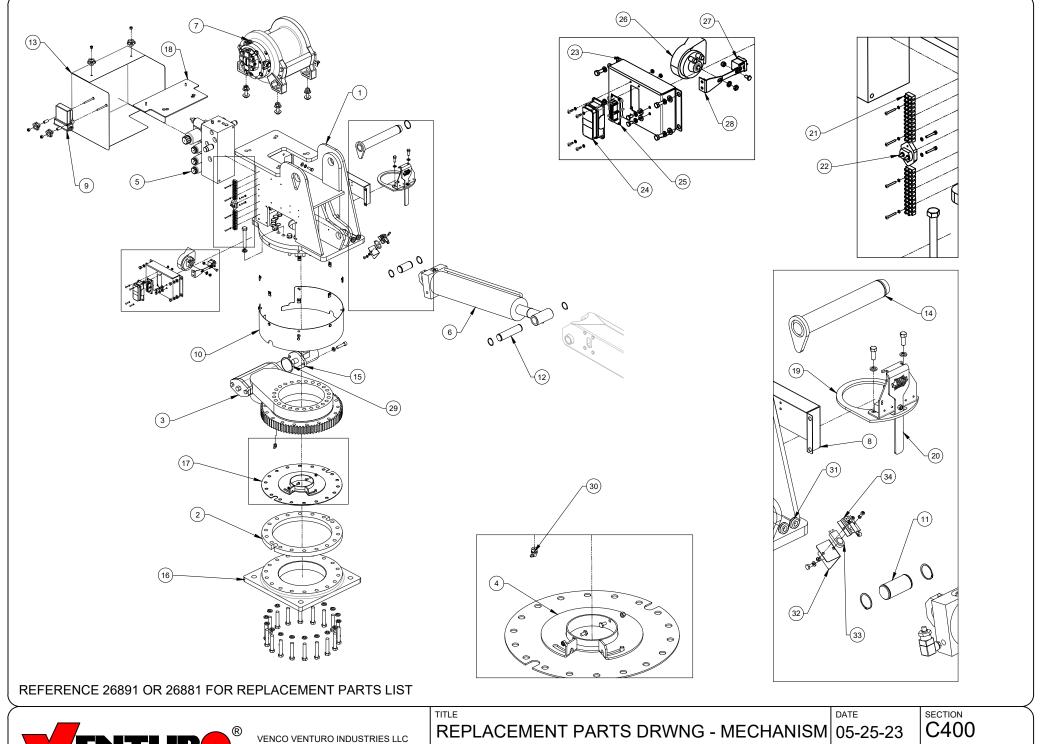


С	WIRE ROPE & HOOK SPECIFICATIONS	05-09-16D	C300
	HT40/50KX	SUPERSEDES 02-21-14C	23231

SECTION 400

REPLACEMENT PARTS





ENTUR

HT40/50 SERIES

SUPERSEDES

26890

REPLACEMENT PARTS LIST - HT40 SERIES; MECHANISM

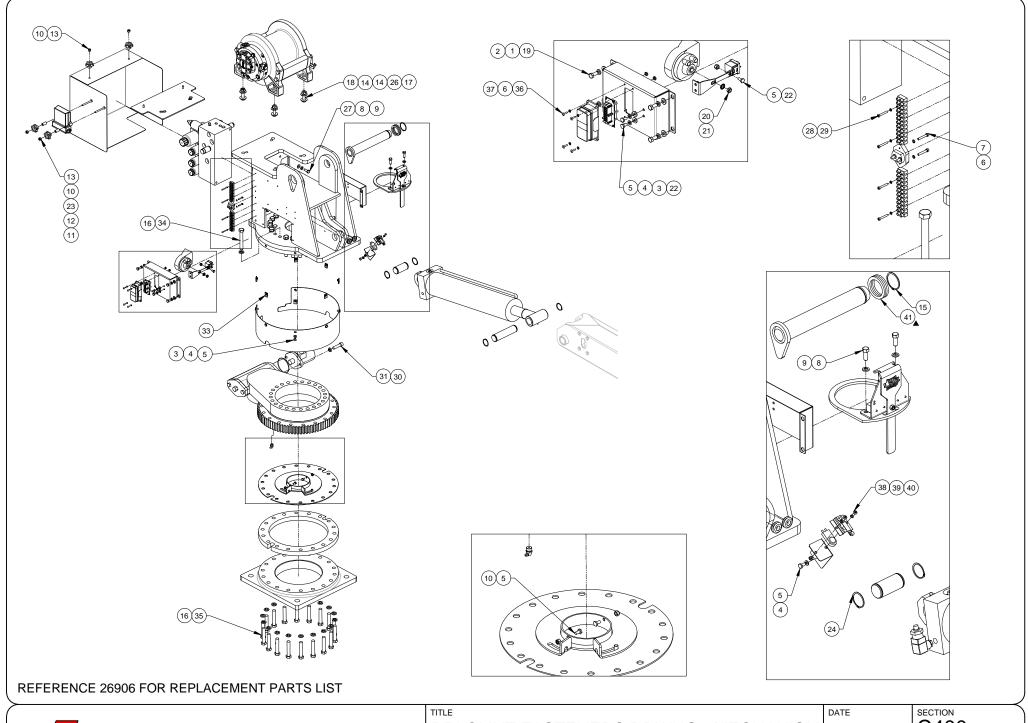
ITE A A	QTY.		DADTAULA ADED	DECORIDION	
ITEM	Р	NP	PART NUMBER	DESCRIPTION	
1	1	1	26600	WELDED ASSEMBLY; HOUSING, MECHANISM	
2	1	1	23662	SPACER PLATE	
3	1	1	22704	SLEWING RING	
4	1	1	24920	STOP DISK	
5	1	-	22736H	HYDRAULIC VALVE MANIFOLD, PROP	
5	-	1	22501-0-225-225	HYDRAULIC VALVE MANIFOLD, NON PROP	
6	1	1	21747	ELEVATION CYLINDER	
7	1	-	22829	HYDRAULIC WINCH, PROP	
7	-	1	22828	HYDRAULIC WINCH, NON PROP	
8	1	1	22715-1	HOUSING SIDE COVER	
9	1	1	21986-HT	RECEIVER; RADIO REMOTE	
10	1	1	23644	SLEWING RING COVER	
11	1	1	22256	ELEVATION CYLINDER PIN - INBOARD	
12	1	1	22257	ELEVATION CYLINDER PIN - OUTBOARD	
13	1	1	22842	REAR COVER	
14	1	1	22721	PIVOT PIN - MAIN BOOM PIVOT	
15	1	1	19177	HYDRAULIC ROTATION MOTOR	
16	1	1	26606	MACHINED BASE	
17	1	1	28473	SLIPPER PLATE WELD	
18	1	1	28319	REAR COVER MOUNTING PLATE WELDEMENT	
19	1	1	23680	HOUSING WATER DAM	
20	1	1	28474	ELECTRIC ROTATION STOP ASSEMBLY	

ITEM	QT	Y.	PART NUMBER	DESCRIPTION		
IILIVI	Р	NP	17 KT TYOTY BEK	DESCRIPTION		
21	1	1	19187-12	TERMINAL STRIP; 12 SECTIONS		
22	1	1	15683-20A	CIRCUIT BREAKER; 20A		
23	1	1	22715-2	HOUSING SIDE COVER		
24	1	1	22481	SOCKET CASE W / HOOD; 16-PIN		
25	1	1	22482	SOCKET; 16-PIN FEMALE INSERT		
26	1	1	21948	HORN		
27	1	1	22739	HIGH CAPACITY RELAY		
28	1	1	22000	BRACKET; HORN		
29	1	1	OR-152-5	O-RING; ROTATION MOTOR		
30	1	1	!ZERK-013-27 NPT-90	FITTING; GREASE, 90°		
31	2	2	14775	GROMMET - RUBBER		
32	1	1	20497	BRACKET; SWITCH		
33	1	1	19918	SWITCH; BOOMTOP POSITION		
34	1	1	19917	BRACKET; BOOM SHUT-OFF SWITCH		
35		-				
36		-				
37		-				
38		-				
39		-				
40		•				
41		•				
42		-				

