

HRBA*G-****

PARTS & INSTALLATION MANUAL HT40KX SERIES

Included in this manual:

HT40KX SERIES

- 6,000 lb Hydraulic Telescopic Service Crane
- Proportional and Non-Proportional
- 20 or 25 ft Fully-Powered, Two-Stage Boom Extension

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

VENCO VENTURO INDUSTRIES LLC

HT40KX SERIES INST-26920 - 7/15/2024 (Rev: A1)

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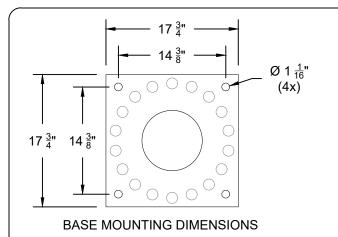
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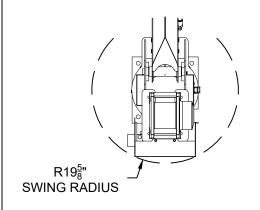
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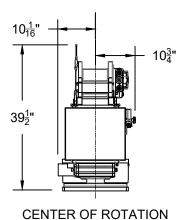
SECTION 100

DESCRIPTION & SPECIFICATIONS







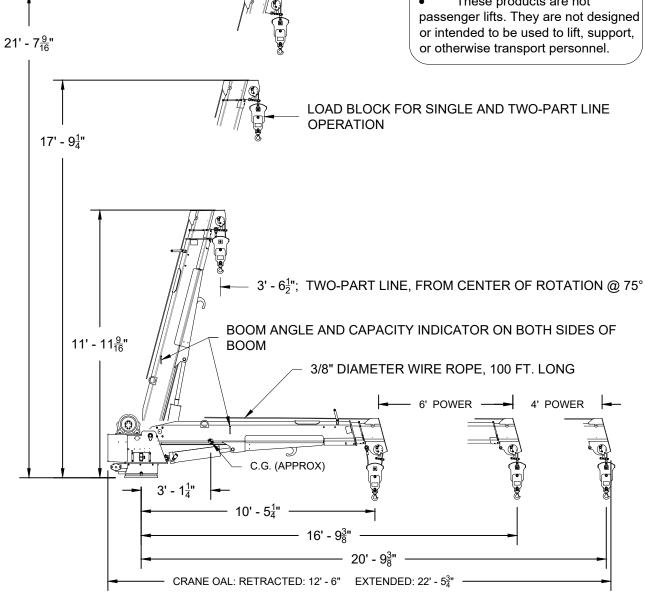


WARNING

These products are not or intended to be used to lift, support, or otherwise transport personnel.

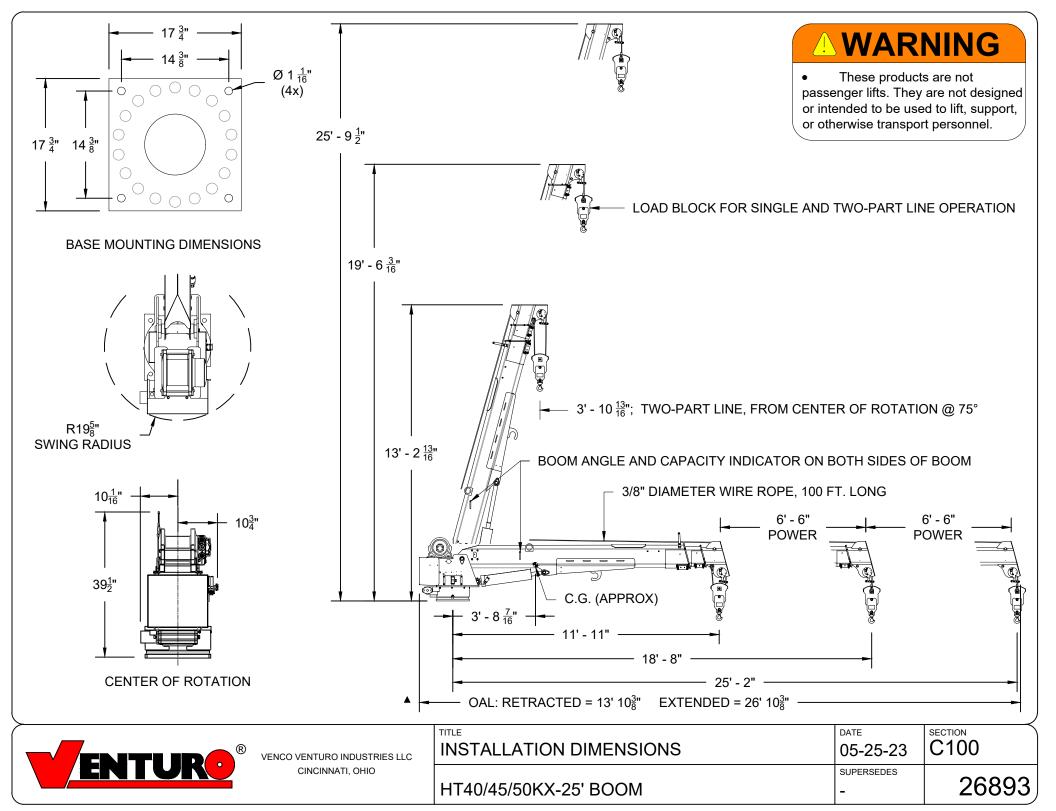
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> > 26894

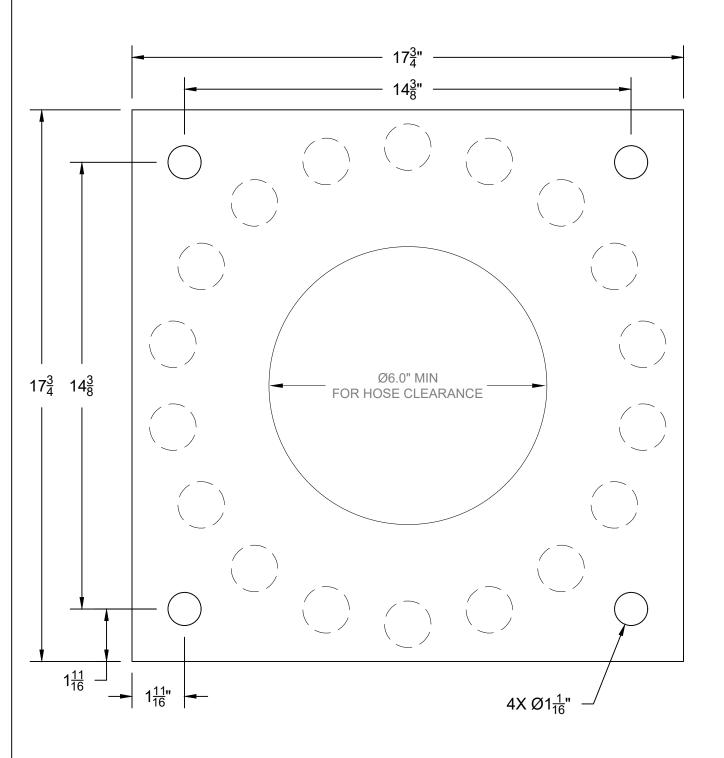




TITLE	DATE
INSTALLATION DIMENSIONS	05-25-23
	SUPERSEDES
HT40/45/50KX-20' BOOM	_



HT40/45/50KX SERIES MOUNTING DIMENSIONS

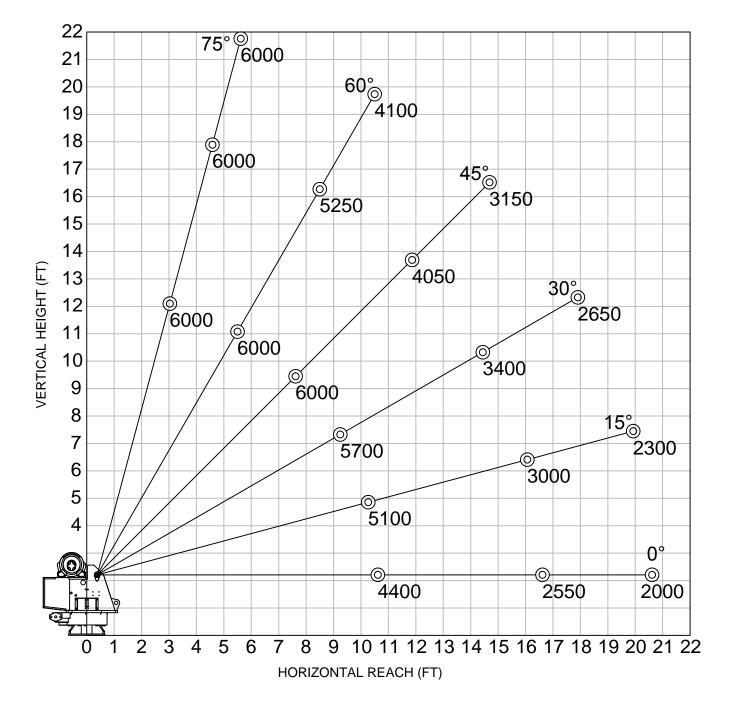


	VENCO VENTURO INDUSTRIES LLC	MOUNTING DIMENSIONS	05-25-23	C100	
ENTUR	CINCINNATI, OHIO	HT40/45/50KX SERIES	SUPERSEDES	26892	

HT40KX, 10'-16'-20' 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

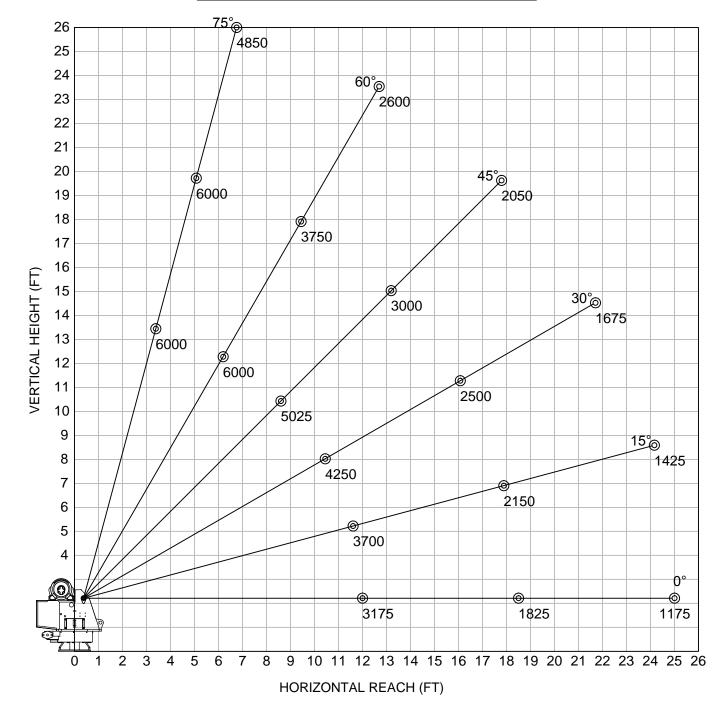


RIES LLC	MAXIMUM LOAD CAPACITY	05-03-16H SUPERSEDES	
	HT40KX, 10'-16'-20' BOOM	06-17-14G	22341

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



ENTURO INDUSTRIES LLC	MAXIMUM LOAD CAPACITY	05-03-16A	C100
inoinnati, offic	HT40KX, 12'-18.5'-25' BOOM	04-23-14	23061

SECTION 150

SAFETY



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 While traveling - minimum clearance distance (nominal, kV, alternating current) (feet) *			
0 - 0.75	(1661)		
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



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

CRANE SAFETY AND HAZARDS HT SERIES CRANES

CAUTIONS

- INSPECT VEHICLE AND CRANE, INCLUDING OPERATION, PRIOR TO USE DAILY. 1.
- 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.
- DO NOT OPERATE, WALK, OR STAND BENEATH BOOM OR A SUSPENDED LOAD. 4.
- ATTACH PENDANT CORD SUPPORT SNAP TO ATTACHMENT POINT BEFORE PLUGGING IN PENDANT. 5.
- 6. UNPLUG PENDANT AND DISENGAGE PTO SYSTEM WHEN CRANE NOT IN USE.
- FOR TRAVEL, BOOM MUST BE IN STOWED POSITION. 7.

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

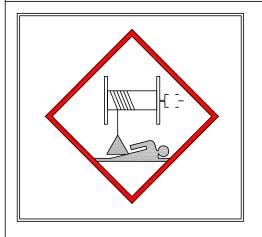
- THIS MACHINE IS NOT INSULATED.
- MAINTAIN SAFE CLEARANCES FROM ELECTRICAL LINES AND APPARATUS.
- YOU MUST ALLOW FOR BOOM SWAY, ROCK OR SAG, AND ELECTRICAL LINE AND LOADLINE SWAYING.
- THIS LIFTING DEVICE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.
- 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.



TITLE
CRANE SAFETY & HZRDS

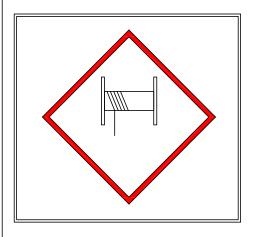
SECTION

WINCH SAFETY WARNINGS



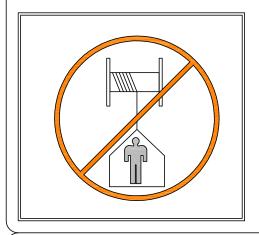
DANGER

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

	DATE OA AAD	SECTION
WINCH SAFETY	02-21-14D	C150
	SUPERSEDES	4004
HT CRANES	04-04-12C	1921

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

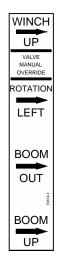
15308-F

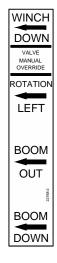
A DANGER

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

SECTION C150

HT40/50/60/66 SERIES

SUPERSEDES 02-21-14D

22181A

A

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: 1

PLACEMENT: Inside of rear cover.

UP

VALVE
MANUAL
OVERRIDE

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: 1

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.

OVERRIDE

NON-PROPORTIONAL VALVE

VALVE

PUSH IN STEM AND ROTATE

WARNING!

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



PROPORTIONAL VALVE

ROTATE STEM

19315-2 Rev E

PART NO.: 20834

DECAL: MANUAL OVERRIDE NOTICE

FUNCTION: To inform the operator of

manual override locations.

QUANTITY: 1

PLACEMENT: Inside rear cover.

NOTICE
FOR MANUAL OVERRIDE
OF CRANE FUNCTIONS,
REMOVE REAR COVER
AND SEE INSTRUCTIONS
INSIDE. 20834-B



| | |

CINCINNATI, OHIO

DECAL DRAWING & LIST

04-14-23H

C150

HT40/50/60/66 SERIES

SUPERSEDES 11-30-22G

22181B

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.





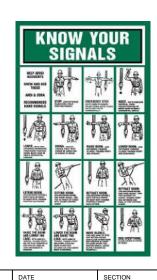
YOU MUST NOT OPERATE THIS CRANE UNLESS:

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.



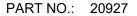
PART NO.: 28523

DECAL: MODEL HT40KX

FUNCTION: Branding.

