

TABLE OF CONTENTS VC 620 W/ LINKAGE BODY PROP MANUAL

<u>PAGE</u>	DESCRIPTION	REF. NO.
1	READ THIS FIRST	416733
2	IMPORTANT WARNING	416086
3	WARNING AND CAUTION DECAL LOCATIONS	416850
4	DECAL DRAWINGS & LIST	628823
5	VC 620 (NON-SUBFRAME) CAPACITIES	620103
6	VC 620 (WITH SUBFRAME) CAPACITIES	620104
7	VC 620 (NON-SUBFRAME) MOUNTING DIMENSIONS	
8	MOUNTING INSTRUCTIONS	
9	MOUNTING INSTRUCTIONS	
10	MOUNTING INSTRUCTIONS	520606
11	SUBFRAME FEATURES	520607
12	MOUNTING INSTRUCTIONS	520608
13	MOUNTING INSTRUCTIONS	
14	MOUNTING INSTRUCTIONS	
15	CABLE / HANDLE ASSEMBLY INSTRUCTIONS	620246
16	PTO PUMP INSTALLATION	
17	DIRECT MOUNT ("SPLIT") PUMP CONFIG. & REPLACEMENT PARTS LIST.	
18	SPDG HOSE CONNECTION DIAGRAM	
19	WILLIAMS PTO WARNING	
20	MOUNTING INSTRUCTIONS	
21	LIFTING ANGLE INSTALLATION	
22	REAR HINGE TO BED MOUNTING ILLUSTRATION	
23	RESERVOIR FILLING	
24	HYDRAULIC POWER UNIT GROUNDING	
25	MONARCH ES POWER UNIT (40058M/MHD) INSTALLATION	
26	MONARCH ES POWER UNIT (40058M/MHD) W/ PUSH BUTTON INSTALL	
27	MONARCH ED POWER UNIT (416081M)	
28	MONARCH ED POWER UNIT (416081M) W/ PUSH BUTTON	
29	HOIST MAINTENANCE AND OPERATION	
30	GREASE POINTS FOR HOISTS	
31	VC 620 WITH SUBFRAME REPLACEMENT PARTS DWG	
32	VC 620 WITH SUBFRAME REPLACEMENT PARTS LIST	. 620116
33	VC 620 (NON-SUBFRAME) REPLACEMENT PARTS DWG	620117
34	VC 620 (NON-SUBFRAME) REPLACEMENT PARTS LIST	
35	VC 620 W/ LINKAGE PROP REPL PARTS DWG	
36	VC 620 W/ LINKAGE PROP REPL. PARTS LIST	
37	FENNER ES POWER UNIT	
38	REPLACEMENT PARTS DRAWING & LIST 40058M/MHD POWER UNIT)	
39	REPLACEMENT PARTS DRAWING (416081M ED PU)	
40	PTO PUMP CABLE REPLACEMENT PARTS DRAWING & LIST	620245

VENCO MANUFACTURING, INC.	TABLE OF CONTENTS	10-7-10	SECTION
WANDI ACTORING, INC.	VC 620 W/ LINK. PROP	SUPERCEDES	620620

READ THIS FIRST

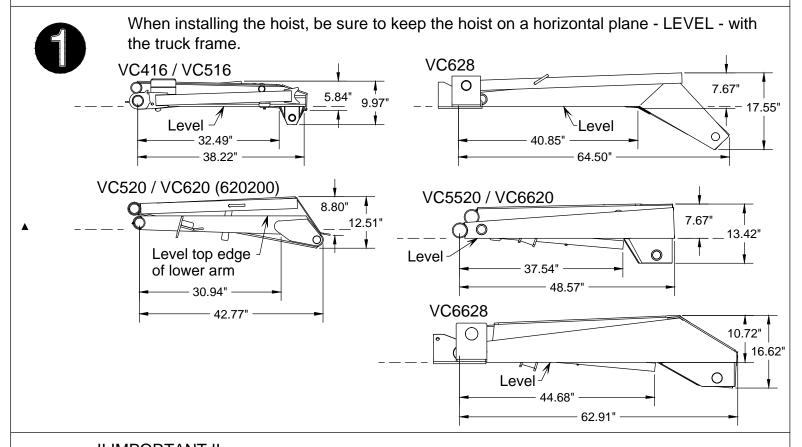
BE SURE TO DO THE FOLLOWING AND YOU WILL AVOID THE MOST COMMON INSTALLATION MISTAKES.