REFERENCE 26890 FOR REPLACEMENT PARTS DRAWING



REPLACEMENT PARTS LIST - MECHANISM	05-25-23	C400
HT40 SERIES	SUPERSEDES -	26891





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

RPLCMNT FASTENERS DRWNG - MECHANISM

03-29-24A

C400

HT40/50 SERIES

SUPERSEDES 05-30-23

26905

RPLCMNT FASTENERS LIST - HT40/50KX VLC SERIES; MECHANISM

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	8	!LWSH-031S	LOCK WASHER; 5/16", S/S
2	8	!FWSH-031S	FLAT W ASHER; 5/16", S/S
3	13	!FWSH-025S	FLAT W ASHER; 1/4", S/S
4	12	!LW SH-025S	LOCK WASHER; 1/4", S/S
5	11	!HHCS02520050S	HHCS; 1/4-20 x 1/2" LG, S/S
6	6	ILW SH-#08S	LOCK WASHER; #8, S/S
7	2	!SHCS#0832100S	SHCS; #8-32 X 1", S/S
8	4	!LW SH-038	LOCK WASHER; 3/8", ZINC-PLTD
9	4	IHHCS03816100	HHCS; 3/8-16 X 1", ZINC-PLTD
10	4	28327	Knob, hand, 5-point
11	2	IHHCS02520275	HHCS, 1/4-20 X2.75", S/S, FULL THREAD
12	2	!JNUT-02520NS	JNUT, NYLON INSERT, 1/4-20, S/S
13	4	!LNUT-02520-H	LOCK NUT; 1/4-20, HVY PAT, NYLON
14	8	!FW SH-050	FLAT W ASHER; 1/2", GR. 8
15	1	ISRNG-175	SNAP RING; 1-3/4", ZINC-PLTD
16	40	!LW SH-063	LOCK WASHER; 5/8", GR. 5, ZINC
17	4	!HNUT-05013-8	HEX NUT; 1/2-13, GR. 8
18	2	!HHC\$05013225-8	HHCS; 1/2-13 X 2-1/4" LG, GR 8
19	8	!HHC\$03118075\$	HHCS; 5/16-18 X 3/4", S/S
20	1	!LW SH-031-STAR	LOCK WASHER; 5/16", ZINC
21	1	!HNUT-03118	HEX NUT; 5/16-18, ZINC

ITEM	QTY.	PART NUMBER	DESCRIPTION	
22	5	!LNUT-02520SS	NYLOCK HEX NUT 1/4-20	
23	2	28328	NYLON SPACER, BLK25"IDX.50"ODX1"LG	
24	4	ISRNG-150	SNAP RING; 1-1/2", ZINC-PLTD	
25	2	!HHC\$02520125\$	HHCS; 1/4-20 X 1-1/4", S/S	
26	4	!LW SH-050	LOCK WASHER; 1/2", GR. 8, ZINC	
27	2	!FW SH-038	FLAT WASHER; 3/8", ZINC-PLTD	
28	4	!LWSH-#06S	LOCK WASHER; #06. S/S	
29	4	!PHPMS#0632100S	PHILIPS-HD PMS; #6-32 X 1", S/S	
30	2	!LWSH-050-HC	LOCK WASHER; 1/2", HI-COLLAR	
31	2	!SHCS05013200	SOCKET HEAD CAP SCREW - 1/2-13 X 2 LG	
32	4	!HHC\$02520100\$	HHCS; 1/4-20 X 1-1/4", S/S	
33	5	!UNUT-02520-LKG	U-NUT 1/4-20, LOCKING TYPE	
34	20	!HHC\$06311450	HHCS; 5/8-11 x 4.5" LG, GR. 5, ZINC	
35	20	!HHC\$06311350	HHCS; 5/8-11 x 3.5" LG, GR. 8, ZINC	
36	4	!SHPMS#0832050S	SLOT-HD PMS; #8-32 x 1/2", S/S	
37	4	!HNUT-#0832S	HEX NUT; #08-32, S/S	
38	2	!PHPMS#1024050S	PHILIPS-HD PMS; #10-24 x 1/2", S/S	
39	2	!LW SH-# 10S	LOCK WASHER; #10, S/S	
40	2	!HNUT-#1024S	HEX NUT; #10-24, S/S	
41	2	26609	SHIM - STAINLESS STEEL	

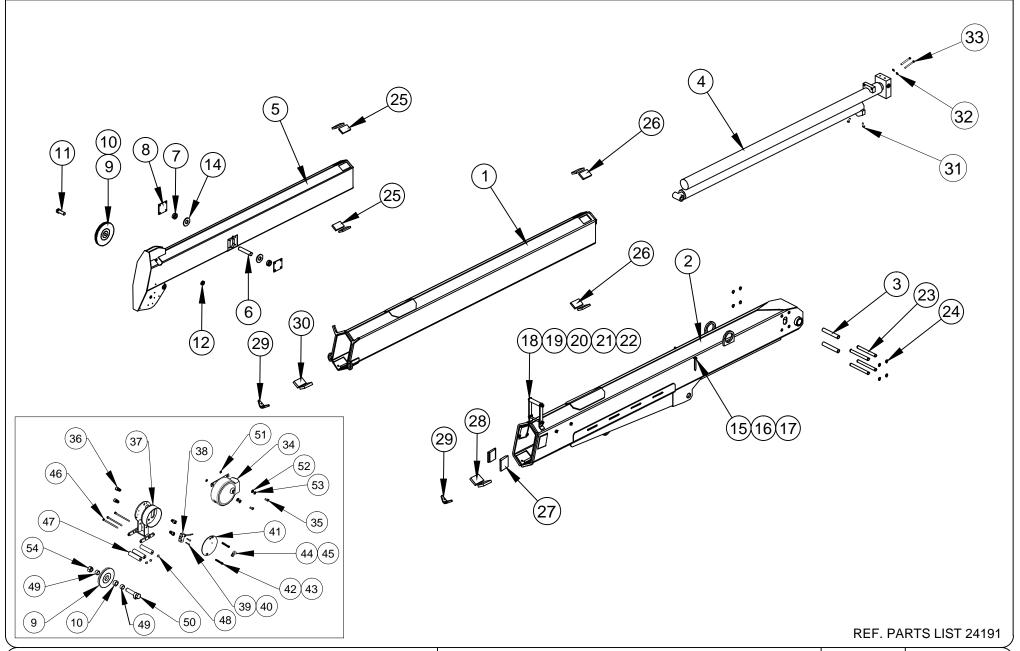
HHCS = HEX HEAD CAP SCREW, SHCS = SOCKET HEAD CAP SCREW, PMS = PAN MACHINE SCREW, S/S = STAINLESS STEEL

REFERENCE 26905 FOR REPLACEMENT PARTS DRAWING



RPLCMNT FASTENERS LIST - MECHANISM	03-29-24A	C400
HT40/50 SERIES	SUPERSEDES 05-30-23	26906

23107 BOOM PARTS DRAWING



ENTURO[®]