QUANTITY: 2

PLACEMENT: Boom.



DECAL: CRANE STABILITY

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

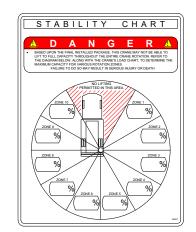
throughout the entire rotation.

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 285

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

LEFT SIDE OF BOOM

RIGHT SIDE OF BOOM

PART NO.: 23065 & 23064

DECAL: HT40-25' CRANE CAPACITY

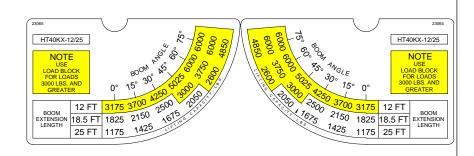
FUNCTION: To show the operator the

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

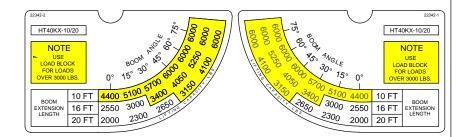
DECAL: HT40-20' CRANE CAPACITY

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



BOOM CAPACITY DECALS
IIILE

	SUPERSEDES	\sim 4
HT40 SERIES	_	24

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.

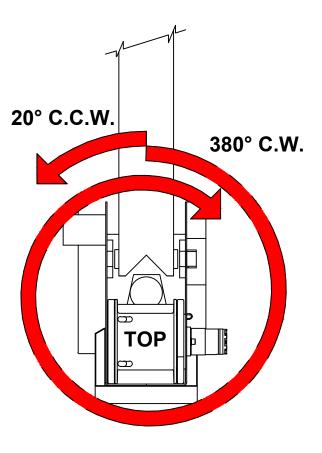
ENGINE START/STOP & THROTTLE CONTROL

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.

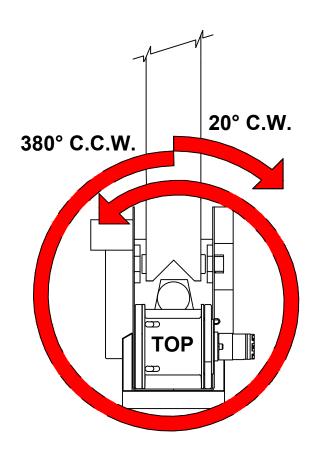
		TITLE	DATE	SECTION	١
ENTIPO®	VENCO VENTURO INDUSTRIES LLC	CRANE INSTALLATION	05-10-21G	C200	
ENION	CINCINNATI, OHIO		SUPERSEDES	00470	Ì
		HT40/50 SERIES CRANES	07-31-15F	22173)

400° ROTATION STOP LOCATION

CURBSIDE



STREETSIDE





TITLE		DATE	SECTION
ROTATION	N STOP LOCATION	03-09-23F	C200
		SUPERSEDES	000=4
400° ROTA	ATION CRANES	05-20-20E	20051

STABILITY TEST - HT40-20' 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
- 5.1. Disconnect the black & white wires from the housing and then connect the black & white wires together to 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.
- 6. Use a test weight weighing a minimum of 2353 lbs, (includes load block weight of 51 lbs.) to a maximum of 2500
- 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: 9.1.
 - 9.1.1. Full extension is reached - Mark the ZONE in question 100%
 - 9.1.2. The truck becomes unstable i.e. a tire lifts off the ground
 - 9.1.2.1. Retract the boom until at least one tire on each corner of the truck is making contact with the ground
 - Use the formula below to determine the allowable % of Rated Capacity for the ZONE in question: 9.1.2.2.
- 10. 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 100 247

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

® VENCO VENTURO INDUSTRIES LLC	STABILITY TEST	03-01-23H	SECTION C200
CINCINNATI, OHIO	HT40-20' SERIES	SUPERSEDES 11-24-21G	20906-40

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

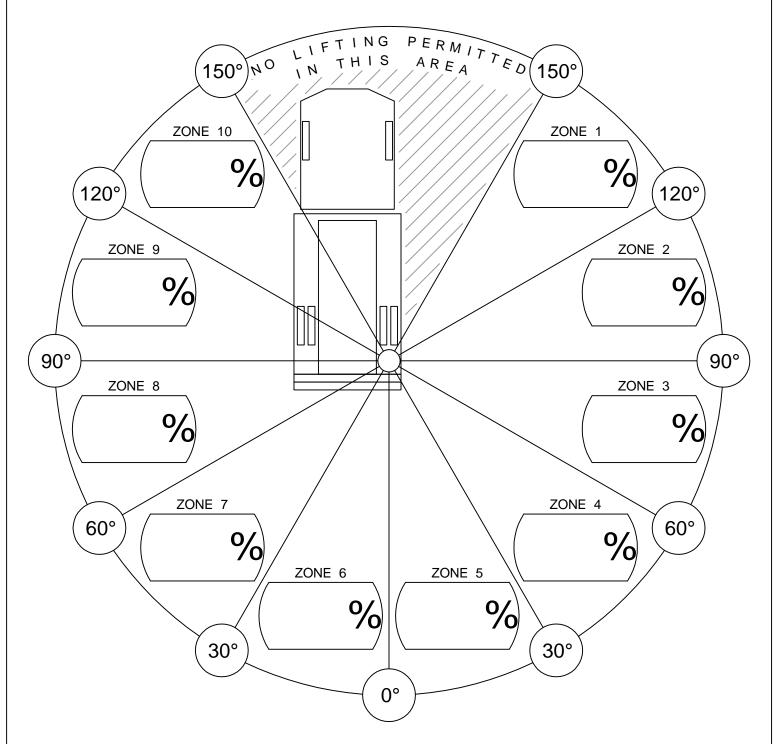
- 1. Locate the truck on firm, level ground and set parking brake.
- 2. Fully deploy stabilizers, making sure they are firmly in contact with supportive ground; use stabilizer pads as required. The tires of the truck should remain in full contact with the ground.
- 3. Inspect wire rope and other key 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	SUPERSEDES 11-24-21C	20906-40B

CRANE STABILITY



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

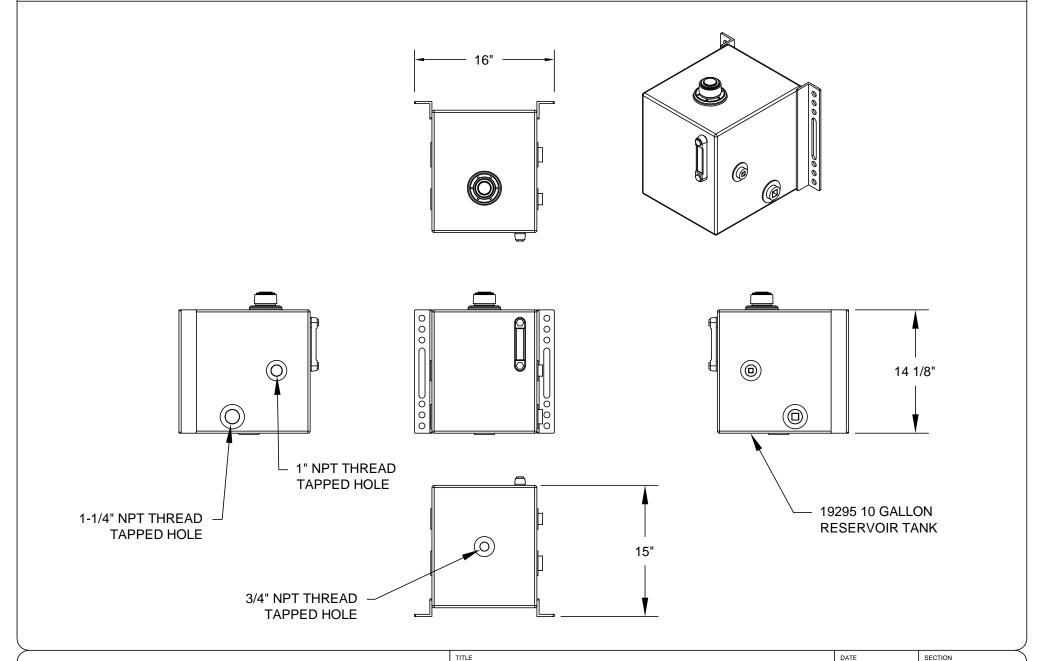
CONDITIONS:

 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

19295; 10 GALLON HYDRAULIC TANK

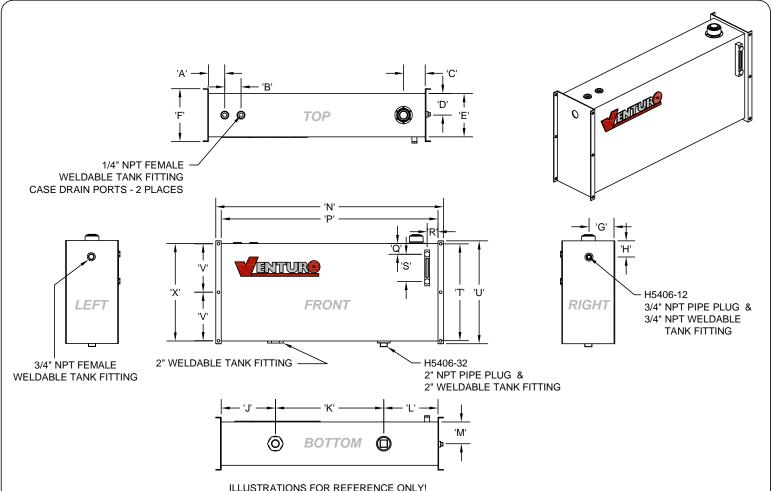




10 GALLON HYDRAULIC TANK	05-01-14A	-
	SUPERSEDES	
VARIOUS APPLICATIONS	03-17-06	

22826

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO



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"	6"			
'K'	30"	30"			
'L'	'L' 5"				
'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

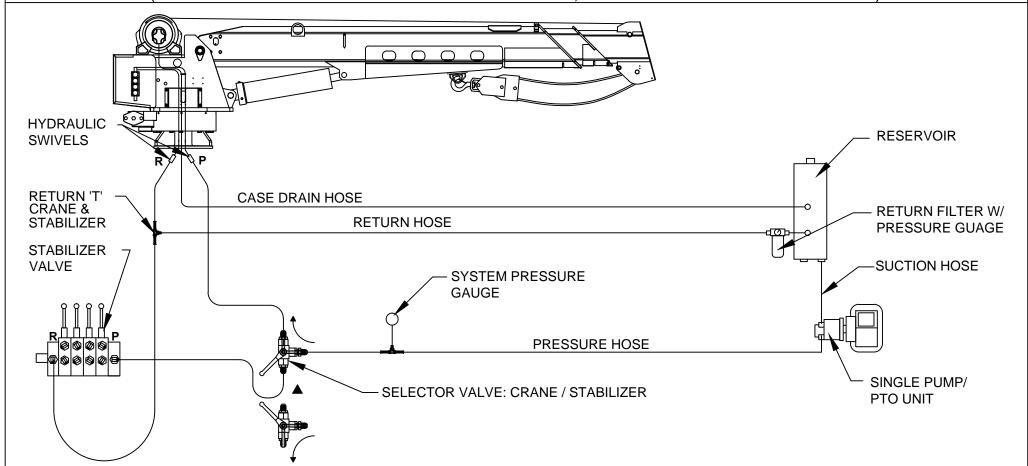
MEASUREMENTS EXCLUDE MOUNTING APARATUSES