- 1. HOIST MUST BE LEVEL SEE PAGE: 416086, 416272.
- 2. MUST HAVE 2" SPACE SEE PAGE: 416086.
- 3. SUFFICIENT OVERHANG SEE PAGE:
- ▲ VC520 NON SUBFRAME 520601
- ▲ VC520 W/ SUBFRAME 520602
- ▲ VC620 NON SUBFRAME 620103
- ▲ VC620 W/ SUBFRAME 620104
- ▲ VC628 628020
- ▲ VC5520 552010
- ▲ VC6620 662052
- ▲ VC6628 662851
- 4. USE PUMP WHICH MEETS VENCO SPECIFICATION SEE PAGE: 416763.

VENCO MANUFACTURING, INC.	CAUTION NOTE	1-22-08A	SECTION _
WANGI AGTORING, INC.	-	SUPERCEDES 10-1-01	416733

!! IMPORTANT WARNING !!

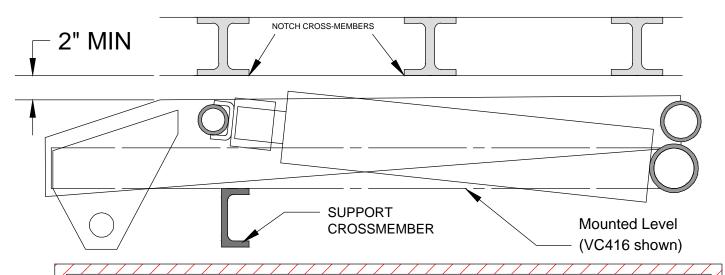
* ALL VENCO CONVERSION HOISTS → VC416 THRU VC6628 *





!! IMPORTANT !!

A minimum clearance of 2" is required between the hoist (upper arm) and the body cross-members in order to prevent a mechanical lockout. If clearance is less than 2", then cross-members must be notched above arms.



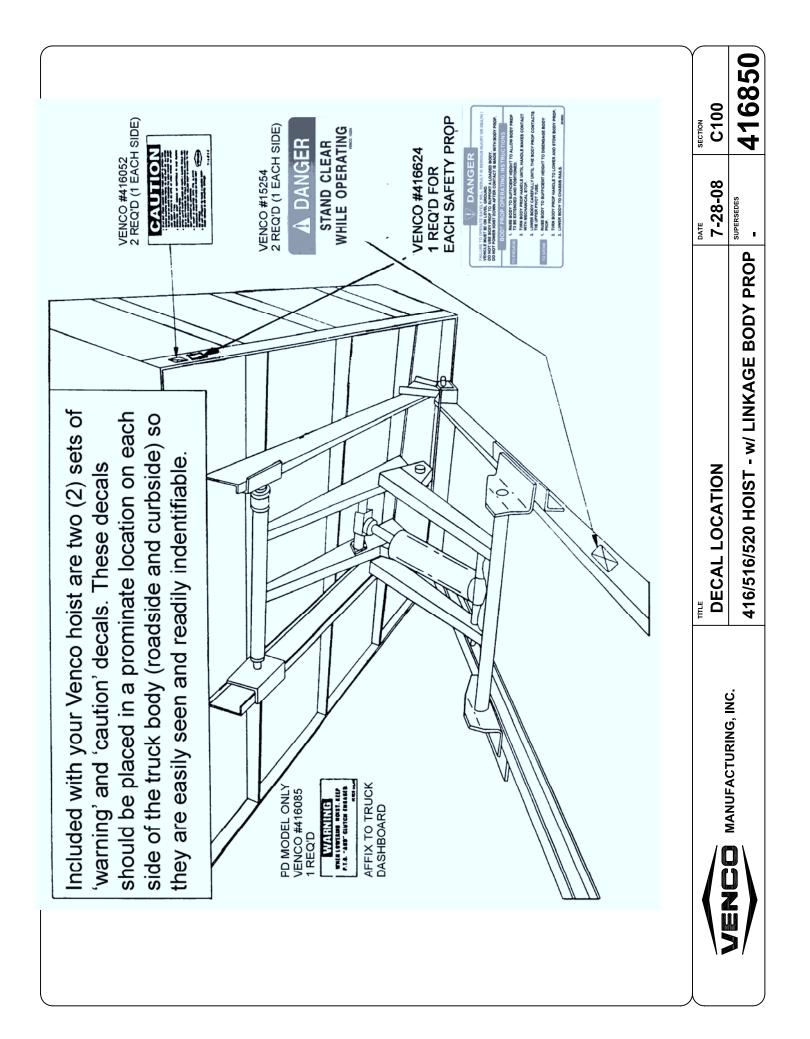
!! IMPORTANT !!