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE	SECTION
23107 BOOM PARTS DRAWING	05-24-21B	C400
A	SUPERSEDES	0.4.4.00
HT40/50 25' BOOM	02-09-21A	24190 <i>)</i>

23107 BOOM PARTS LIST

ITEM NO.	QTY.	PARTNUMBER	DESCRIPTION
1	1	27175	WELDED ASSY; SECONDARY BOOM
2	1	27172	WELDED ASSY; PRIMARY BOOM
3	2	24535	THRUST ROLLER
4	1	21749	CYLINDER; EXTENSION
5	1	23105	WELDED ASSY; TERTIARY BOOM
6	1	21405	PIN; CYLINDER
7	2	21428	BUSHING
8	2	23116	COVER PLATE; PIN STOP
9	2	23928	BOOM SHEAVE W/ BUSHING
10	2	23929	SPACER; 23927 & 23928 POLY SHEAVES
11	1	17059-6	SHEAVE AXLE
12	1	!JNUT-07510N	JAM NUT; 3/4-10, NYLON
13	-	-	-
14	2	!FWSH-100SAE	FLAT WASHER; 1", SAE
15	2	22490	SPACER; BOOM ARROW, 1/2" O.D.
16	2	13459-2	ARROW; BOOM, 4 - 7/16" LONG
17	2	!ANUT-02520S	ACORN NUT; 1/4-20, STAINLESS
18	1	21935	WELDED ASSY; WIRE ROPE GUIDE
19	1	21936	WIRE ROPE GUIDE; FLAT MOUNT
20	1	!HHCS04414550	HEX HEAD CAP SCREW; 7/16-14 x 5 - 1/2 LG
21	1	21560	ROLLER; UHMW GUIDE
22	2	!LNUT-04414	JAM NUT; 7/16-14, NYLON LOCK
23	4	22255	THRUST PIN; EXTENSION CYLINDER
24	8	!SRNG-075	RETAINING RING - 3/4" SHAFT DIA.
25	4	23217-1	UHMW GUIDE PAD
26	4	23217-2	UHMW GUIDE PAD
27	2	23217-13	UHMW GUIDE PAD

[ПЕМ	QTY.	PART NUMBER	DESCRIPTION	
Ì	28	2	23217-17	UHMW GUIDE PAD	
Ì	29	2	23183	V-BLOCK SLIDER	
İ	30	2	23217-14	UHMW GUIDE PAD	
ľ	31	2	!HHCS03816100	HEX HEAD CAP SCREW; 3/8-16 X 1" LG	
İ	32	2	!LWSH-050-HC	LOCK WASHER; 1/2" HI-COLLAR	
Ī	33	2	!SHCS05013200	SOCKET HEAD CAP SCREW; 1/2-13 X 2" LG	
Ī	34	1	28190-1	CORD REEL ASSEMBLY	
•	-	1	28191	BRACKET, CORD REEL, (RIGHT HAND MOUNTING)	
	35	2	!SHCS03118063S	SHCS; 5/16-18 X 5/8" LG, S/S	
	36	4	27467	SOCKET HEAD CAP SCREW; NYLON, 1/2-13 X 3/4"	
	37	1	27468	WELDMENT, COMPACT A2B FRAME (LEFT HAND)	
	38	1	19376	A2B SWITCH	
	39	2	!PHCS#0632100	PHCS; 6-32 X 1"	
	40	2	!LWSH-#06	LOCK WASHER; #06, GR. 5	
	41	1	27473	COVER PLATER; COMPACT A2B	
	42	2	!SHCS02520200SS	SOCKET HEAD CAP SCREW; 1/4-20 X 2", SS	
	43	2	23379	WASHER, NYLON, BLACK, .375" OD X .25" ID X .02"	
	44	1	19269	CABLE CLAMP, 1/4"	
	45	1	!PHCS#1032038-M	PHCS; 10-32 X 3/8", GR. 5	
	46	3	!HHCS02520450	HHCS; 1/4-20 X 4-1/2" LG	
	47	3	27475	WIRE ROPE GUIDE ROLLER	
	48	3	!JNUT-02520N	JAM NUT; 1/4-20 W/ NYLON INSERT	
A	49	2	27476-1	SPACER/PIVOT; COMPACT A2B	
	50	1	28362	ASSY, WELDED, CAM & HHCS CA2B CUT-OUT	
ļ	51	2	28198	INSULATING SLEEVE WASHER - 5/16"	
ļ	52	2	01016	FIBER WASHER	
	53	2	!FWSH-031	FLAT WASHER; 5/16" SAE	
	54	1	!LNUT-07510	NYLOC LOCK NUT, FULL, 3/4-10, GR. 5, ZINC	

REFERENCE PARTS DRAWING 24190

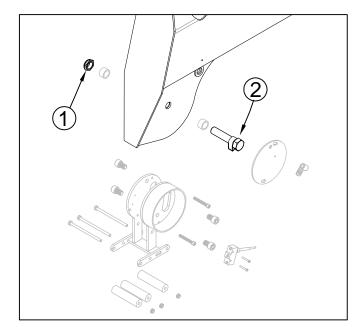


23107 REPLACEMENT PARTS LIST	04-24-24F	section C400
HT40/50 25' BOOM	supersedes 03-26-24E	24191

Compact A2B with Stowage Cut-out, Install/Adjustment Instructions (Kit: 28375)

The purpose of the Stowage Cut-out system is to prevent a situation whereby the wire rope is over-tensioned when the load block / wire rope is attached to the stowage hook on the bottom of the primary boom assembly. However, the OPERATOR is ultimately responsible for ensuring that the wire rope is not over-tensioned when stowing the wire rope and boom assembly into the boom rest.

- Initially, apply a light torque to the nyloc full nut Item #1 (P/N !LNUT-07510), such that the axle bolt & cam welded assembly can be rotated / adjusted in the steps below.
- Position the cam *lobe* Item #2 (P/N 28362) so that it is pointing towards the housing / mechanism
- 3. Hang the load block on the open stowage hook under the primary boom.
- 4. Thread the wire rope through the load block in a two-line configuration; the wire rope end / eyelet is pinned in the standard position on the tertiary boom tip
- 5. Actuate the Winch Up function until the load block and wire rope are *taut* enough to prevent the load block from bouncing during transit, *but do not tighten excessively so as to prevent damage to the wire rope.*
- 6. Rotate the axle bolt & cam welded assembly towards the housing (clockwise in standard configuration) until the cam lobe makes contact with and trips the wobble micro switch and actuates the A2B function.
- 7. Once adjusted, torque the nyloc full nut (Item #1) to 100 ft*lbs to prevent further rotational movement of the axle bolt & cam welded assembly.
- 8. Test the A2B trip-point by slackening and tightening the wire rope / load block assembly by actuating Winch Up/Down. NOTE: The point at which the A2B trips WILL vary to some degree, depending upon the winch up speed. It is recommended to actuate the winch up function slowly, which will yield a consistent and repeatable result, in terms of wire rope tension when stowed.