CINCINNATI, OHIO



;	RESERVOIR DIMENSIONS		C200
	HYD. TANKS (25/40 GAL.)	06-04-13D	22825

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

CONNECTION GUIDE	E, PAGE 1 / 2
TITLE	

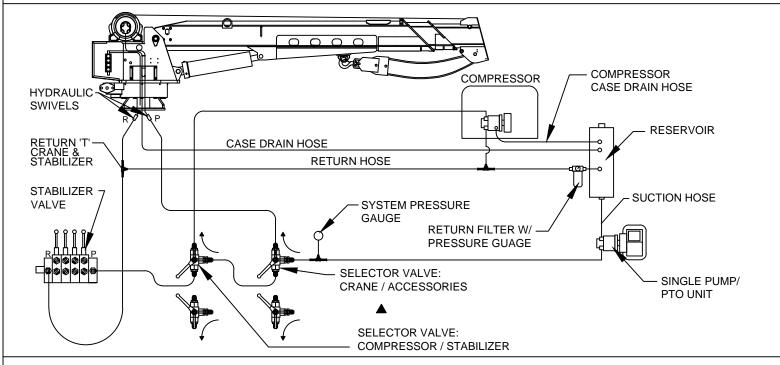
08-09-23C C200

HT CRANES

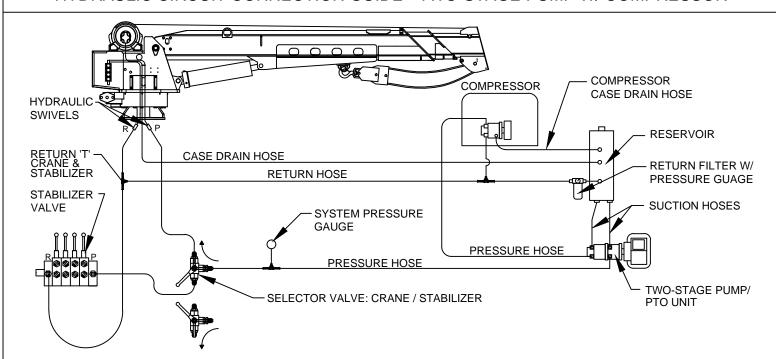
02-21-14B 23015

SECTION

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

CNINCTNI CDE DACE 2/2
CNNCTN GDE, PAGE 2/2

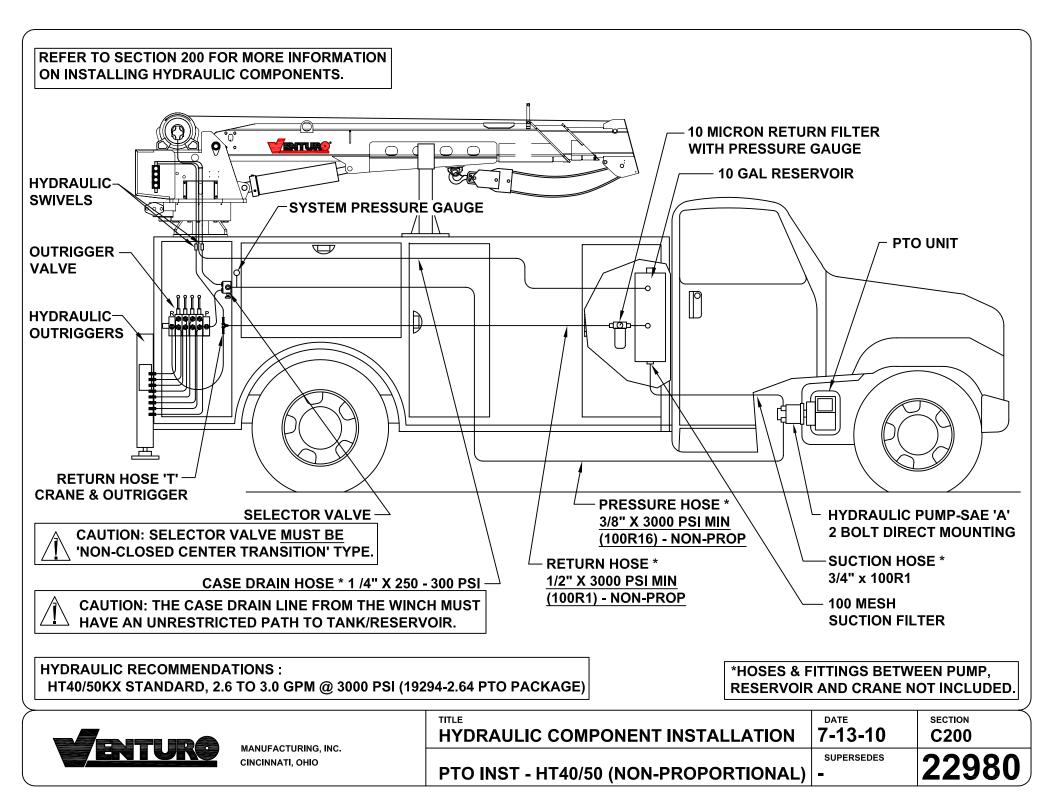
08-08-23C
SUPERSEDES

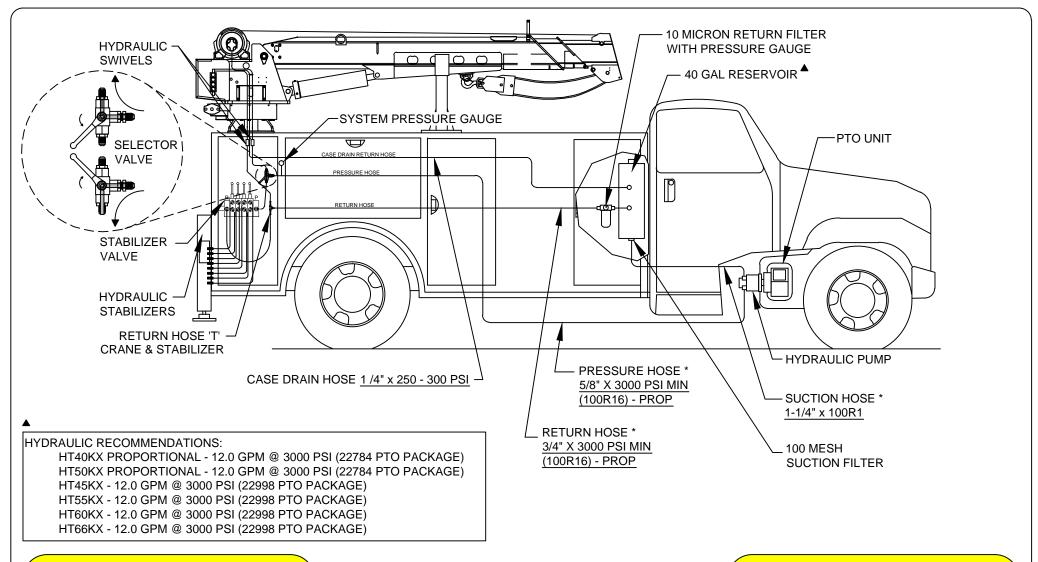
23014

SECTION

HT CRANES

02-21-14B







CAUTION

 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	07-15-24H	C200
	SUPERSEDES	00000
HT40-66, PROPORTIONAL	08-08-23G	22883

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



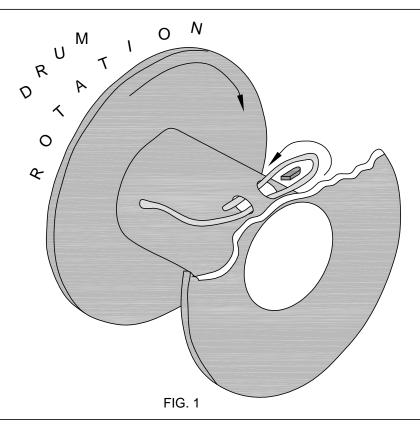
 SELECTOR VALVE MUST BE 'NON-CLOSED CENTER TRANSITION' TYPE VALVE.

CAUTION

 CASE DRAIN MUST RETURN DIRECTLY TO RESERVOIR WITHOUT RESTRICTION.



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 CINCINNATI, OHIO	WIRE ROPE INSTALLTN	02-21-14K	C200		
		SUPERSEDES	00045	ĺ	
		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.



TITLE	DATE	SECTION
MAINTENANCE INFO	06-11-24E	C300
HT25/30/40/50/60/66KX(P)	SUPERSEDES 11-10-22D	23203
11120/00/40/00/00/10/1/(1)	11-10-220	

CRANE OPERATION AND MAINTENANCE INSTRUCTIONS



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 A

If the load exceeds the single-line rated load 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 A

The control pendant should be stored in a compartment or the cab when the crane is not in use.

Before activating the control pendant, inspect the cord(s) and pendant head/switches for damage. With the pendant OFF and the PTO disengaged, actuate all switches in both directions to verify that they all have the same feel/sound and return to the center position.

PTO SYSTEM ▲

Check the hydraulic fluid level in the PTO system reservoir. Engage PTO and set the engine speed to provide the desired hydraulic flow rate per the PTO system instructions.

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.



TITLE
CRANE OP / MNTNC INST

08-08-23A
SUPERSEDES

C200

SECTION

HT CRANES

10-11-18

CRANE OPERATION AND MAINTENANCE INSTRUCTIONS HT40/50KX

CONTROL FUNCTIONS

EMERGENCY STOP - Push to stop crane. Removes pendant voltage supply.

POWER - Supplies voltage to pendant.

HORN - Activates audible alert.

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

BOOM "UP" and "DOWN" - Increases and decreases the boom elevation angle.

BOOM "OUT" and "IN" - Extends and retracts the boom.

ROTATION "L" and "R" - Rotates the crane left and right.

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.

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.

TITLE	DATE	SECTION
CRANE OP & MAINT	06-18-24A	C200
	SUPERSEDES	26025
HT40/50KX	04-23-24	26935

CRANE OPERATION AND MAINTENANCE INSTRUCTIONS, PAGE 3

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.
- 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. Power down the control pendant and store in a body compartment or the cab.
- 6. Turn OFF power to crane.

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 months or 100 hours of operation (whichever comes first). Periodic Change - every 24 months or 300 hours of operation (whichever comes first).

HLP 46 or HLP 68 hydraulic 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

Slew drive (2 or 3 zerk fittings depending on component supplier)

Swing bearing race (2 zerk fittings)

Elevation cylinder base and rod pivots

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

Check electrical connections for looseness and corrosion.

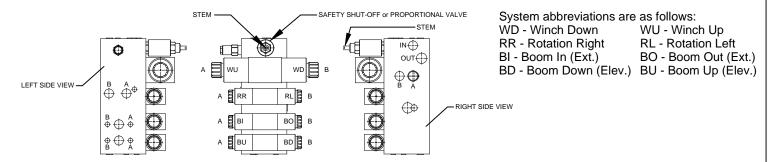
	VENCO VENTURO INDUSTRIES LLC	CRANE OP / MNTNC INST	06-18-24B	C200	
ENION	CINCINNATI, OHIO	HT40/45/50	SUPERSEDES 06-12-24A	23755	

EXPLANATION OF HYDRAULIC VALVE SYSTEMS

OVERVIEW

Venturo's hydraulic cranes are available in two [2] general configurations: Proportional and Non-Proportional. The **Non-Proportional** configuration utilizes a safety shut-off valve which, when *not* actuated, allows hydraulic fluid to bypass the valve bank and return to tank; the crane will not function when the safety shut-off valve is not actuated. When the safety shut-off valve is actuated (control pendant energizes the coil or the coil is manually overridden), hydraulic fluid cycles through the valve bank and allows the crane to function. The **Proportional** configuration utilizes a proportional valve which, in its fully closed and fully opened positions, functions similarly to the safety shut-off valve, but adds the ability to operate the crane at any speed in between these two extremes.

In both the Non-Proportional and Proportional configurations, the four [4] crane functions (winch, rotation, boom elevation, and boom extension) 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 the associated manual override lie on the same side of the valve bank (both 'push').



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 safety shut-off or proportional valve by turning the red stem on the valve as stated below:

Non-Proportional system

For override operation, press stem in and rotate counter-clockwise until it stops.

To return to normal operation, press stem in and rotate clockwise until it stops.

Proportional system

For override operation, rotate stem clockwise (the farther the stem turns, the faster the crane operates). To return to normal operation, roate 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 press firmly. For example, pushing the stem labeled 'A' on the first bank (see illustration above) will actuate winch down.

• For normal crane operation, the safety shut-off or proportional valve <u>MUST</u> be in the 'normal' position (as described above). Test the crane before each use by placing the power toggle switch or trigger in the 'OFF' position and testing each crane function using the manual overrides. If any crane function operates, verify that the red stem on the safety shut-off or proportional valve is in the normal position, then retest.



WIRE ROPE ASSEMBLY

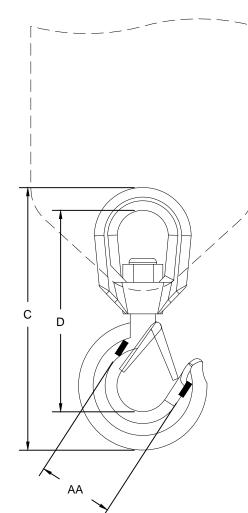
LOAD BLOCK ASSEMBLY

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"

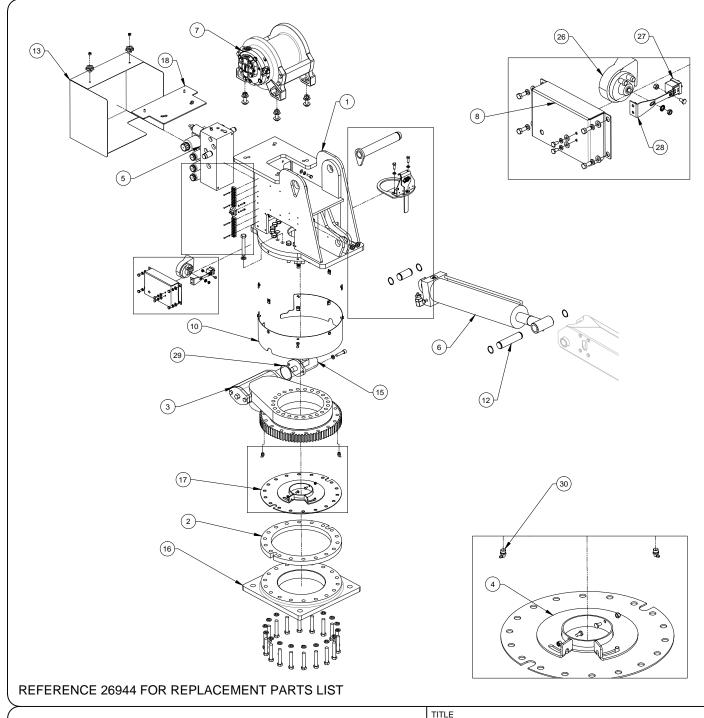


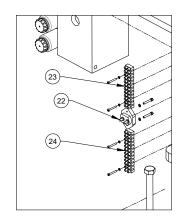
С	WIRE ROPE & HOOK SPECIFICATIONS	05-09-16D	C300
	HT40/50KX	SUPERSEDES 02-21-14C	23231

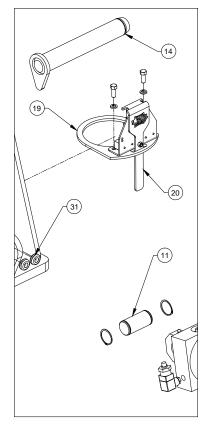
SECTION 400

REPLACEMENT PARTS











VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE
REPLACEMENT PARTS DRWNG - MECHANISM	06-1

06-17-24A C400 SUPERSEDES

HT40/45/50

06-11-24

REPLACEMENT PARTS LIST - MECHANISM

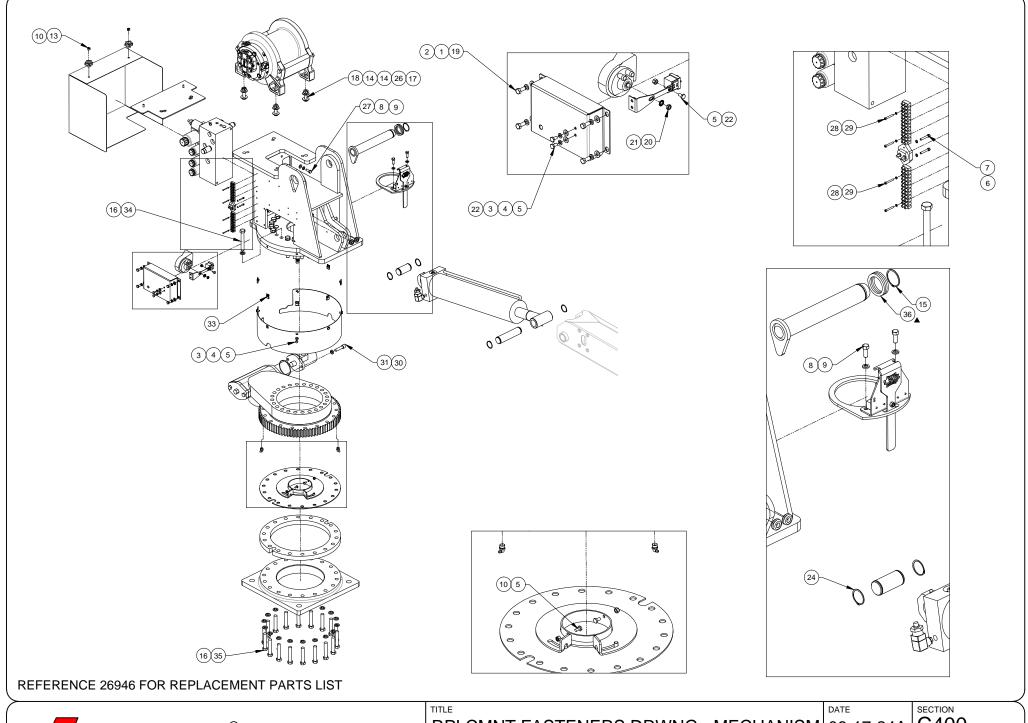
ITEM	QTY.	PART NUMBER	DESCRIPTION	ITEM	Q
1	1	26583	W ELDED ASSEMBLY; HOUSING, MECHANISM	21	
2	1	23662	SPACER PLATE	22	
3	1	22704	SLEWING RING	23	1
4	1	24920	STOP DISK	24	
5	1	22736H-3	HYDRAULIC VALVE MANIFOLD	25	8
6	1	21747	ELEVATION CYLINDER	26	
7	1	22829	HYDRAULIC WINCH	27	
8	2	22715-1	HOUSING SIDE COVER	28	
9	1		ia.	29	
10	1	23644	SLEWING RING COVER	30	
11	1	22256	ELEVATION CYLINDER PIN - INBOARD	31	
12	1	22257	ELEVATION CYLINDER PIN - OUTBOARD	32	
13	1	22842	REAR COVER	33	-
14	1	22721	PIVOT PIN - MAIN BOOM PIVOT	34	
15	1	27276	HYDRAULIC ROTATION MOTOR	35	
16	1	26606	MACHINED BASE	36	
17	1	28473	SLIPPER PLATE W ELD	37	
18	1	28319	REAR COVER MOUNTING PLATE WELDEMENT	38	8
19	1	23680	HOUSING WATER DAM	39	
20	1	28474	ELECTRIC ROTATION STOP ASSEMBLY	40	