THE HOIST SCISSOR MUST BE SUPPORTED WITH A CHASSIS-MOUNTED SUPPORT CROSSMEMBER. IF THE TRUCK CHASSIS DOES NOT HAVE A CROSSMEMBER TO SUPPORT THE HOIST IN A 'LEVEL' POSITION, THE INSTALLER 'MUST' INSTALL A SUPPORT CROSSMEMBER AS SHOWN ABOVE.



VENCO VENTURO INDUSTRIES LLO
CINCINNATI, OHIO

VENCO HOISTS	11-05-15N	416086
IMPORTANT WARNING	12-08-20P	H200
TITLE	DATE	SECTION



PART NO.: 416052

DECAL: **CAUTION STAY CLEAR**

FUNCTION:

To provide operator with a summary of key

hoist operating

procedures.

QUANTITY: 2

PLACEMENT: One on each side of body.

PART NO.: 416084

APPLICATION: VC620-VC6628 MODELS ONLY

DECAL: SAFETY PROP OPERATION

FUNCTION: To inform the operator of proper

operation of safety prop.

QUANTITY: 1 For each safety prop.

PLACEMENT: On side of body closest to safety

prop(s).

PART NO.: 416624

APPLICATION: VC416,516 & 520 MODELS ONLY

SAFETY PROP OPERATION 'LINKAGE' PROP ONLY DECAL:

FUNCTION: To inform the operator of proper

operation of safety prop.

QUANTITY: 1 For each safety prop.

PLACEMENT: On side of body closest to safety

prop(s).

PART NO . 15254

DECAL: **CAUTION STAND CLEAR**

FUNCTION: To inform the operator to stay clear of body / hoist.

QUANTITY:

PLACEMENT: One on each side of truck frame.

PART NO.: 416085

WARNING WHEN LOWERING DECAL:

FUNCTION: To inform the operator to keep

P.T.O. and clutch engaged when

lowering the hoist.

QUANTITY: 1

PLACEMENT: Affixed to truck dashboard.



- STAY OUT FROM UNDER BODY WHEN HOIST IS OPERATING.
 DURING DURPING OPERATIONS, NO ONE MUST BE ALLOWED
 TO STAND IN OR MOVE THROUGH THE AREA WHERE THE BODY
 AND HOIST OPERATE OR INTO AN AREA WHERE AN UPSET
 LOAD MIGHT FALL.
 OPERATOR MUST REMAIN AT CONTROLS IN CAB DURING
 DUMPING OPERATIONS.
 NEVER LEAVE BODY RAISED OR PARTLY RAISED WHILE VEHICLE
 IS UNATTENDED OR WHILE PERFORMING MAINTENANCE
 OR SERVICE UNDER BODY, UNLESS BODY IS BRACED TO
 PREVENT ACCIDENTAL LOWERING.
 IF HOIST IS EQUIPPED WITH PTO, ALWAYS
 DISENGAGE WHEN NOT IN USE OR WHEN
 MOVING VEHICLE.

- MOVING VEHICLE.