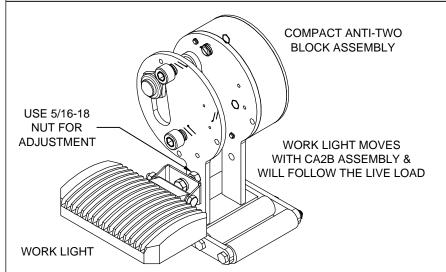


Contact Venturo Tech Support for assistance. 1-800-226-2238 ext. 124

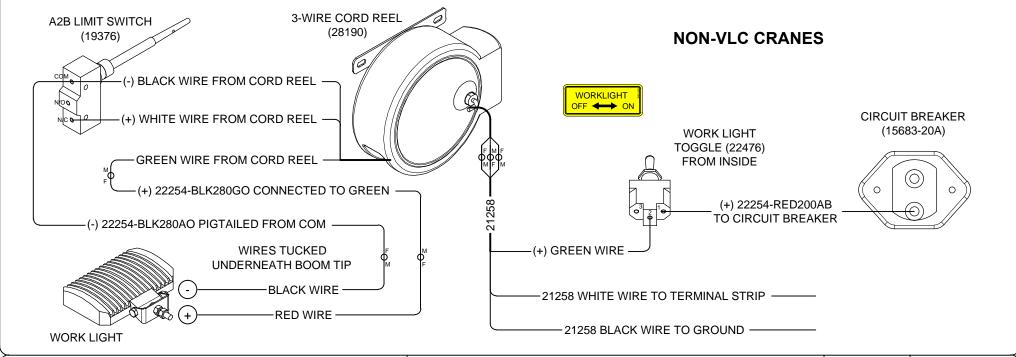


A2B Stowage Cut-out	10-04-21B	C400
ET/HT Cranes w/ Comp. A2B	SUPERSEDES 08-03-21A	28239

WORK LIGHT INSTALLATION: 28240-1 (3-WIRE CORD REEL ON NON-VLC CRANES)



	BILL OF MATERIALS	-1	28240
#	DESCRIPTION		PART NUMBER
1	IDWG; WORK LIGHT INSTALLATION, NON-VLC CRANES	1	28199
2	LED WORK LIGHT	1	27483
3	TERMINAL; 16G, FEMALE, QUICK-CONNECT	3	!TERM16G250QCFI
4	TERMINAL; 16G, MALE, QUICK-CONNECT	4	!TERM16G250QCM
5	WIRE ASS'Y; 16G, BLACK, 28", #6 RING - STRIPPED END	1	22254-BLK280AO
6	WIRE ASS'Y; 16G, BLACK, 28", QCF - STRIPPED END	1	22254-BLK280GO
7	TOGGLE SWITCH; ON / OFF, IP-RATED	1	22476
8	HALF-BOOT, FOR IP-RATED TOGGLE SWITCH	1	19793
9	DECAL; ON/OFF, OPTIONAL WORK LIGHT W/ TOGGLE	1	28307
10	WIRE ASS'Y; 16G, RED, 20", #6 RING - #10 RING	1	22254-RED200AB
11	TERMINAL; 16G, #6 RING, CLOSED-END	1	!TERM16G#6RG

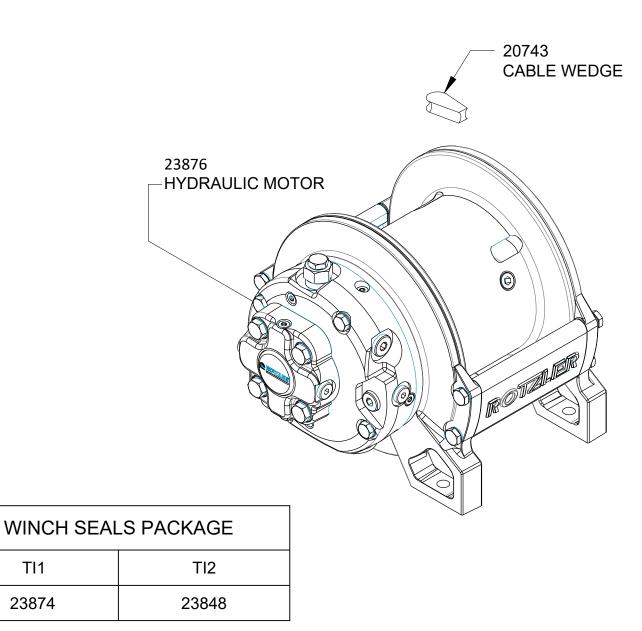




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WORK LIGHT INSTALLATION, 3-WIRE CORD REEL	02-10-21	C400
NON-VLC CRANES	SUPERSEDES -	28199

TI1 & TI2 WINCH REPLACEMENT PARTS DRAWING



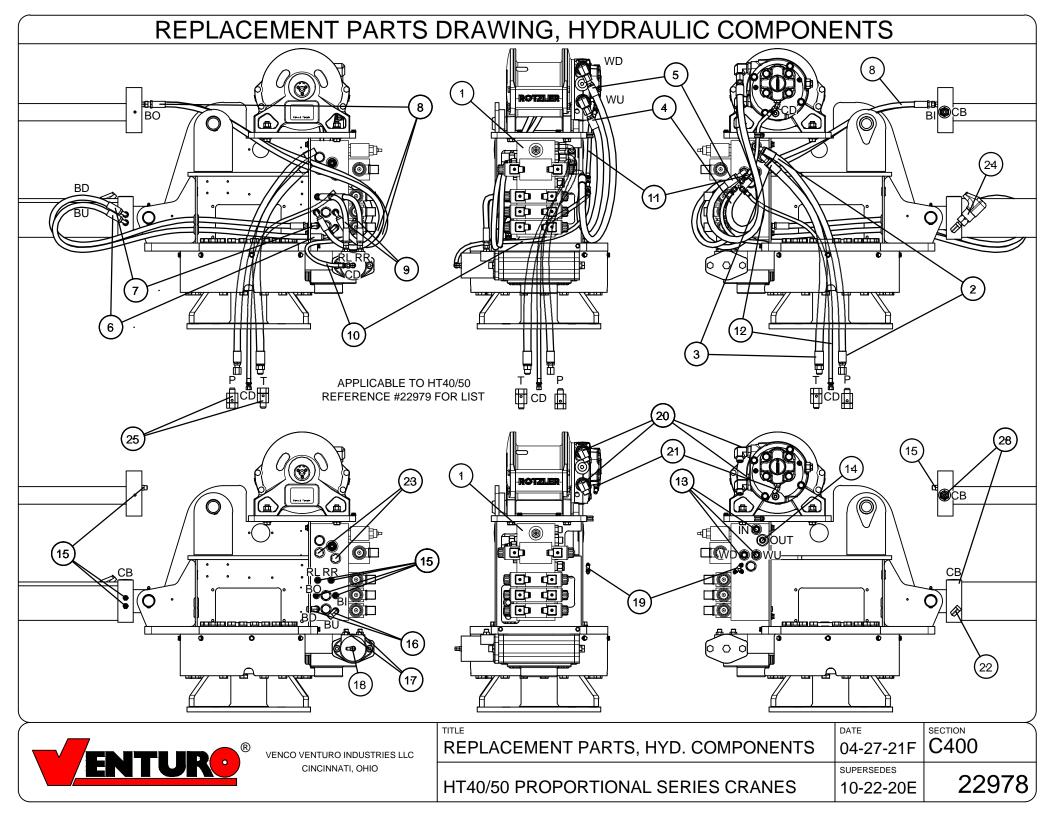
VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO



TI1

23874

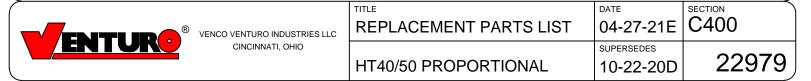
HT40/45/50KX	SUPERSEDES	26896
TI1 & TI2 REPLACEMENT PARTS DRAWING	05-30-23	C400
TITLE	DATE	SECTION