ITEM	QTY.	PART NUMBER	DESCRIPTION
21	-		
22	1	15683-20A	CIRCUIT BREAKER; 20A
23	1	19187-12	TERMINAL STRIP (HT45 VLC ONLY)
24	1	19187-12	TERMINAL STRIP
25	-	-	82
26	1	21948	HORN
27	1	22739	HIGH CAPACITY RELAY
28	1	22000	BRACKET; HORN
29	1	OR-152-5	O-RING; ROTATION MOTOR
30	2	IZERK-013-27 NPT-90	FITTING; GREASE, 90°
31	2	26586	GROMMET - RUBBER
32	-		
33	120		
34	-		
35	-		
36	140		
37	-		-
38			
39	-		
40	-		

REFERENCE 26943 FOR REPLACEMENT PARTS DRAWING



TITLE	DATE	SECTION
REPLACEMENT PARTS LIST - MECHANISM	06-17-24A	C400
	SUPERSEDES	00044
HT40/45/50	06-11-24	26944)





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

RPLCMNT FASTENERS DRWNG - MECHANISM

06-17-24A

C400

HT40/45/50

SUPERSEDES **06-11-24**

REPLACEMENT PARTS LIST - HT45KX VLC SERIES; MECHANISM

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	8	!LWSH-031S	LOCK WASHER; 5/16", S/S
2	8	!FWSH-031S	FLAT WASHER; 5/16", S/S
3	7	!FW SH-025S	FLAT WASHER; 1/4", S/S
4	7	!LW SH-025S	LOCK WASHER; 1/4", S/S
5	10	!HHC\$02520050\$	HHCS; 1/4-20 x 1/2" LG, S/S
6	2	!LWSH-#08S	LOCK WASHER; #8, S/S
7	2	!SHC\$#0832100\$	SHCS; #8-32 X 1", S/S
8	4	!LW SH-038	LOCK WASHER; 3/8", ZINC-PLTD
9	4	!HHCS03816100	HHCS; 3/8-16 X 1", ZINC-PLTD
10	2	28327	Knob, hand, 5-point
11	-	90	-
12	-		-
13	2	!LNUT-02520-H	LOCK NUT; 1/4-20, HVY PAT, NYLON
14	8	!FW SH-050	FLAT WASHER; 1/2", GR. 8
15	1	ISRNG-175	SNAP RING; 1-3/4", ZINC-PLTD
16	40	!LWSH-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	!LWSH-031-STAR	LOCK WASHER; 5/16", ZINC

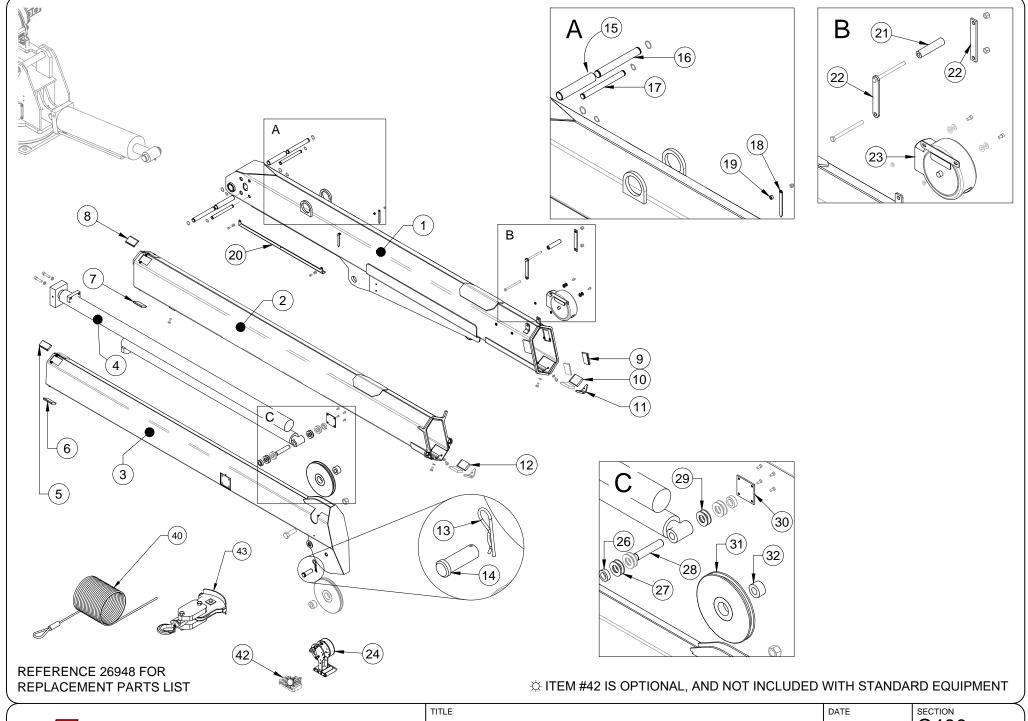
ITEM	QTY.	PART NUMBER	DESCRIPTION
21	1	!HNUT-03118	HEX NUT; 5/16-18, ZINC
22	3	!LNUT-02520SS	NYLOCK HEX NUT 1/4-20
23	(90)	i n .	#8
24	4	!SRNG-150	SNAP RING; 1-1/2", ZINC-PLTD
25	-	-	+
26	4	!LW SH-050	LOCK WASHER; 1/2", GR. 8, ZINC
27	2	!FWSH-038	FLAT WASHER; 3/8", ZINC-PLTD
28	4	!LWSH-#06S	LOCK WASHER; #06. S/S
29	4	!PHPMS#0632100S	PHILIPS-HD PMS; #6-32 X 1", S/S
30	2	!LW SH-050-HC	LOCK WASHER; 1/2", HI-COLLAR
31	2	!SHC\$05013200	SOCKET HEAD CAP SCREW - 1/2-13 X 2 LG
32	-	-	-:
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	2	26609	SHIM - STAINLESS STEEL
37	1-3		
38	(200		
39	-		
40	-		

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

REFERENCE 26945 FOR REPLACEMENT PARTS DRAWING



RPLCMNT FASTENERS LIST - MECHANISM	06-17-24A	C400
HT40/45/50	SUPERSEDES 06-11-24	26946





26595 BOOM - REPLACEMENT PARTS LIST - HT40/45/50 - 20'

1 26596 1 WELDED ASS'Y; PRIMARY BOOM 2 27209 1 WELDED ASS'Y; SECONDARY BOOM 3 21416 1 WELDED ASS'Y; TERTIARY BOOM 4 21744 1 EXTENSION CYLINDER 5 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 6 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 7 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 8 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 9 23217-13 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38 10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER 12 23217-14 2 BOOM PAD; UHMW, 'B', 3.19 x 2.13 x 0.50	
3 21416 1 WELDED ASS'Y; TERTIARY BOOM 4 21744 1 EXTENSION CYLINDER 5 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 6 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 7 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 8 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 9 23217-13 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38 10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER	
4 21744 1 EXTENSION CYLINDER 5 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 6 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 7 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 8 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 9 23217-13 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38 10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER	
5 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 6 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 7 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 8 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 9 23217-13 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38 10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER	
6 23217-1 2 BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44 7 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 8 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 9 23217-13 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38 10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER	
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8 23217-2 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44 9 23217-13 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38 10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER	
9 23217-13 2 BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38 10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER	
10 23217-17 2 BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50 11 23183 2 V-BLOCK, SLIDER	
11 23183 2 V-BLOCK, SLIDER	
12 23217-14 2 BOOM PAD; UHMW, 'B', 3.19 x 2.13 x 0.50	
13 21-08 1 PIN; HAIRPIN COTTER	
14 27272 1 CLEVIS PIN	
15 24535 2 THRUST ROLLER; EXTENSION CYLINDER	
16 22255 2 THRUST PIN; REAR, EXTENSION CYLINDER	
17 22255 2 THRUST PIN; FRONT, EXTENSION CYLINDER	
18 13459-2 2 ARROW	
19 22490 2 SPACER; BOOM ARROW	
20 26940 1 CABLE GUARD BRACKET	
21 21560 1 ROLLER; UHMW, WIRE ROPE GUIDE	

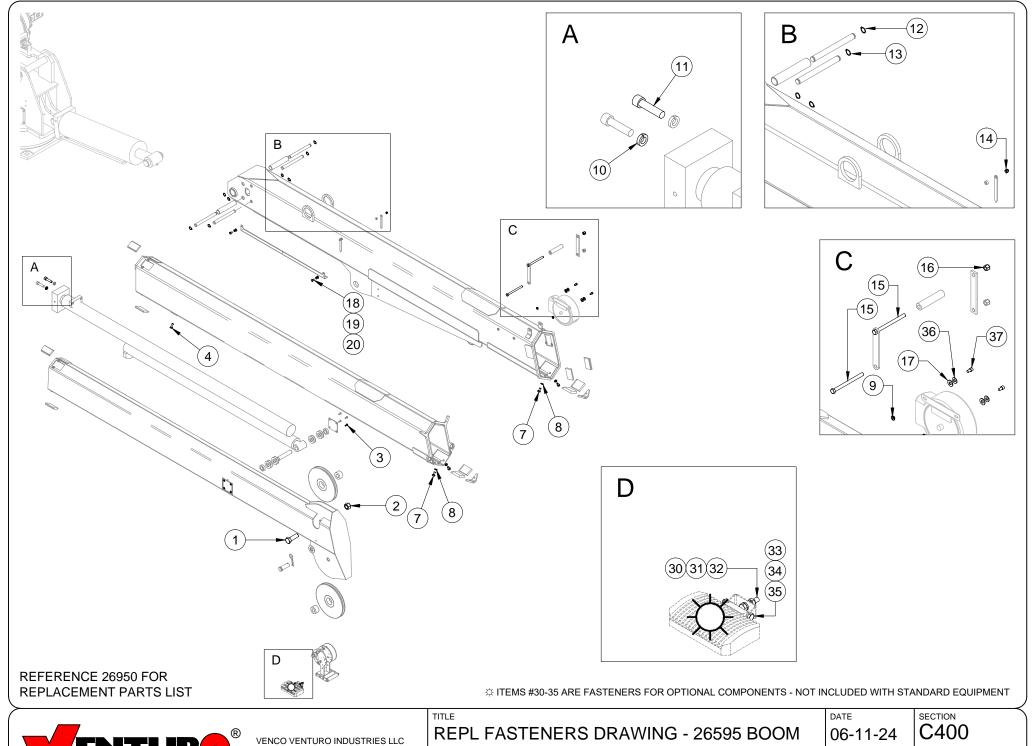
ITEM	PART NO.	QTY	DESCRIPTION	
22	21936	2	FLAT, MOUNT; WIRE ROPE GUIDE	
23	26577-1-20	1	COMPLETE CORD REEL	
24	27469-L-C-11	1	ANTI-TWO-BLOCK ASSEMBLY	
25	-	-	-	
26	21428	2	BUSHING; EXTENSION CYLINDER	
27	12534-8	2	BUSHING; MACHINE, 1" ID, 1-1/2" OD, 14G, ZINC	
28	21405	1	PIN; CYLINDER	
29	12534-2	2	BUSHING; MACHINE, 1" ID, 1-1/2" OD, 10G, ZINC	
30	23116	2	PIN BLOCK REINFORCING	
31	23928	2	CABLE SHEAVE	
32	23929	2	SPACER; SHEAVE	
33	-	ı	-	
34	-	ı	-	
35	-	ı	-	
36	-	ı	-	
37	-	ı	-	
38	-	-	-	
39	-	-	-	
40	17094-3/8-100	1	WIRE ROPE; 100 FT, NO HOOK	
41	-	-	-	
⇔ 42	27483	1	ASS'Y; WORK LIGHT, LED	
	17949-1	1	LOAD BLOCK ASSEMBLY (HT40)	
43	17949-4	1	LOAD BLOCK ASSEMBLY (HT45)	
	17949	1	LOAD BLOCK ASSEMBLY (HT50)	

REFERENCE 26947 FOR REPLACEMENT PARTS DRAWING

☼ OPTIONAL; NOT INCLUDED WITH STANDARD EQUIPMENT



REPLACEMENT PARTS LIST - 26595 BOOM	06-11-24	C400
HT40/45/50 - 20'	SUPERSEDES	26948





CINCINNATI, OHIO

HT40/45/50 - 20'

SUPERSEDES

ITEM#	PART#	QTY	DESCRIPTION	WHERE-USED
1	17059-6	1	SHEAVE AXLE; HHCS 3/4-10 X 2" LG.	TOP SHEAVE
2	!JNUT-07510N	1	JAM NUT; 3/4-10, GR. 5	TOP SHEAVE
3	!CACS02520050S	8	CACS; 1/4-20 X 1/2", S/S	PIN BLCK REINFORCING
4	!HHCS02520125S	2	HHCS; 1/4-20 X 1-1/4", S/S	EXTENSION CYLINDER
5	-	-	-	-
6	-	-	-	-
7	!HHCS03816075S	4	HHCS; 3/8-16 X 3/4", S/S	V-BLOCKS
8	!LWSH-038	4	LOCK WASHER; 3/8", GR. 5, ZINC-PL	V-BLOCKS
9	28198	2	INSULATING SLEEVE WASHER - 5/16"	CORD REEL ASS'Y
10	!LWSH-050-HC	2	LOCK WASHER; 1/2", HI-COLLAR	EXTENSION CYLINDER
11	!SHCS05013200	2	SHCS; 1/2-13 X 2"	EXTENSION CYLINDER
12	!SRNG-075	4	SNAP RING; 3/4"	EXT. CYL. REAR PINS
13	!SRNG-075	4	SNAP RING; 3/4"	EXT. CYL. FRONT PINS
14	!ANUT-02520S	2	ACORN NUT; 1/4-20, S/S	BOOM ARROWS
15	!HHCS04414550	2	HHCS; 7/16-14 X 5-1/2", GR. 5, ZINC	WIRE ROPE GUIDE
16	!LNUT-04414	2	LOCK NUT; 7/16-14, GR. 5, ZINC	WIRE ROPE GUIDE
17	01016	2	FIBER WASHER	CORD REEL ASS'Y
18	!HHCS03118050S	2	HHCS; 5/16-11 X 1/2", S/S	CABLE GUARD BRACKET
19	!LWSH-031S	2	LOCK WASHER; 5/16", S/S	CABLE GUARD BRACKET
20	!FWSH-031S	2	FLAT WASHER; 5/16", S/S	CABLE GUARD BRACKET