 DO NOT ATTEMPT TO RAISE A LOADED BODY WHEN VEHICLE IS ON UNLEVEL GROUND.

VENCO*

416052

A OPERATION OF SAFETY PROP A

WARNING: DO NOT USE SAFETY PROP TO SUPPORT A LOADED BODY!

- 1. Raise body to sufficient height and shut off all power.
- 2. Unlock PROP(S) and permit to swing freely to the vertical position.
- 3. Using inside-the-cab controls, lower body slowly until PROP contacts lower support bracket.

WARNING: DO NOT POWER HOIST DOWN AFTER CONTACT IS MADE WITH PROP!

To discontinue use of safety PROP

- 1. Raise body to sufficient height and shut off all power.

 2. Swing PROP to STORED pos-
- ition and engage lock.



#416084

√ DANGER

FAILURE TO OPERATE SAFELY WILL RESULT IN SERIOUS INJURY OR DEATH VEHICLE MUST BE ON LEVEL GROUND.

DO NOT USE BODY PROP TO SUPPORT A LOADED BODY.

DO NOT POWER HOIST DOWN AFTER CONTACT IS MADE WITH BODY PROP.

- RAISE BODY TO SUFFICIENT HEIGHT TO ALLOW BODY PROP TO BE EXTENDED AND POSITIONED.
- 2. TURN BODY PROP HANDLE UNTIL HANDLE MAKES CONTACT WITH MECHANICAL STOP.
- 3. LOWER BODY CAREFULLY UNTIL THE BODY PROP CONTACTS THE UPPER PIVOT TUBE.
- TO STOW 1. RAISE BODY TO SUFFICIENT HEIGHT TO DISENGAGE BODY PROP.

- 2. TURN BODY PROP HANDLE TO LOWER AND STOW BODY PROP 3. LOWER BODY TO CHASSIS RAILS.

A DANGER

STAND CLEAR WHILE OPERATING



WHEN LOWERING HOIST, KEEP P.T.O. "AND" CLUTCH ENGAGED.



DECAL LIST

DATE 11-13-08A

SECTION

SUPERSEDES

VC416-520, Linkage Prop

7-29-08

VENCO HOIST MODEL VC 620 (NON-SUBFRAME)

CAPACITIES ARE BASED ON WATER LEVELS AND UNDIMINISHING LOADS. DUE TO THE VARIATIONS IN TRUCK EQUIPMENT AND CAB-AXLE LENGTHS (CA), THE DATA PROVIDED ON THIS PAGE IS TO BE USED AS A GUIDELINE ONLY.

DUMP CLASS: 40 CONVERSION CLASS: D WEIGHT: 595 LBS

POWER SOURCE: PD - POWER TAKE OFF DOUBLE ACTING

ES - ELECTRIC SINGLE ACTING ED - ELECTRIC DOUBLE ACTING

ADDITIONAL DATA;

SINGLE CYLINDER (6" BORE x 20" STROKE)

CA: 84" - 138" DUMP ANGLE: 40°-50° MOUNTING HEIGHT REQ'D: 8"

CONVER	CONVERSION APPLICATIONS VC 620 WITHOUT SUBFRAME						
BODY	CA	REAR O.H.	40° (TON)	45° (TON)	50°(TON)		
13'	84"	42"	24.0	21.4	19.4		
13'	102"	24"	16.0	14.3	12.9		
13'	108"	18"	14.4	12.9	11.6		
13'	114"	12"	13.1	11.7	10.6		
13'	120"	6"	12.0	10.7	9.7		
14'	102"	36"	18.0	16.1	14.5		
14'	108"	30"	16.0	14.3	12.9		
14'	114"	24"	14.4	12.9	11.6		
14'	120"	18"	13.1	11.7	10.6		
14'	124"	14"	12.4	11.0	10.0		
14'	126"	12"	12.0	10.7	9.7		
15'	102"	48"	20.6	18.4	16.6		
15'	108"	42"	18.0	16.1	14.5		
15'	114"	36"	16.0	14.3	12.9		
15'	120"	30"	14.4	12.9	11.6		
15'	124"	26"	13.5	12.0	10.9		
15'	126"	24"	13.1	11.7	10.6		
15'	138"	12"	11.1	9.9	8.9		
16'	114"	48"	18.0	16.1	14.5		
16'	120"	42"	16.0	14.3	12.9		
16'	124"	38"	14.9	13.3	12.0		
16'	126"	36"	14.4	12.9	11.6		
16'	138"	25"	12.0	10.7	9.7		
16'	144"	18"	11.1	9.9	8.9		