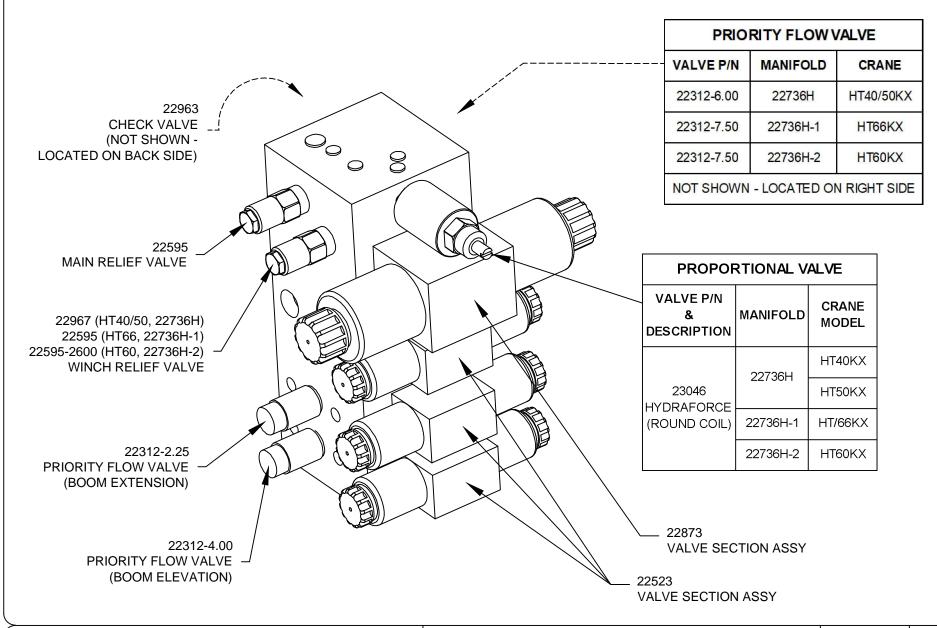
REPLACEMENT PARTS LIST; HYDRAULIC COMPONENTS

#	DESCRIPTION	QTY	PART NUMBER	APPLICATION	
1	VALVE MANIFOLD; PROPORTIONAL, HT40-55KX	1	22736H	REAR OF MECHANISM, INSIDE REAR COVER	
2	HOSE ASSEMBLY; PRESSURE SUPPLY	1	23798	RIGHT SIDE VALVE BANK TO COMPARTMENT SIDE	
3	HOSE ASSEMBLY; RETURN SUPPLY	1	23799	RIGHT SIDE VALVE BANK TO COMPARTMENT SIDE	
4	HOSE ASSEMBLY; WINCH UP	1	27024	RIGHT SIDE VALVE BANK TO WINCH UP PORT	
5	HOSE ASSEMBLY; WINCH DOWN	1	27025	RIGHT SIDE VALVE BANK TO WINCH DOWN PORT	
6	HOSE ASSEMBLY; BOOM UP	1	27026	LEFT SIDE VALVE BANK TO BOOM UP PORT	
7	HOSE ASSEMBLY; BOOM DOWN	1	27027	LEFT SIDE VALVE BANK TO BOOM DOWN PORT	
8	HOSE ASSEMBLY; BOOM IN & OUT	2	27592	EXTENSION PORTS TO LEFT SIDE VALVE BANK	
9	HOSE ASSEMBLY; ROTATION LEFT & RIGHT	2	27598	LEFT SIDE VALVE BANK TO ROTATION PORTS	
10	HOSE ASSEMBLY; WINCH CASE DRAIN	1	22952	ROTATION CASE DRAIN TO T-FITTING JUNCTION	
11	HOSE ASSEMBLY; ROTATION CASE DRAIN	1	22953	WINCH CASE DRAIN TO T-FITTING JUNCTION	
12	HOSE ASSEMBLY; CASE DRAIN OUT	1	22903	T-FITTING JUNCTION TO COMPARTMENT SIDE	
13	FITTING; ADAPTER, STRAIGHT, 80FS-10MO	3	FF6400-0810	RIGHT SIDE VALVE BANK; IN, WU & WD PORTS	
14	FITTING; ADAPTER, STRAIGHT, 80FS-12MO	1	FF6400-0812	RIGHT SIDE VALVE BANK, OUT PORT	
15	FITTING; ADAPTER, STRAIGHT, 60FS-6MO	8	FF6400-0606	ELEVATION, EXTENSION, RL, RR, BI & BO PORTS	
16	FITTING; ADAPTER, 90° ELBOW, 60FS-6MO	2	FF6801-0606	LEFT SIDE VALVE BANK, BU & BD PORTS	
17	FITTING; ADAPTER, STRAIGHT, 60FS-10MO	2	FF6400-0610	ROTATION RIGHT & LEFT PORTS	
18	FITTING; ADAPTER, 90° ELBOW, 4MJ-4MO	1	H6801-0404	ROTATION CASE DRAIN PORT	
19	FITTING; ADAPTER, T-SHAPE, 4MJ-4MJ-4MJ	1	H2603-040404	T-FITTING JUNCTION FOR CASE DRAIN HOSES	
20	FITTING; ADAPTER, 90° ELBOW, 80FS-12MO BRITISH	2	FF3801-8-12	WINCH UP & DOWN PORTS, ROTZLER TI SERIES	
21	FITTING; ADAPTER, 45° ELBOW, 4MJ-4MO BRITISH	1	3802-0404	WINCH CASE DRAIN PORT, ROTZLER TI SERIES	
22	FITTING; ADAPTER, 90° ELBOW, 4MO-4FO	1	H6805-0404	ELEVATION BASE-END, PRESSURE SWITCH	
23	FITTING; PLUG, 10MO	2	H6408-10	LEFT SIDE VALVE BANK, WU & WD PORTS	
24	PRESSURE SWITCH, 2900 PSI RATING	1	17460-2900-21	BASE-END ON ELEVATION CYLINDER	
25	LIVE SWIVEL; CONTINUOUS, STRAIGHT, 6MJ-6FJ	2	22764	PRESSURE & RETURN HOSES, COMPARTMENT SIDE	
26	COUNTER-BALANCE VALVE; CBPA, 50/40, 3000 PSI SYS.	2	20893	ELEVATION & EXTENSION CYLINDER VALVE	
	НУС	RAUL	IC FUNCTION KEY		
Р	PRESSURE SUPPLY	RL	RL ROTATION LEFT		
Т	TANK RETURN	RR	ROTATION RIGHT		
CD	CASE DRAIN	во	воом оит		
IN	PRESSURE IN	ВІ	BOOM IN		
OUT	RETURN OUT	BU	BOOM UP		
WU	WINCH UP	BD	BOOM DOWN		
WD	WINCH DOWN	СВ	COUNTER-BALAN	NCE VALVE	

REFERENCE #22978 FOR REPLACEMENT PARTS DRAWING



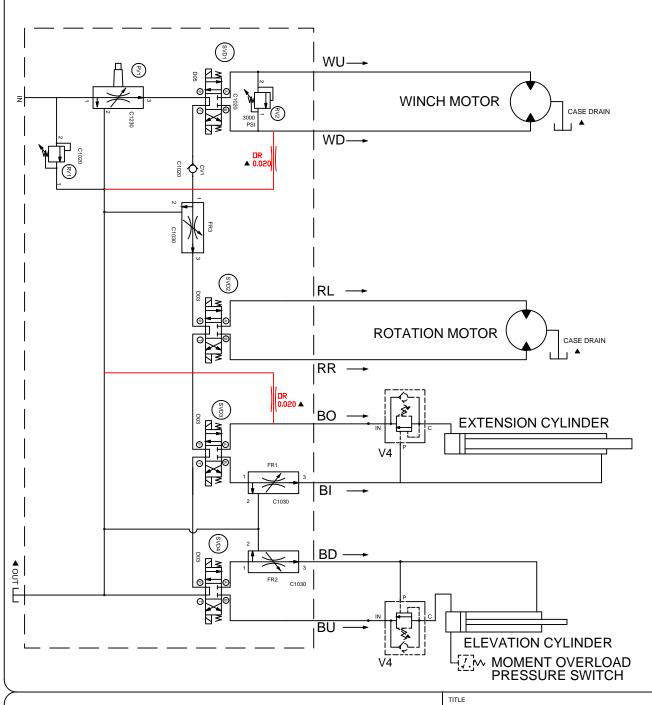
22736 SERIES VALVE MANIFOLD REPLACEMENT PARTS