ITEM#	PART#	QTY	DESCRIPTION	WHERE-USED
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	1	-	-
25	-	1	-	-
26	-	ı	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
⇔ 30	!HHCS03118125S	1	HHCS; 5/16-18 X 1-1/4", S/S	WORK LIGHT
☼ 31	!HNUT-03118S	2	HEX NUT; 5/16-18, S/S	WORK LIGHT
☼ 32	!FWSH-031S	1	FLAT WASHER; 5/16", S/S	WORK LIGHT
☼ 33	!HHCS02520250S	1	HHCS; 1/4-20 X 2-1/2", S/S	WORK LIGHT
☼ 34	!LWSH-025S	1	LOCK WASHER; 1/4", S/S	WORK LIGHT
☼ 35	!HNUT-02520S	1	HEX NUT; 1/4-20, S/S	WORK LIGHT
36	!FWSH-031	2	FLAT WASHER; 5/16"	CORD REEL ASS'Y
37	!SHCS03118063S	2	SHCS; 5/16-18 X 5/8" LG, S/S	CORD REEL ASS'Y
38	-	-	-	-
39	-	-	-	-
40	-	-	-	-

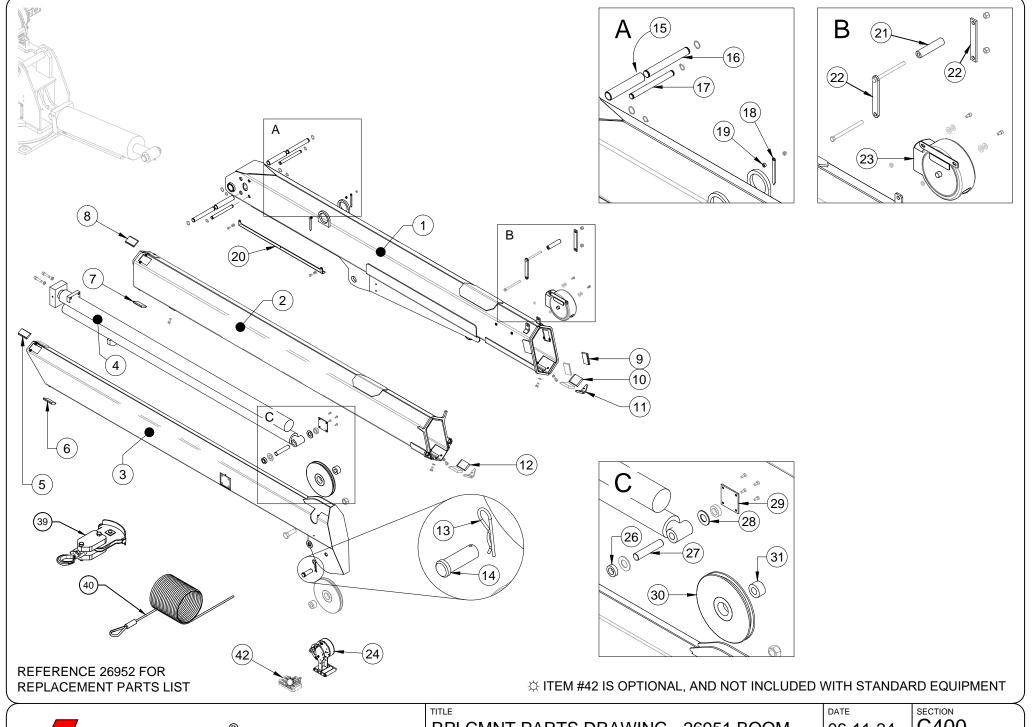
[🜣] ITEMS #30-35 ARE FOR OPTIONAL COMPONENTS - NOT INCLUDED WITH STANDARD EQUIPMENT

SH = SOCKET HEAD HH = HEX HEAD THCS = TRUSS HEAD PHILLIPS SCREW
CACS = COUNTERSUNK ALLEN HEAD CAP SCREW PMS = PAN MACHINE SCREW
S/S = STAINLESS STEEL

REFERENCE 26949 FOR REPLACEMENT FASTENERS DRAWING



| TITLE | REPLCMNT FASTENERS LIST - 26595 BOOM | DATE | 06-11-24 | C400 | C400





REPLACEMENT PARTS LIST - 26593 BOOM

ITEM	PART NO.	QTY	DESCRIPTION
			WELDED ASS'Y; PRIMARY BOOM
1	26594	1	,
2	27175	1	WELDED ASS'Y; SECONDARY BOOM
3	23105	1	WELDED ASS'Y; TERTIARY BOOM
4	21749	1	EXTENSION CYLINDER
5	23217-1	2	BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.50
6	23217-1	2	BOOM PAD; UHMW, 'A', 3.19 x 1.88 x 0.44
7	23217-2	2	BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44
8	23217-2	2	BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.44
9	23217-13	2	BOOM PAD; UHMW, 'A', 3.19 x 2.13 x 0.38
10	23217-17	2	BOOM PAD; UHMW, 'B', 3.19 x 2.50 x 0.50
11	23183	2	V-BLOCK, SLIDER
12	23217-14	2	BOOM PAD; UHMW, 'B', 3.19 x 2.13 x 0.50
13	21-08	1	PIN; HAIRPIN COTTER
14	27272	1	CLEVIS PIN
15	24535	2	THRUST ROLLER; EXTENSION CYLINDER
16	22255	2	THRUST PIN; REAR, EXTENSION CYLINDER
17	22255	2	THRUST PIN; FRONT, EXTENSION CYLINDER
18	13459-2	2	ARROW
19	22490	2	SPACER; BOOM ARROW
20	26940	1	CABLE GUARD BRACKET
21	21560	1	ROLLER; UHMW, WIRE ROPE GUIDE

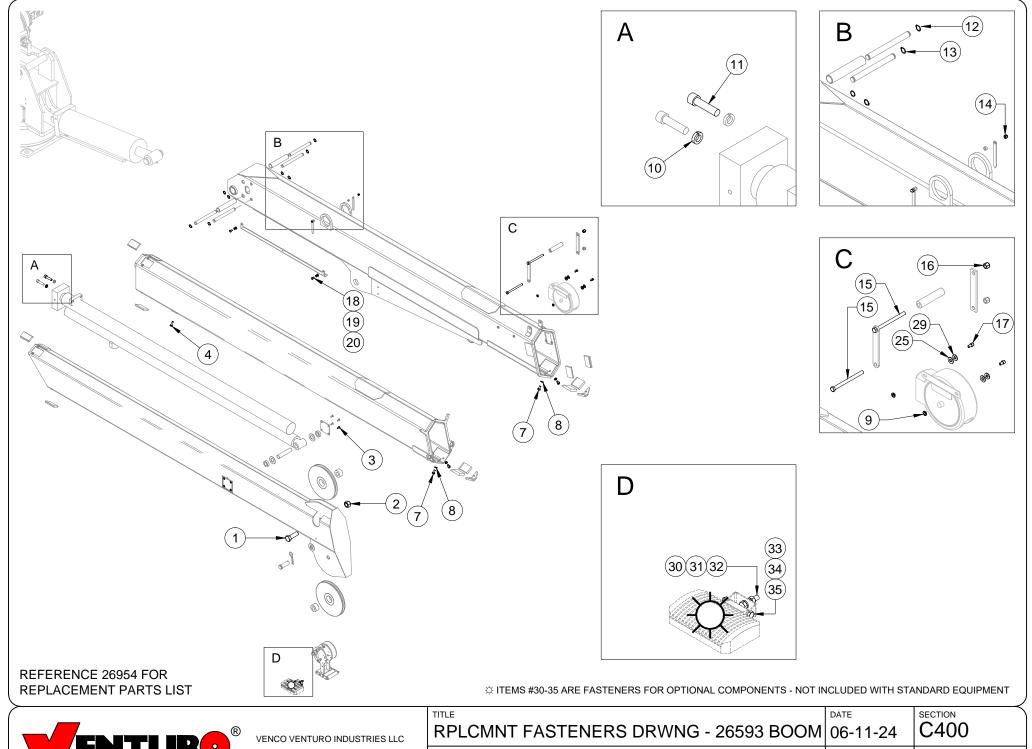
ITEM	PART NO.	QTY	DESCRIPTION	
22	21936	2	FLAT, MOUNT; WIRE ROPE GUIDE	
23	26577-1-25	1	COMPLETE CORD REEL	
24	27469-L-C-11	1	ANTI-TWO-BLOCK ASSEMBLY	
25	-	-	-	
26	21428	2	BUSHING; EXTENSION CYLINDER	
27	21405	1	PIN; PIVOT, EXTENSION CYLINDER	
28	!FWSH-100SAE	2	FLAT WASHER; 1" SAE	
29	23116	2	PIN BLOCK REINFORCING	
30	23928	2	CABLE SHEAVE	
31	23929	2	SPACER; SHEAVE	
32	27476-1	2	SPACER; COMPACT A2B	
33	-	1	-	
34	•	ı	-	
35	•	1	-	
36	•	1	-	
37	-	-	-	
38	-	-	-	
	17949-1	1	LOAD BLOCK ASSEMBLY (HT40)	
20	17949-2	1	LOAD BLOCK ASSEMBLY (HT45)	
39	17949	1	LOAD BLOCK ASSEMBLY (HT50)	
	17949-5	1	LOAD BLOCK ASSEMBLY (HT60)	
40	17094-3/8-100	1	WIRE ROPE; 100 FT, NO HOOK (HT40/45/50/55)	
40	24916-3/8-100	1	WIRE ROPE; 100 FT, NO HOOK (HT60)	
⇔ 42	27483	1	ASS'Y; WORK LIGHT, LED	

REFERENCE 26951 FOR REPLACEMENT PARTS DRAWING

☼ OPTIONAL; NOT INCLUDED WITH STANDARD EQUIPMENT



REPLACEMENT PARTS LIST - 26593 BOOM	06-11-24	C400
HT40/45/50/60 - 25'	SUPERSEDES -	26952



	ENTI IDA®	VENCO VENTURO INDUSTRIES LLC	RPLCMNT FASTENERS DRWNG - 26593 BOOM	1 06-11-24	C400
ENIUR	CINCINNATI, OHIO	HT40/45/50/60 - 25'	SUPERSEDES	26953	
			11110, 10, 00, 00		

ITEM#	PART#	QTY	DESCRIPTION	WHERE-USED
1	17059-6	1	SHEAVE AXLE; HHCS, 3/4-10 X 2", S/S	TOP SHEAVE
2	!LNUT-07510	2	LOCK NUT, FULL, 3/4-10, GR. 5, ZINC	SHEAVES
3	!CACS02520050S	8	CACS; 1/4-20 X 1/2", S/S	PIN BLCK REINFORCING
4	!HHCS02520125S	2	HHCS; 1/4-20 X 1-1/4", S/S	EXTENSION CYLINDER
5	!HHCS02520100S	2	HHCS; 1/4-20 X 1", S/S	INCLINOMETER
6	!LNUT-02520NS	2	LOCK NUT; 1/4-20, NYLON, S/S	INCLINOMETER
7	!HHCS03816075S	4	HHCS; 3/8-16 X 3/4", S/S	V-BLOCKS
8	!LWSH-038	4	LOCK WASHER; 3/8", GR. 5, ZINC-PL	V-BLOCKS
9	28198	2	INSULATING SLEEVE WASHER - 5/16"	CORD REEL
10	!LWSH-050-HC	2	LOCK WASHER; 1/2", HI-COLLAR	EXTENSION CYLINDER
11	!SHCS05013200	2	SHCS; 1/2-13 X 2"	EXTENSION CYLINDER
12	!SRNG-075	4	SNAP RING; 3/4"	EXT. CYL. REAR PINS
13	!SRNG-075	4	SNAP RING; 3/4"	EXT. CYL. FRONT PINS
14	!ANUT-02520S	2	ACORN NUT; 1/4-20, S/S	BOOM ARROWS
15	!HHCS04414550	2	HHCS; 7/16-14 X 5-1/2", GR. 5, ZINC	WIRE ROPE GUIDE
16	!LNUT-04414	2	LOCK NUT; 7/16-14, GR. 5, ZINC	WIRE ROPE GUIDE
17	!SHCS03118063S	2	SHCS; 5/16-18 X 5/8" LG, S/S	CORD REEL
18	!HHCS03118050S	2	HHCS; 5/16-11 X 1/2", S/S	CABLE GUARD BRACKET
19	!LWSH-031S	2	LOCK WASHER; 5/16", S/S	CABLE GUARD BRACKET
20	!FWSH-031S	2	FLAT WASHER; 5/16", S/S	CABLE GUARD BRACKET

ITEM#	PART#	QTY	DESCRIPTION	WHERE-USED
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	01016	2	FIBER WASHER	CORD REEL
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	!FWSH-031	2	FLAT WASHER, 5/16"	CORD REEL
☆ 30	!HHCS03118125S	1	HHCS; 5/16-18 X 1-1/4", S/S	WORK LIGHT
☼ 31	!HNUT-03118S	2	HEX NUT; 5/16-18, S/S	WORK LIGHT
⇔ 32	!FWSH-031S	1	FLAT WASHER; 5/16", S/S	WORK LIGHT
☼ 33	!HHCS02520250S	1	HHCS; 1/4-20 X 2-1/2", S/S	WORK LIGHT
☼ 34	!LWSH-025S	1	LOCK WASHER; 1/4", S/S	WORK LIGHT
☼ 35	!HNUT-02520S	1	HEX NUT; 1/4-20, S/S	WORK LIGHT
36	-	-	-	-
37	-	-	-	-
38	-	-	-	-
39	-	-	-	-
40	-	-	-	-

[🜣] ITEMS #30-35 ARE FOR OPTIONAL COMPONENTS - NOT INCLUDED WITH STANDARD EQUIPMENT

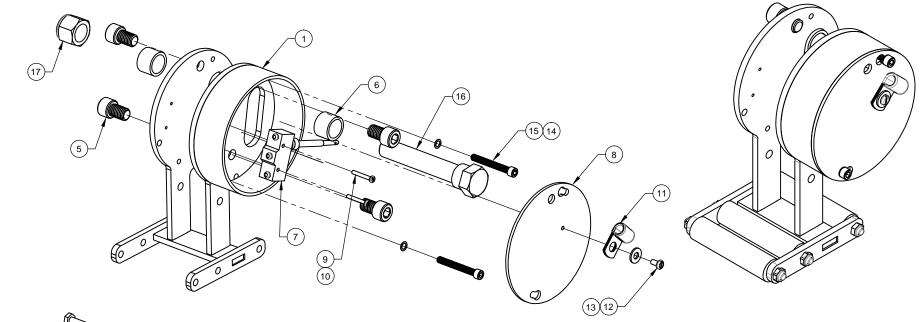
REFERENCE 26953 FOR REPLACEMENT FASTENERS DRAWING

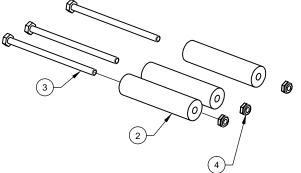
HHCS = HEX HEAD CAP SCREW PMS = PAN MACHINE SCREW S/S = STAINLESS STEEL



PLCMNT FASTENERS LIST - 26593 BOOM	06-11-24	C400
HT40/45/50/60 - 25'	SUPERSEDES -	26954

REPLACEMENT PARTS LIST - 27469-L-C-11 A2B





			T
ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	27468	1	WLDMNT - COMPACT A2B FRAME LH
2	27475	3	WIRE ROPE GUIDE ROLLER
3	!HHCS02520450	3	HHC\$ 1/4-20 X 4-1/2 LG
4	!JNUT-02520N	3	NYLON INSERT JAM NUT - 1/4-20
5	27467	4	SHCS NYLON BLACK 1/2-13 X 3/4 LG
6	27476-1	2	SPACER/PIVOT
7	19376	1	ANTI-TWO BLOCK SWITCH
8	27473	1	COVER PLATE
9	!PHCS#0632100	2	PHILLIPS HEAD CAP SCREW 6-32 X 1 LONG
10	!LWSH-#06	2	LOCK WASHER - 6
11	19269	1	WIRE CLAMP, 3/8 ID VIBRATION DAMPING
12	!PHCS#1032038	1	PAN HEAD CAP SCREW 10-32 X 3/8 LONG
13	!FWSH-025	1	FLAT WASHER - 1/4
14	!SHCS02520200SS	2	SHCS, 1/4-20 X 2.00 LONG, STAINLESS STEEL
15	23379	2	WASHER, NYLON, BLACK, .375" O.D. X .25" I.D.
16	28362	1	COMPACT A2B CUT-OUT CAM WELDED ASSY.
17	LNUT-07510	1	NYLON INSERT LOCK NUT - 3/4-10



VENCO VENTURO INDUSTRIES LLC

CINCINNATI, OHIO

REPLACEMENT PARTS LIST - 27469-L-C-11 A2B

06-11-24 SUPERSEDES

DATE

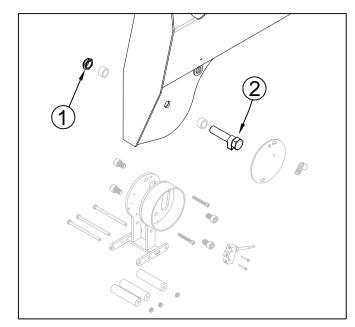
SECTION C400

HT30/40/45/50/60

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.