DU	DUMP APPLICATIONS VC 520 WITHOUT SUBFRAME						
BODY CA REAR O.H. 40° (TON) 45° (TON) 50° (TO							
8'	-	12"	24.0	21.4	19.4		
9'	-	12"	20.6	18.4	16.6		
10'	-	12"	18.0	16.1	14.5		
12'	-	12"	14.4	12.9	11.6		

CAPACITY CHART	3-24-05A	sестіон H100
VC 620 HOIST	SUPERSEDES 6-12-03	620103

VENCO HOIST MODEL VC 620 WITH SUBFRAME

CAPACITIES ARE BASED ON WATER LEVELS AND UNDIMINISHING LOADS. DUE TO THE VARIATIONS IN TRUCK EQUIPMENT AND CAB-AXLE LENGTHS (CA), THE DATA PROVIDED ON THIS PAGE IS TO BE USED AS A GUIDELINE ONLY.

DUMP CLASS: 40 CONVERSION CLASS: D WEIGHT: 825 LBS

POWER SOURCE: PD - POWER TAKE OFF DOUBLE ACTING

ES - ELECTRIC SINGLE ACTING ED - ELECTRIC DOUBLE ACTING

ADDITIONAL DATA;

SINGLE CYLINDER (6" BORE x 20" STROKE)

CA: 84" - 138"