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

22736 REPLACEMENT PARTS	11-10-22G	C400
HT40/50/60/66KX PROPORTIONAL	SUPERSEDES 11-13-17F	22940



PVI PROPORTIONAL CONTROL VALVE (SIMPLIFIED REP)

RV1 INLET RELIEF VALVE (3000 PSI)

RV2 WINCH RELIEF VALVE

FR1 PRIORITY FLOW REGULATOR - 2.25 GPM FR2 PRIORITY FLOW REGULATOR - 4.00 GPM FR3 PRIORITY FLOW REGULATOR - 6.00 GPM

SVD1 3 POSITION - 4 WAY VALVE SVD2 3 POSITION - 4 WAY VALVE SVD3 3 POSITION - 4 WAY VALVE SVD4 3 POSITION - 4 WAY VALVE

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VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

HYDRAULIC SYSTEM DIAGRAM

12-04-23D

C400

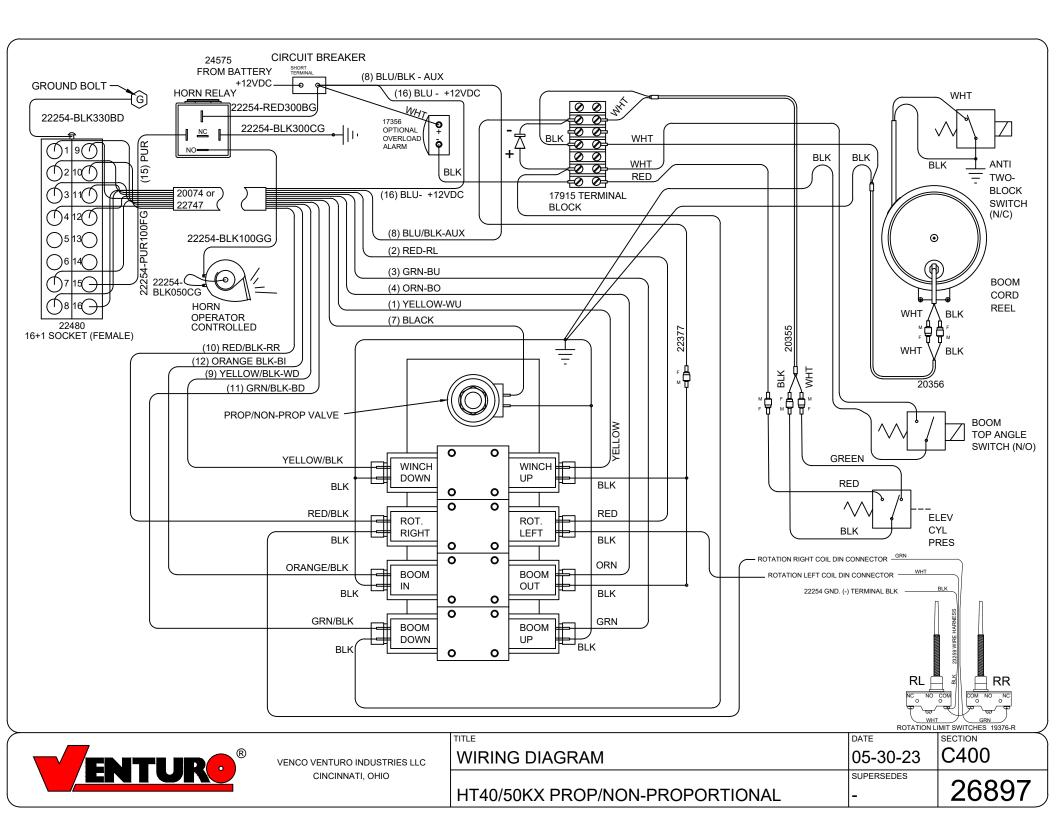