- 1. 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.
- 2. 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.



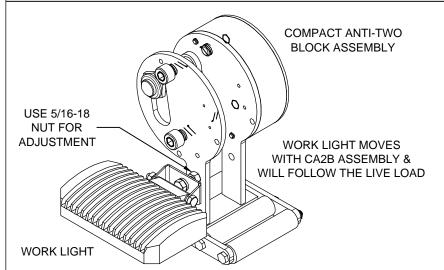


Contact Venturo Tech Support for assistance. 1-800-226-2238 ext. 124

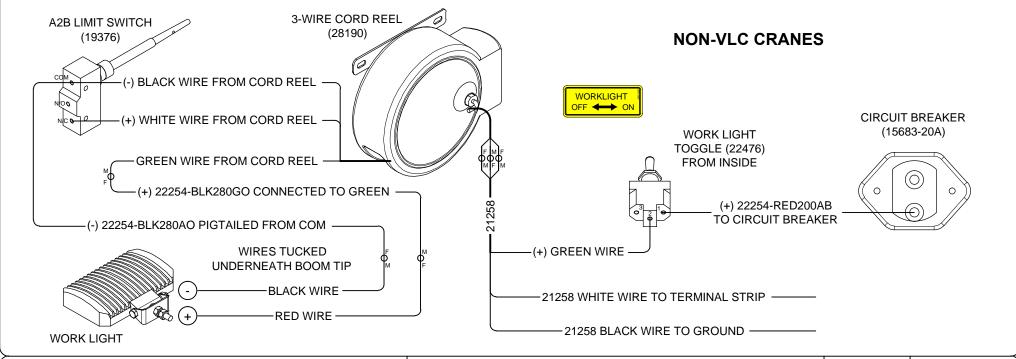


:	A2B Stowage Cut-out	10-04-21B	SECTION C400
	ET/HT Cranes w/ Comp. A2B	SUPERSEDES 08-03-21A	28239

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	ITERM16G250QCFI
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
â	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	ПERM16G#6RG

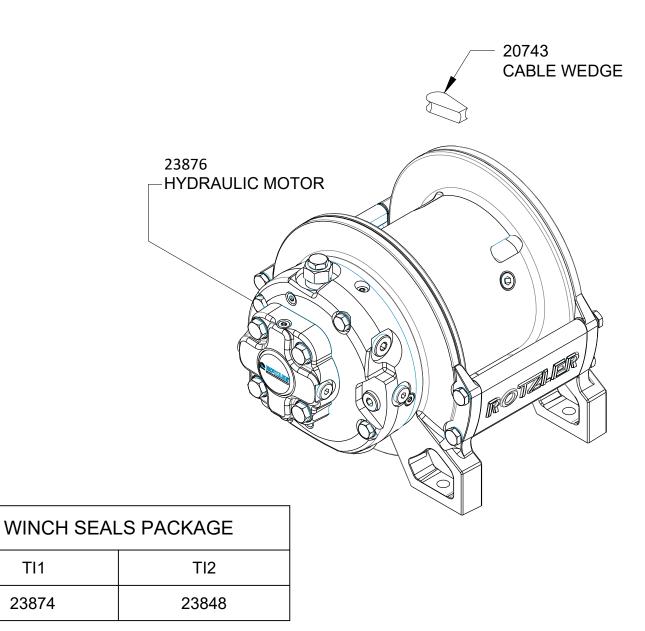




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

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

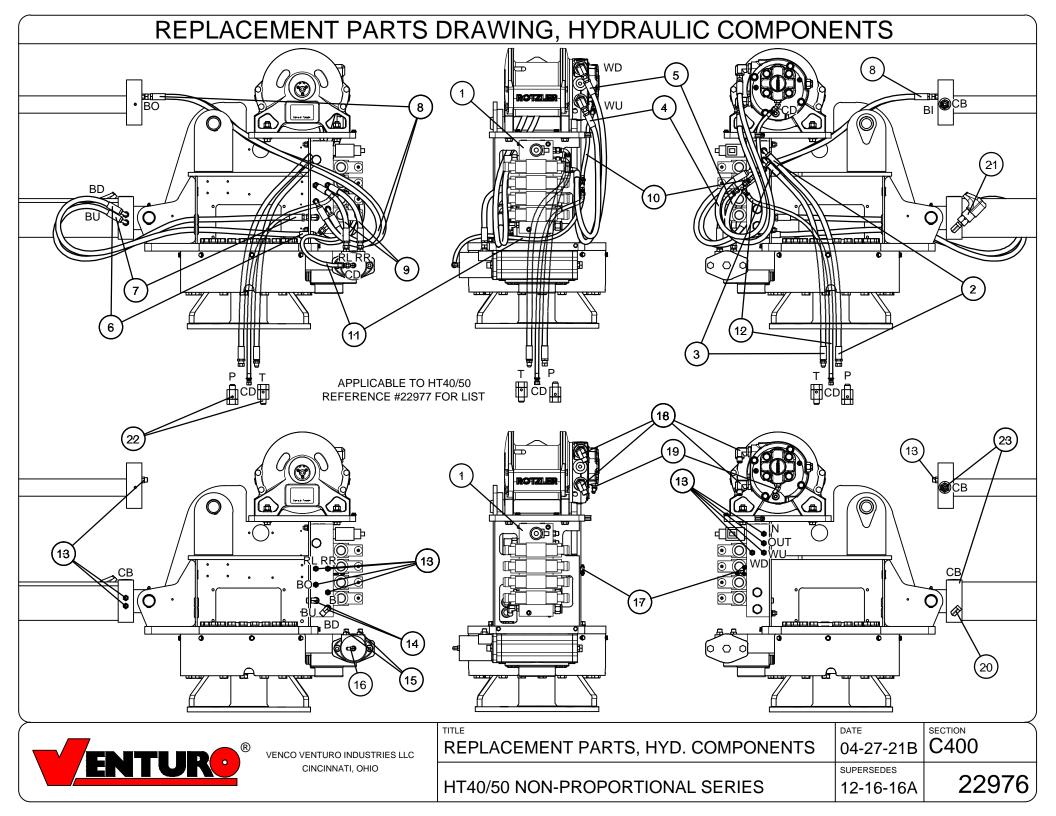
TI1 & TI2 WINCH REPLACEMENT PARTS DRAWING





TI1

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

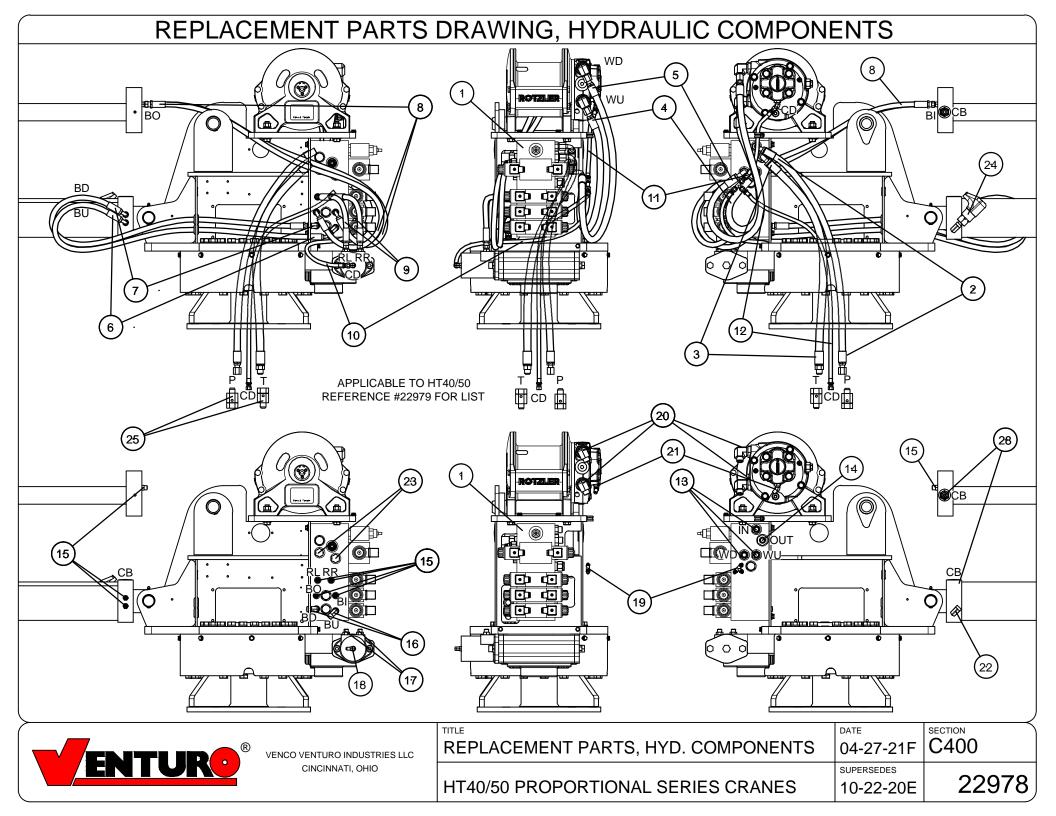


REPLACEMENT PARTS LIST; HYDRAULIC COMPONENTS

#	DESCRIPTION	QTY	PART NUMBER	APPLICATION		
1	VALVE MANIFOLD; NON-PROPORTIONAL, HT40/50KX	1	22501-0-225-225	REAR OF MECHANISM, INSIDE REAR COVER		
2	HOSE ASSEMBLY; PRESSURE SUPPLY	1	23832	RIGHT SIDE VALVE BANK TO COMPARTMENT SIDE		
3	HOSE ASSEMBLY; RETURN SUPPLY	1	23833	RIGHT SIDE VALVE BANK TO COMPARTMENT SIDE		
4	HOSE ASSEMBLY; WINCH UP	1	27046	RIGHT SIDE VALVE BANK TO WINCH UP PORT		
5	HOSE ASSEMBLY; WINCH DOWN	1	27047	RIGHT SIDE VALVE BANK TO WINCH DOWN PORT		
6	HOSE ASSEMBLY; BOOM DOWN	1	27026	LEFT SIDE VALVE BANK TO BOOM UP PORT		
7	HOSE ASSEMBLY; BOOM UP	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	27043	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, 6OFS-6MO	12	FF6400-0606	IN, OUT, WU, WD, RL, RR, BI, BO, EL. & EXT. CYL'S		
14	FITTING; ADAPTER, 90° ELBOW, 6OFS-6MO	2	FF6801-0606	LEFT SIDE VALVE BANK, BU & BD PORTS		
15	FITTING; ADAPTER, STRAIGHT, 60FS-10MO	2	FF6400-0610	ROTATION MOTOR PORTS		
16	FITTING; ADAPTER, 90° ELBOW, 4MJ-4MO	1	H6801-0404	ROTATION CASE DRAIN PORT		
17	FITTING; ADAPTER, T-SHAPE, 4MJ-4MJ-4MJ	1	H2603-040404	T-FITTING JUNCTION, CASE DRAIN HOSES		
18	FITTING; ADAPTER, 90° ELBOW, 60FS-8MO BRITISH	2	FF3801-06-08	WINCH UP & DOWN PORTS, ROTZLER TI SERIES		
19	FITTING; ADAPTER, 45° ELBOW, 4MJ-4MO BRITISH	1	3802-0404	WINCH CASE DRAIN PORT, ROTZLER TI SERIES		
20	FITTING; ADAPTER, 90° ELBOW, 4MO-4FP	1	H6805-0404	ELEVATION CYLINDER, PRESSURE SWITCH		
21	PRESSURE SWITCH, 2900 PSI RATING	1	17460-2900-21	BASE-END ON ELEVATION CYLINDER		
22	LIVE SWIVEL; CONTINUOUS, STRAIGHT, 6MJ-6FJ	2	20684	PRESSURE & RETURN HOSES, COMPARTMENT SIDE		
23	COUNTER-BALANCE VALVE; CBPA, 50/40, 3000 PSI SYS.	2	20893	ELEVATION & EXTENSION CYLINDER VALVE		
	нус	RAUL	IC FUNCTION KEY			
Р	PRESSURE SUPPLY	RL	ROTATION LEFT			
T	TANK RETURN	RR	ROTATION RIGHT			
CD	CASE DRAIN	во	BOOM OUT			
IN	PRESSURE IN	ВІ	BOOM IN			
OUT	RETURN OUT	BU	BOOM UP			
WU	WINCH UP	BD	BOOM DOWN	BOOM DOWN		
WD	WINCH DOWN	СВ	COUNTER-BALAN	NCE VALVE		

REFERENCE #22976 FOR REPLACEMENT PARTS DRAWING

	VENCO VENTURO INDUSTRIES LLC	REPLACEMENT PARTS LIST	04-27-21B	C400	
ENTUR	CINCINNATI, OHIO	HT40/50 NON-PROPORTIONAL	SUPERSEDES 12-19-16A	22977	