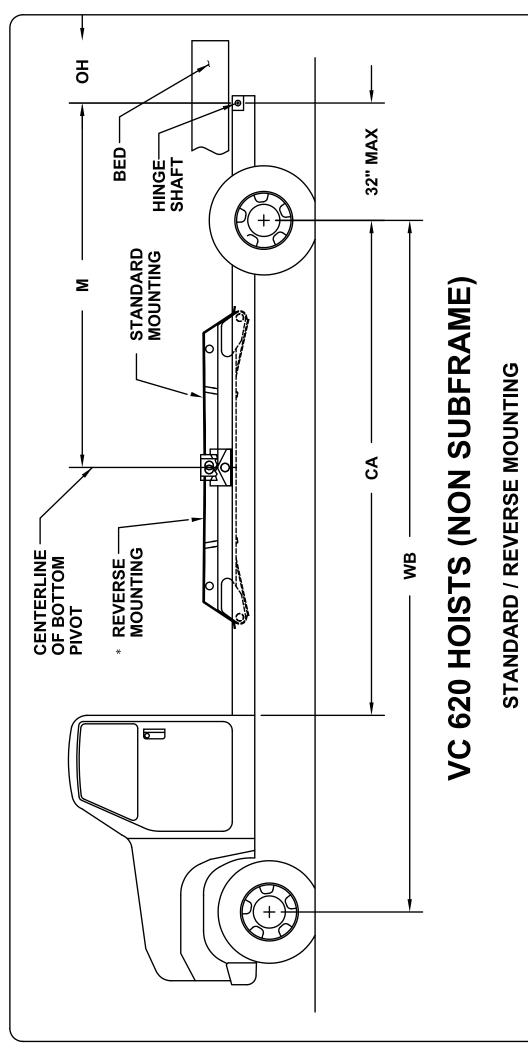
DUMP ANGLE: 40°-50°

HEIGHT ABOVE SUBFRAME : 6-7/8" ▲

CONVERSION APPLICATIONS VC 620 WITH SUBFRAME						
BODY	CA	REAR O.H.	45° (TON)	47° (TON)	50°(TON)	
13'	84"	42"	21.8	20.9	19.7	
13'	102"	24"	14.5	13.9	13.1	
13'	108"	18"	13.1	12.5	11.8	
13'	114"	12"	11.9	11.4	10.7	
13'	120"	6"	10.9	10.4	9.9	
14'	102"	36"	16.3	15.7	14.8	
14'	108"	30"	14.5	13.9	13.1	
14'	114"	24"	13.1	12.5	11.8	
14'	120"	18"	11.9	11.4	10.7	
14'	124"	14"	11.2	10.7	10.1	
14'	126"	12"	10.9	10.4	9.85	
15'	102"	48"	18.7	17.9	16.9	
15'	108"	42"	16.3	15.7	14.8	
15'	114"	36"	14.5	13.9	13.1	
15'	120"	30"	13.1	12.5	11.8	
15'	124"	26"	12.2	11.7	11.1	
15'	126"	24"	11.9	11.4	10.7	
15'	138"	12"	10.0	9.6	9.1	
16'	114"	48"	16.3	15.7	14.8	
16'	120"	42"	14.5	13.9	13.1	
16'	124"	38"	13.5	13.0	12.2	
16'	126"	36"	13.1	12.5	11.8	
16'	138"	25"	10.9	10.4	9.9	
16'	144"	18"	10.0	9.6	9.1	

DUMP APPLICATIONS VC 520 WITHOUT SUBFRAME						
BODY CA REAR O.H. 45° (TON) 47° (TON) 50° (TON						
8'	-	12"	21.8	20.9	19.7	
9'	•	12"	18.7	17.9	16.9	
10'	-	12"	16.3	15.7	14.8	
12'	-	12"	13.1	12.5	11.8	

VENCO MANUFACTURING, INC.	CAPACITY CHART	3-24-05B	SECTION H100
	VC 620 HOIST	SUPERSEDES 9-19-03A	620104



DUMP ANGLE M 40° 102" 45° 91" 50° 83"

FIGURE 1.A

MANUFACTURING, INC.	

MOUNTING DIMENSIONS	6-18-03
/C 620 HOIST	SUPERSEDES

620122

SECTION H100

HOIST MOUNTING INSTRUCTIONS

Refer to drawings 520071, 662053, or 628021 (on the preceding pages).

CAUTION

If the distance between the centers of the rear axle and the rear hinge assembly exceeds 38", additional reinforcement of the truck frame is necessary.

- A. Mark the location for the rear hinge. Ideally this location will be immediately behind a truck cross member approximately 34" behind the center of the rear axle on a single axle truck.
- B. Cut a 90° slot in each side of the frame as shown in Figure 2.
- C. Position the angle iron frame of the rear hinge assembly in the truck frame cut outs. Make sure the rear hinge assembly is properly positioned on the truck frame. Weld all around truck frame rear hinge assembly joint (both sides). See installation drawing 662861 on the following page for information regarding the mounting of the rear hinge brackets to the body.

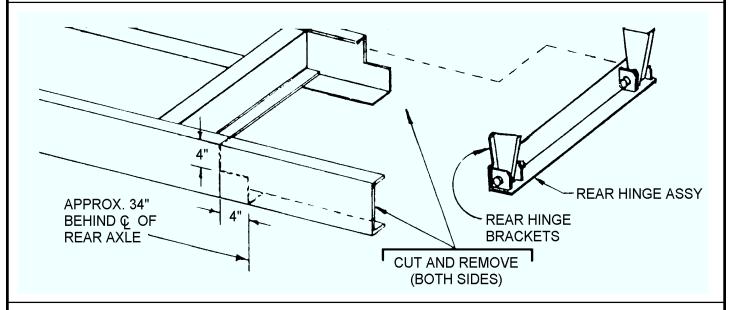


Figure 2 - Frame Modification and Rear Hinge Attachment

D. Locate the hoist on the truck frame, making sure to center and square the hoist to the truck frame. The VC Hoist is designed to rest on the truck frame. A section of the hoist extends below the truck frame level. Therefore, the hoist may have to be moved slightly forward or backward to avoid frame crossmembers. The distance between the rear hinge assembly center and the hoist center is referred to as the "M" dimension. The tables on drawings 520071, 662053, and 628021 provide the dump angles associated with various "M" dimensions.