HT40/50/66KX; PROPORTIONAL

DATE
12-04-23D

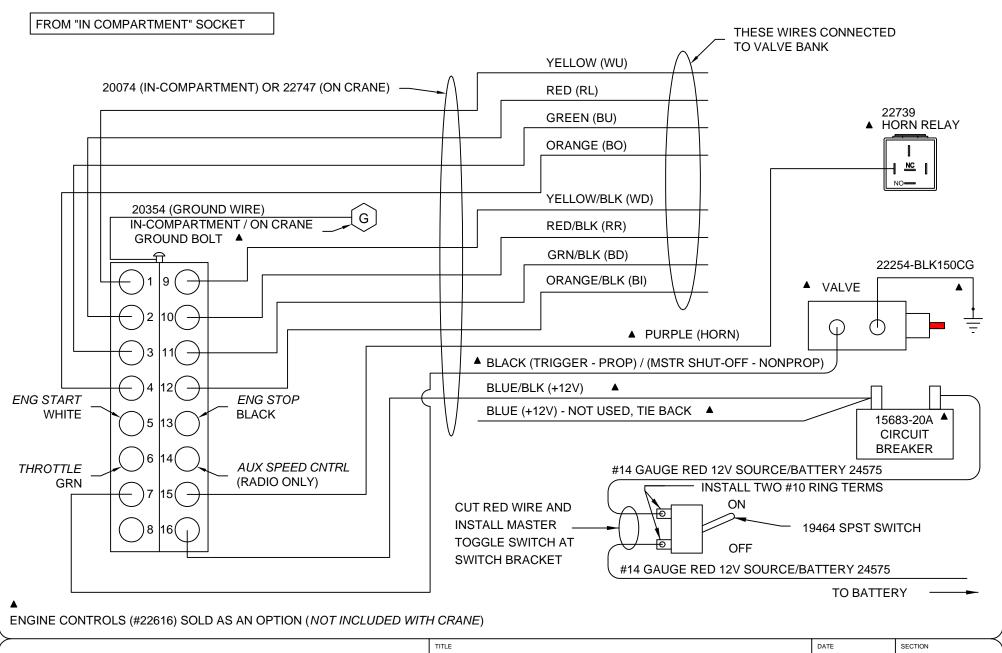
C400

SUPERSEDES
12-11-20C

27352



SOCKET WIRING; 16-PIN, W/ OPTIONAL ENG CONTROLS

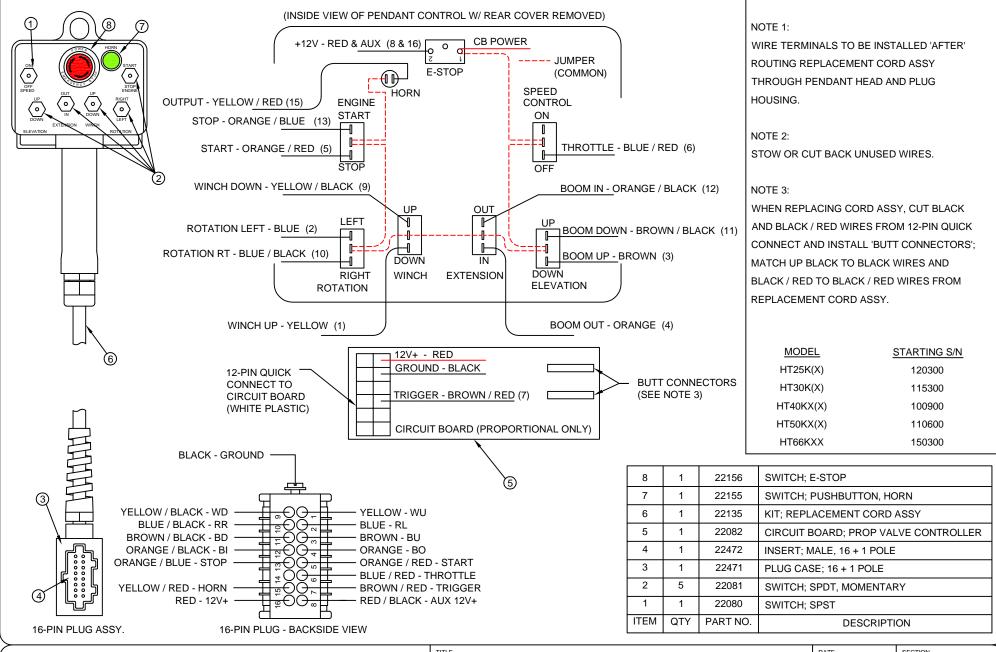




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

I IIILE	DATE	SECTION
SOCKET WIRING; 16 PIN	02-17-15G	C400
	SUPERSEDES	00405
HT CRANES	02-21-14F	22125

21987 PENDANT; PROP, ENG CNTRL, E-STOP / HORN

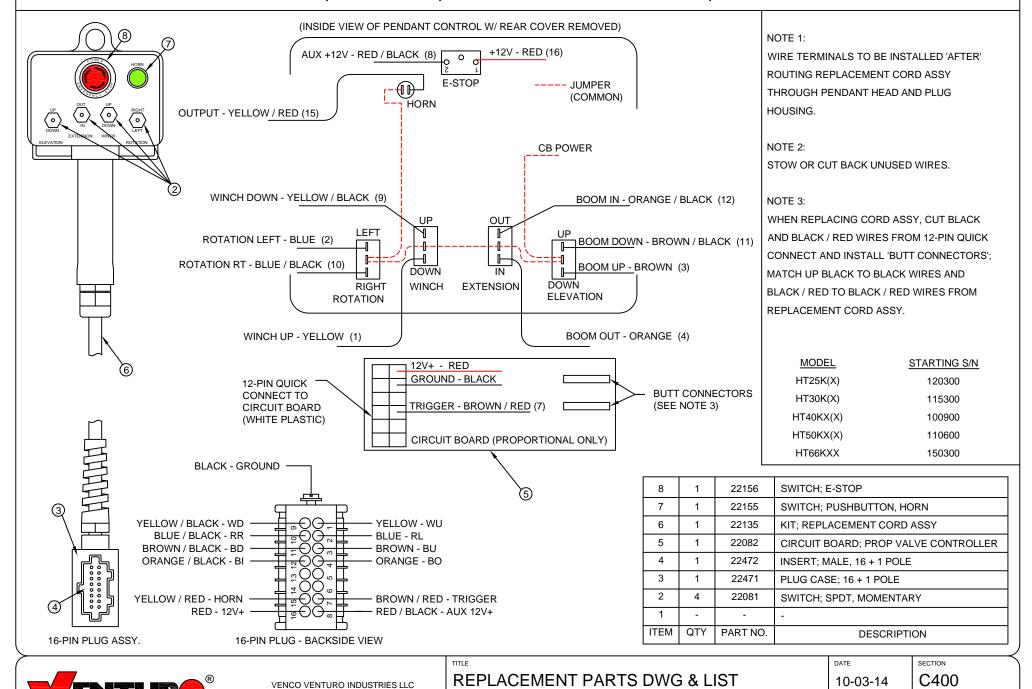




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

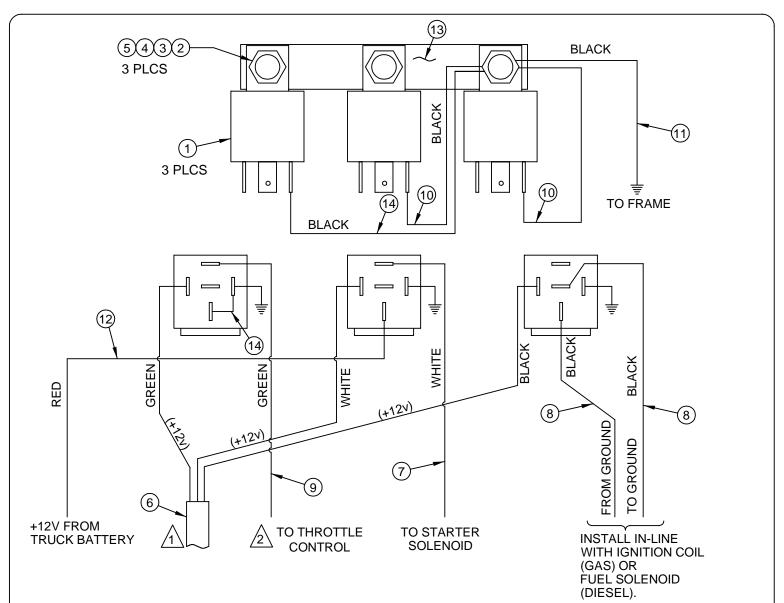
REPLACEMENT PARTS DWG & LIST	10-03-14	C400
21987 PENDANT; PROP, ENG CNTL, ESTP/HRN	SUPERSEDES	23072