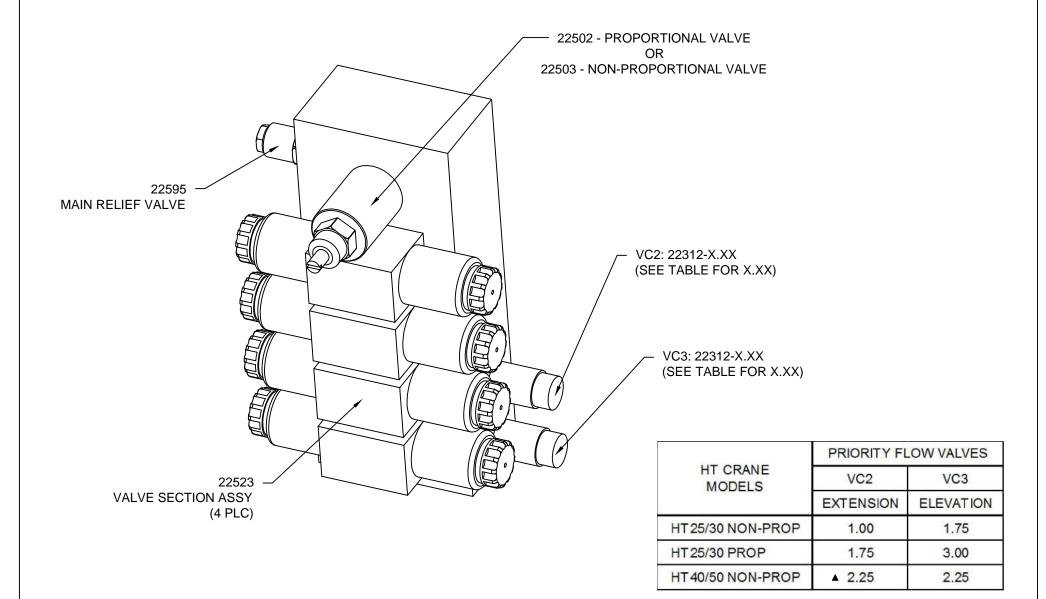
REPLACEMENT PARTS LIST; HYDRAULIC COMPONENTS

#	DESCRIPTION	QTY	PART NUMBER	APPLICATION		
1	VALVE MANIFOLD; PROPORTIONAL, HT40-55KX	1	22736H-3	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	ê	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	ROTATION LEFT			
Т	TANK RETURN	RR	ROTATION RIGHT			
CD	CASE DRAIN	во	воом опт			
IN	PRESSURE IN	ВІ	BOOM IN			
OUT	RETURN OUT	BU	BOOM UP	BOOM UP		
WU	WINCH UP	BD	BOOM DOWN			
WD	WINCH DOWN	СВ	COUNTER-BALAN	NCE VALVE		

REFERENCE #22978 FOR REPLACEMENT PARTS DRAWING

® VENCO VENTU	JRO INDUSTRIES LLC	REPLACEMENT PARTS LIST	04-19-24	C400	
ENTUR	NNATI, OHIO	HT40/50 PROPORTIONAL	SUPERSEDES -	26930	$\Big]$

22501 HYDRAULIC VALVE MANIFOLD, REPLACEMENT PARTS

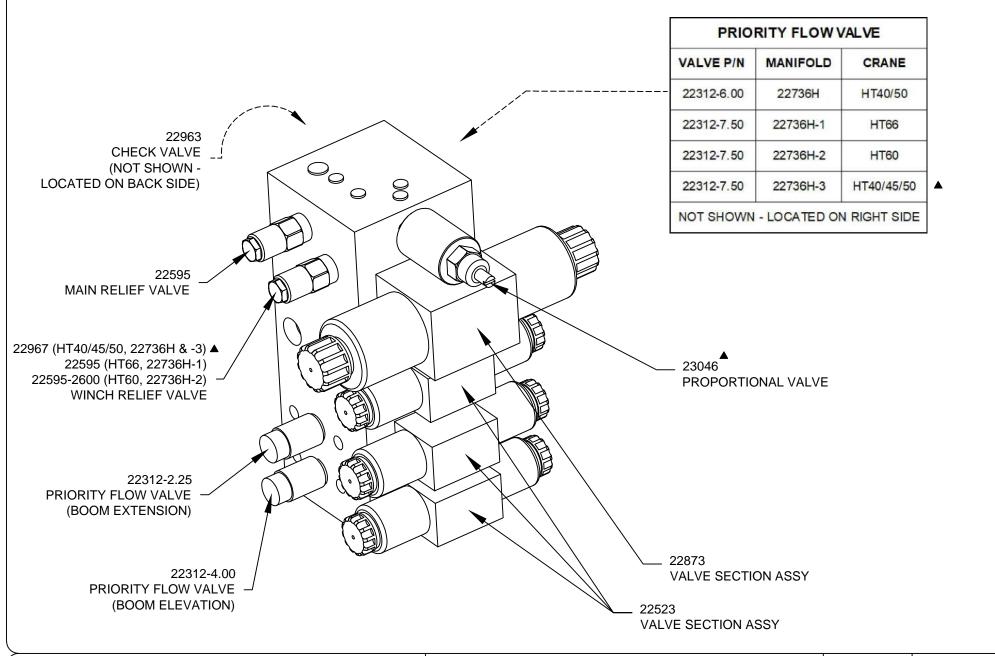




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE	SECTION
REPLACEMENT PARTS	10-22-15B	C400
	SUPERSEDES	2222
22501 VALVE BLOCK, HT SERIES CRANES	03-04-10A	22939

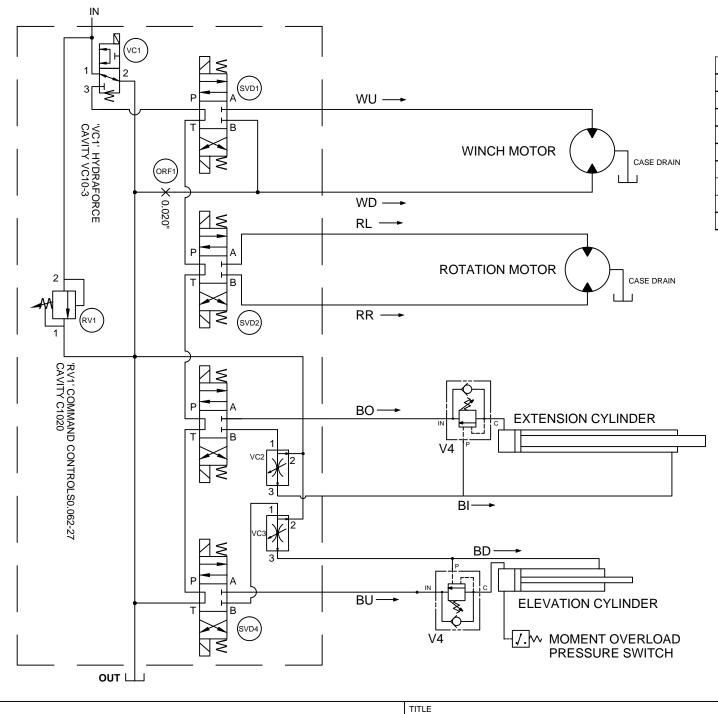
22736 SERIES VALVE MANIFOLD REPLACEMENT PARTS





VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE	DATE	SECTION
22736 REPLACEMENT PARTS	04-19-24H	C400
	SUPERSEDES	00040
HT40/50/60/66KX PROPORTIONAL	11-10-22G	22940

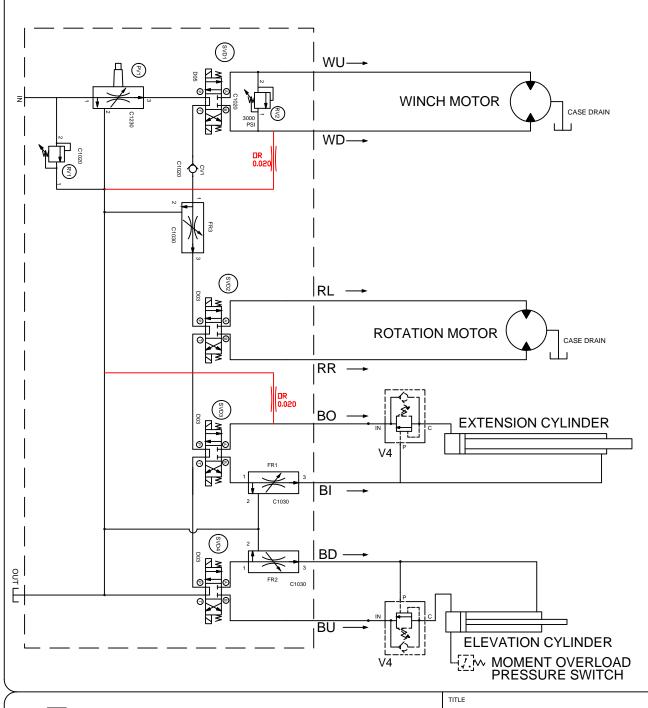


VA1	CONTROL VALVE ASSEMBLY
RV1	RELIEF VALVE
\$VD1	3 POSITION - 4 WAY VALVE SECTION
\$VD2	3 POSITION - 4 WAY VALVE SECTION
SVD3	3 POSITION - 4 WAY VALVE SECTION
SVD4	3 POSITION - 4 WAY VALVE SECTION
∨4	COUNTERBALANCE CARTRIDGE VALVE
VC1	MAIN FLOW VALVE (MANUAL OVERRIDE)
VC2	PRIORITY FLOW REGULATOR VALVE
VC3	PRIORITY FLOW REGULATOR VALVE

ENTURO®

VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

HYDRAULIC SCHEMATIC	06-17-24F	C400
HT40KX NON-PROPORTIONAL	SUPERSEDES 12-04-23E	22486



PVI PROPORTIONAL CONTROL VALVE (SIMPLIFIED REP)
RV1 INLET RELIEF VALVE
RV2 WINCH RELIEF VALVE

SECTION

06-17-24E

12-04-23D

SUPERSEDES

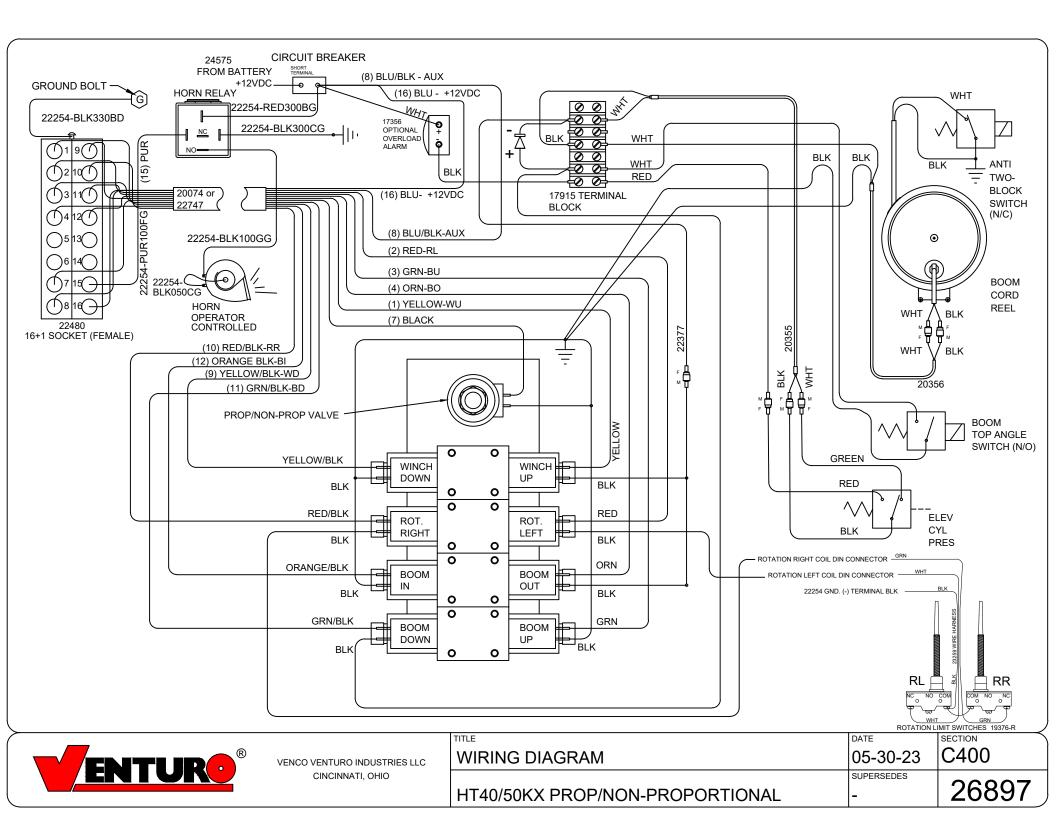
C400

27352

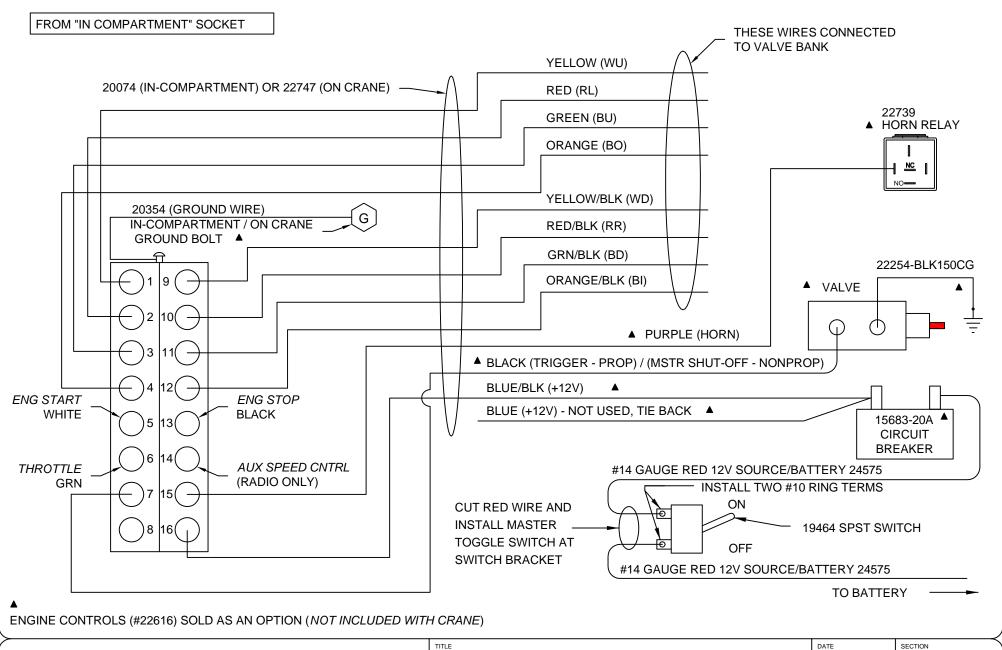
FR1 PRIORITY FLOW REGULATOR
FR2 PRIORITY FLOW REGULATOR
FR3 PRIORITY FLOW REGULATOR
SVD1 3 POSITION - 4 WAY VALVE
SVD2 3 POSITION - 4 WAY VALVE
SVD3 3 POSITION - 4 WAY VALVE

SVD4 3 POSITION - 4 WAY VALVE





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

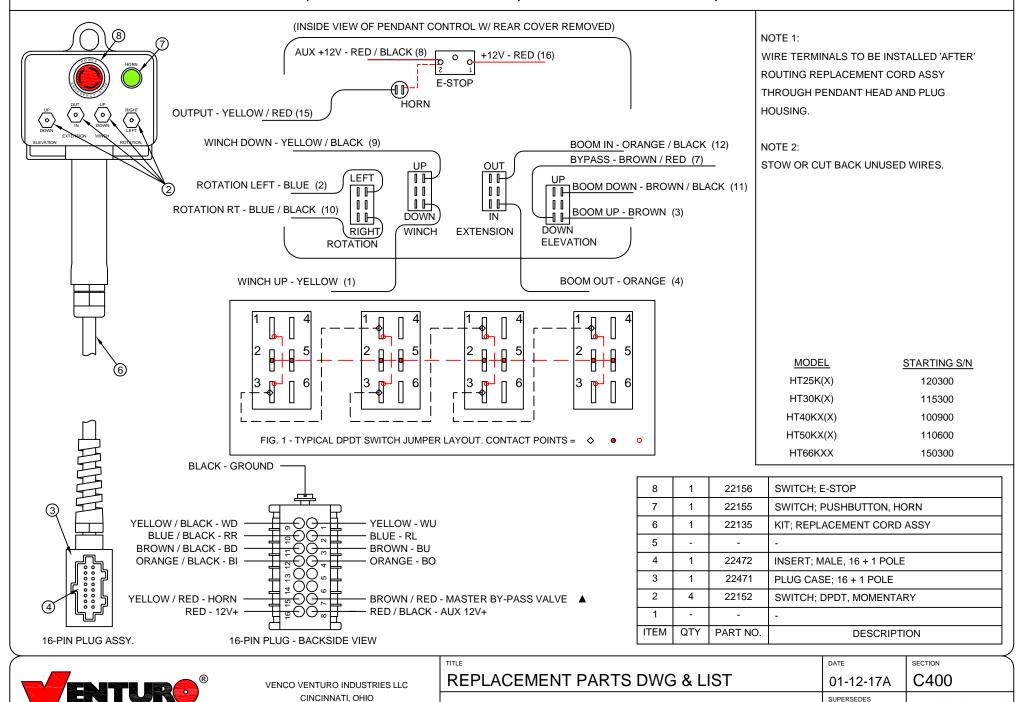




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

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

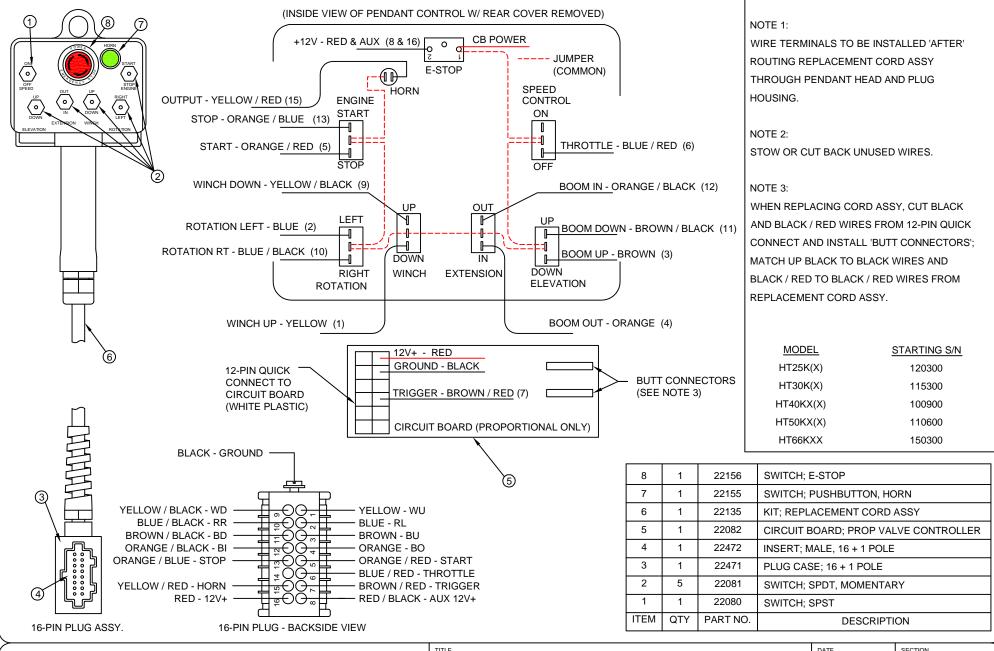
21989 PENDANT; HT CRANES, NON-PROP, E-STOP / HORN



21989 PNDNT; HT, NON-PROP, ESTP/HRN

10-03-14

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

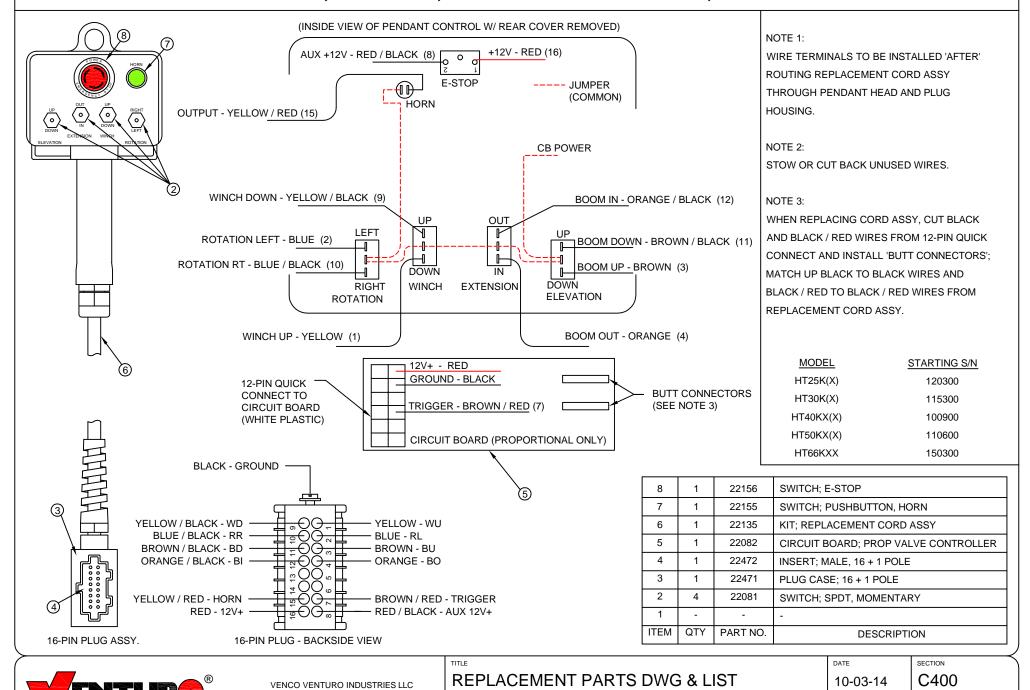




VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

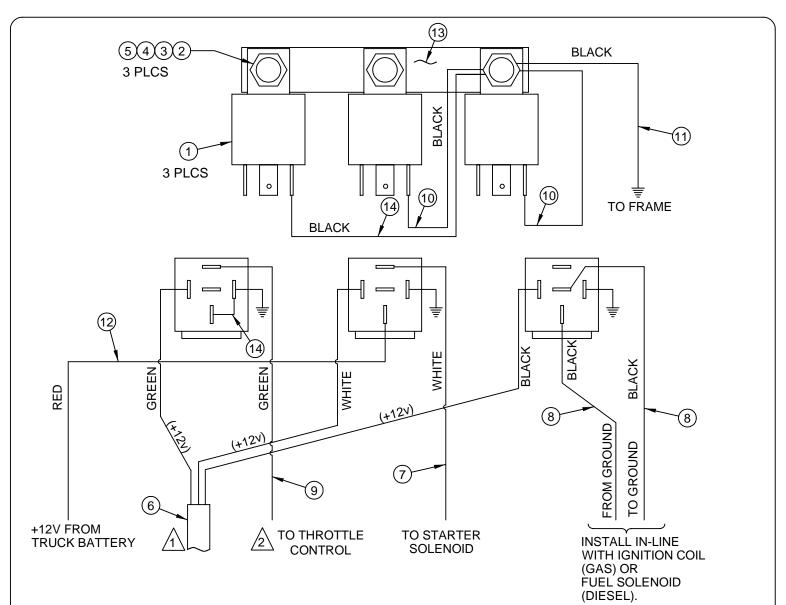
IIILE	DATE	SECTION
REPLACEMENT PARTS DWG & LIST	10-03-14	C400
	SUPERSEDES	00070
21987 PENDANT; PROP, ENG CNTL, ESTP/HRN	-	23072

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



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

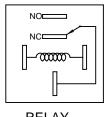
CINCINNATI, OHIO



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

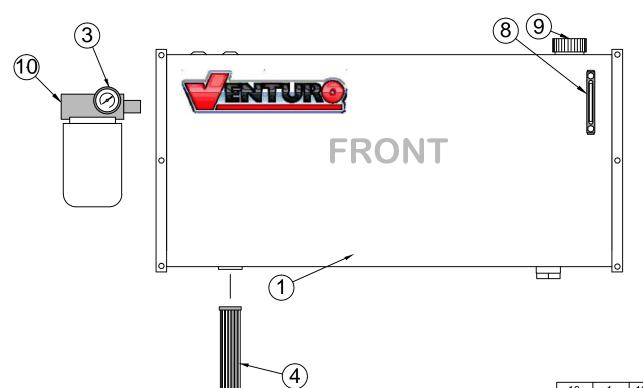
THROTTLE CONTROL IS DESIGNED TO PROVIDE A GROUND SIGNAL WHEN RELAY IS ACTIVATED

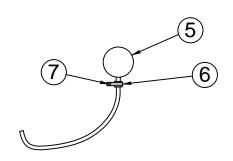
ITEM	QTY	PART#	DESCRIPTION
1	3	22739	RELAY
2	3	!PHCS#1024075	#10-24 X 3/4 PHIL PAN HD BOLT
3	3	!LWSH-#10	#10 LOCKWASHER
4	3	!FWSH-025	#10 WASHER
5	3	!HNUT-#1024	#10 NUT
6	1	22607	WIRE HARNESS - 12/3 SJO
7	1	22609	WHITE - 16 GAGE ELECTRICAL WIRE - 15 FEET LONG
8 2 22610 BLACK - 16 GAGE ELECTRICAL WIRE - 15 FEET		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

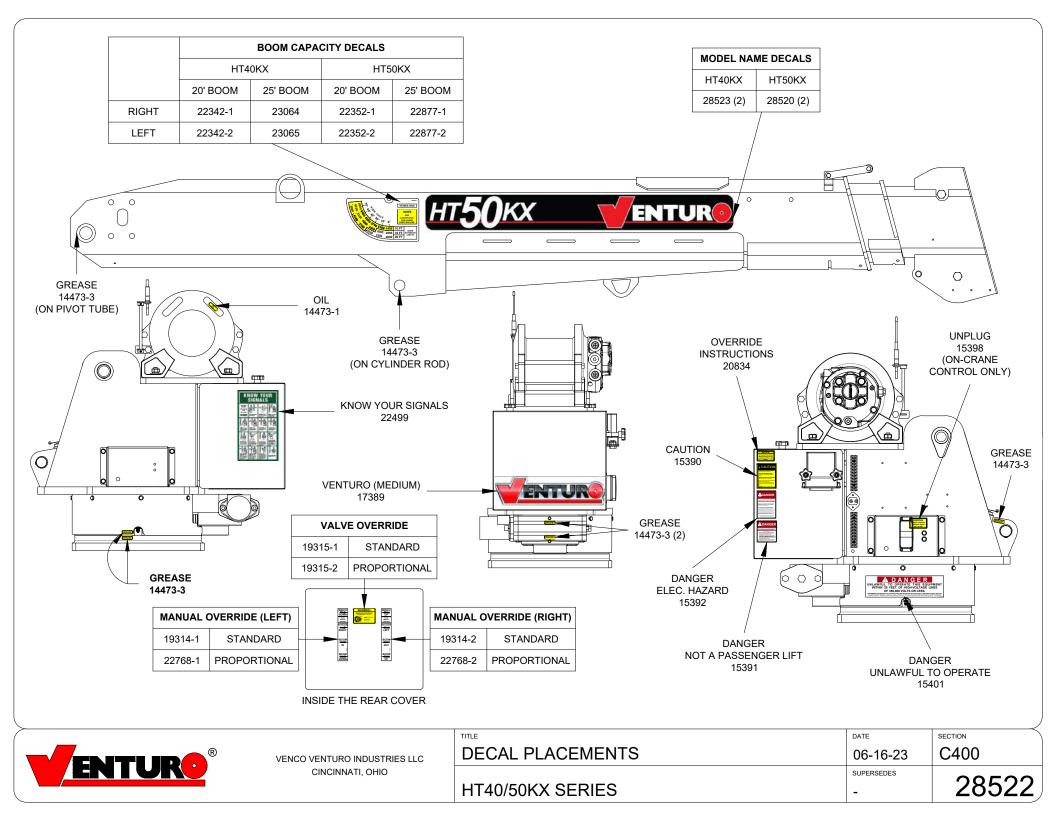
 TITLE ENGINE START / STOP THROTTLE CONTROL	06-09-20F	c400
HT CRANES	02-21-14E	22615





	10	1	19298	FILTER ASSY, RETURN
	9	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





HT40KX FIELD SERVICE LABEL KITS

HT40KX		(
STANDARD 20'	PROPORTIONAL 20'	STANDARD 25'	PROPORTIONAL 25'		22920 FIELD SERVICE LABEL KITS (FOR HT40KX)
Q	(AU	TIT	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

ENTURO ® VE	ENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO
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TITLE	DATE	SECTION
FIELD SERVICE LABEL KITS	07-17-23H	C400
	SUPERSEDES	22
HTAOKX	06 16 226	

USER NOTES			
-			
			_
	LIGER NOTES	DATE	PAGE _
® VENCO VENTURO INDUSTRIES LLC	USER NOTES	02-23-16	_



INSTALLATION MANUALS	SUPERSEDES	25431
USER NOTES	02-23-16	-
	DATE	PAGE

USER NOTES			
-			
			_
	LIGER NOTES	DATE	PAGE _
® VENCO VENTURO INDUSTRIES LLC	USER NOTES	02-23-16	_



INSTALLATION MANUALS	SUPERSEDES	25431
USER NOTES	02-23-16	-
	DATE	PAGE

USER NOTES			
-			
			_
	LIGER NOTES	DATE	PAGE _
® VENCO VENTURO INDUSTRIES LLC	USER NOTES	02-23-16	_



INSTALLATION MANUALS	SUPERSEDES	25431
USER NOTES	02-23-16	-
	DATE	PAGE

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

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