21988 PENDANT; PROP, NO ENG CNTRL, E-STOP / HORN



21988 PNDNT; PROP, NO ENG CNT, ESTP/HRN

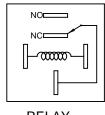
CINCINNATI, OHIO



USER-CONTROLLED +12V INPUT SIGNALS FROM HETRONIC VLC SYSTEM OR ANALOG PENDANT OR RADIO SYSTEM

THROTTLE CONTROL IS DESIGNED TO PROVIDE A GROUND SIGNAL WHEN RELAY IS ACTIVATED

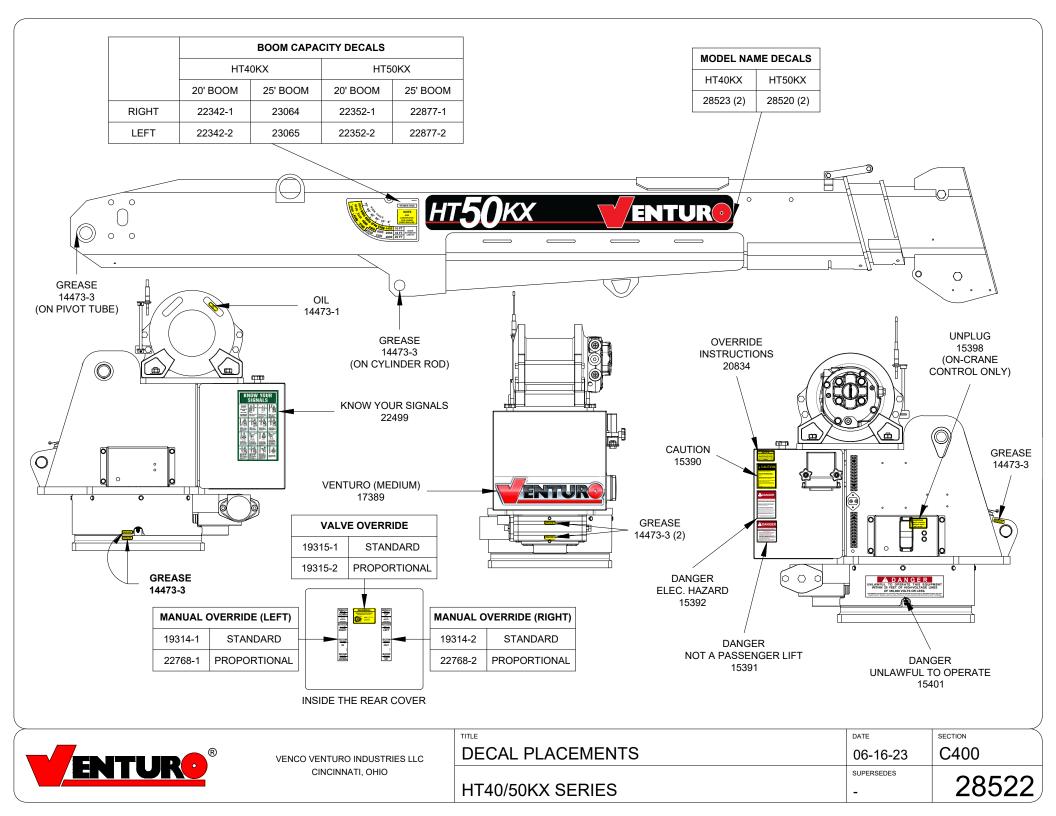
ITEM	QTY	PART#	DESCRIPTION
1	3	22739	RELAY
2	3	!PHCS#1024075	#10-24 X 3/4 PHIL PAN HD BOLT
3	3	!LWSH-#10	#10 LOCKWASHER
4	3	!FWSH-025	#10 WASHER
5	3	!HNUT-#1024	#10 NUT
6	1	22607	WIRE HARNESS - 12/3 SJO
7	1	22609	WHITE - 16 GAGE ELECTRICAL WIRE - 15 FEET LONG
8	2	22610	BLACK - 16 GAGE ELECTRICAL WIRE - 15 FEET LONG
9	1	22611	GREEN - 16 GAGE ELECTRICAL WIRE - 15 FEET LONG
10	2	22612	BLACK - 16 GAGE ELECTRICAL WIRE - 6 INCHES LONG
11	1	22613	BLACK - 16 GAGE ELECTRICAL WIRE - 8 FEET LONG
12	1	22614	RED - 14 GAGE ELECTRICAL WIRE - 15 FEET LONG
13	1	01181	BUSS BAR
14	1	22619	BLACK - 16GA WIRE ASSY - 6" LONG W/ 3 INCH PIGTAIL

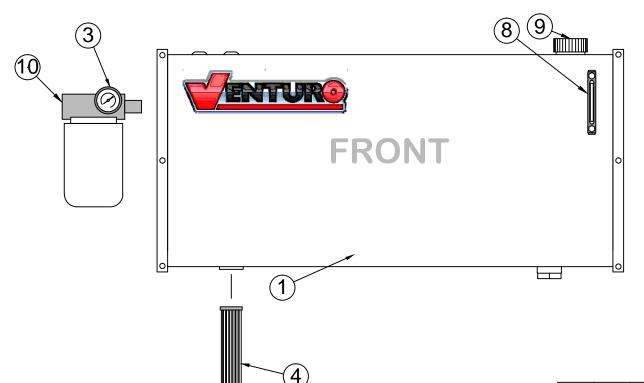


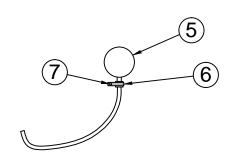
RELAY SCHEMATIC

ENTURO ®	VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO
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.,	TITLE ENGINE START / STOP THROTTLE CONTROL	06-09-20F	SECTION C400
	HT CRANES	02-21-14E	22615







	10	1	19298	FILTER ASSY, RETURN
	9	1	22789	FILLER / BREATHER CAP ASSEMBLY
	8	1	22787	SIGHT GLASS
	7	1	!HWHS02520075-F	HEX WASHER HEAD 1/4-20 X 3/4 SELF TAPPING
	6	1	19275	CLAMP
	5	1	22730	PRESSURE GAUGE ASSEMBLY
	4	1	22788	SUCTION SCREEN - 100 MESH
	3	1	19297	PRESSURE GAUGE - RETURN
	2	-	-	-
	* 1	1	22785	HYDRAULIC RESERVOIR - 25 GAL (18" x 40" x 8")
•	'	•	22998	HYDRAULIC RESERVOIR - 40 GAL (20" x 42" x 11")
	ITEM	QTY	PART NUMBERS	DESCRIPTION



TITLE	DATE	SECTION
RESERVOIR KIT REPL PARTS	12-09-22D	C400
	SUPERSEDES	00004
HT CRANES; 25/40 GAL RESERVOIR	08-04-15C	23224

HT40KX FIELD SERVICE LABEL KITS

HT40KX					
STANDARD 20'	PROPORTIONAL 20'	STANDARD 25'	PROPORTIONAL 25'	;	22920 FIELD SERVICE LABEL KITS (FOR HT40KX)
C	IAU	VTIT	Υ	PART#	DESCRIPTION
2	2	2	2	28523	DECAL; MODEL HT40KX
1	1	1	1	17389	DECAL; VENTURO LOGO, MEDIUM
1	1			22342-1	DECAL; BOOM CAPACITY, HT40KX, 10'/16'/20', RIGHT
1	1			22342-2	DECAL; BOOM CAPACITY, HT40KX, 10'/16'/20', LEFT
		1	1	23064	DECAL; BOOM CAPACITY, HT40KX, 12'/18.5'/25', RIGHT
		1	1	23065	DECAL; BOOM CAPACITY, HT40KX, 12'/18.5'/25', LEFT
1	1	1	1	14473-1	DECAL; OIL
7	7	7	7	14473-3	DECAL; GREASE
1	1	1	1	17813	DECAL; OVERLOAD SENSING SYSTEM
1	1	1	1	14459	DECAL; OVERLOAD ALARM SYSTEM (OPTIONAL PART)
1	1	1	1	22499	DECAL; KNOW YOUR SIGNALS
1	1	1	1	20834	DECAL; MANUAL OVERRIDE, INSTRUCTIONS
1		1		19315-1	DECAL; MANUAL OVERRIDE, SHUTOFF, STANDARD
	1		1	19315-2	DECAL; MANUAL OVERRIDE, SHUTOFF, PROPORTIONAL
1		1		19314-1	DECAL; MANUAL OVERRIDE, STANDARD, LEFT
1		1		19314-2	DECAL; MANUAL OVERRIDE, STANDARD, RIGHT
	1		1	22768-1	DECAL; MANUAL OVERRIDE, PROPORTIONAL, LEFT
	1		1	22768-2	DECAL; MANUAL OVERRIDE, PROPORTIONAL, RIGHT
1	1	1	1	22922	IDWG; FIELD SERVICE LABEL KITS, HT40KX
1	1	1	1	28522	IDWG; DECAL PLACEMENTS, HT40/50KX
1	1	1	1	INST-23233	SAFETY MANUAL, VENTURO CRANES
1	1	1	1	15397	KIT; ACCIDENT PREVENTION SIGNS

			TITLE	DATE	SECTION
	ENTIPO®	VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	FIELD SERVICE LABEL KITS	07-17-23H	C400
	ENION			SUPERSEDES	22022
			HT40KX	06-16-23G	22922

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.

VENCO VENTURO INDUSTRIES LLC

12110 BEST PLACE | CINCINNATI, OHIO 45241 P: 800-226-2238 | F: 513-326-5427 www.venturo.com

Revised: January 2015 12-00073_VNT1-D