Note: Moving the hoist along the truck frame will affect the hoist's performance. A forward movement decreases dump angle and increases capacity. A backward movement increases dump angle and decreases capacity.

VENCO MANUFACTURING, INC.	MOUNTING INSTR.	10-27-97B	H200
WARDI ACTORING, INC.	VC 520 - VC 6628	9-4-97A	520072

HOIST MOUNTING INSTRUCTIONS IVC 520 NON-SUBFRAME ONL

- □. After the hoist is positioned, place the mounting angles (Figure 3) under the lower pivot angles and against the truck frame. Clamp securely in place. Drill though the frame and install the mounting angle with two (2) 1 2 x 1-1 2 hex head cap screws, lock washers, and hex nuts, and four flatwashers (both sides).
 - NOT: The hoist mounting bracket must sit flush on the truck frame. If rivet head interference is encountered, use a filler block or countersink clearance holes in the bottom of the lower pivot angles.

Do not weld the hoist mounting bracket to the truck frame. This may void the truck warranty.

F. Weld each end of the lower pivot angle to its mounting angle as shown in Figure 3. Note the welding symbols. Do not weld to the truck frame.

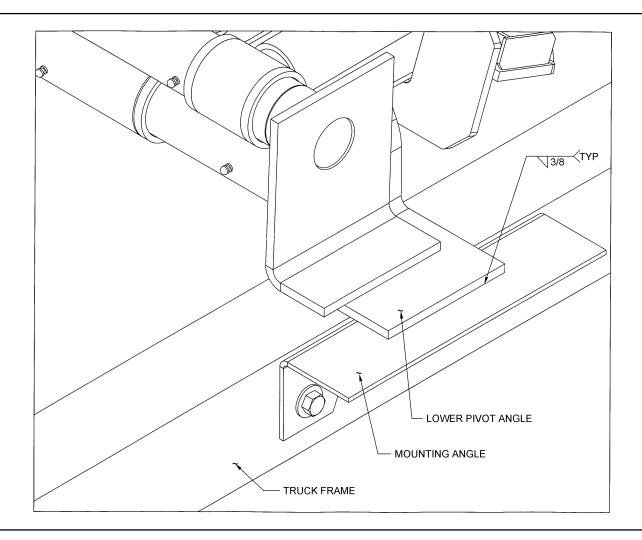


Figure 3 - Mounting Angle Assembly

VENIOR MANUEL OTURNO INC.	MOUNTING INSTR.	11-16-98	H200
MANUFACTURING, INC.	VC 520 NON-SUBFRAME	SUPERCEDES	520605

HOIST MOUNTING INSTRUCTIONS (VC 520 / 620 WITH SUBFRAME ONLY)

Refer to drawing 520602 for VC 520 and 620104 for VC 620 (on the preceding pages).

A. Position the hoist into the front half of the subframe by inserting the two lower pivot angles into the lower pivot tube on the scissors and then positioning that assembly inside the front half of the subframe. The two holes on each lower pivot angle should match up with a set of holes on the subframe mounting brace. The front set of holes on the subframe corresponds to a dump angle of 45 degrees, the middle to 47 degrees, and the rear to 50 degrees. See Dwg. 520607 for subframe features.

NOTE: If any dump angle other than 50 degrees is desired, an additional crossmember will be required to support the rear knuckle of the scissors.

- B. Fasten the lower pivot angles to the subframe using two (2) 1/2" x 1-1/2" hexhead cap screws, lockwashers, and nuts, and four (4) flatwashers (both sides). See Dwg. 520608 Figure 4a.
- C. Position the hoist with the subframe front section onto the truck frame.

NOTE: The front crossmember of the front section has only been tack welded into place. This was done to provide you with the flexibility to move the front crossmember and power unit, if desired. When the crossmember is where you want it, fully weld it into place.

D. Place the rear section of the subframe onto the truck frame.

NOTE: A distance of less than 38" should be maintained between the center of the rear hinge and the center of the rear axle. If this distance exceeds 38", additional reinforcement of the truck frame may be necessary.

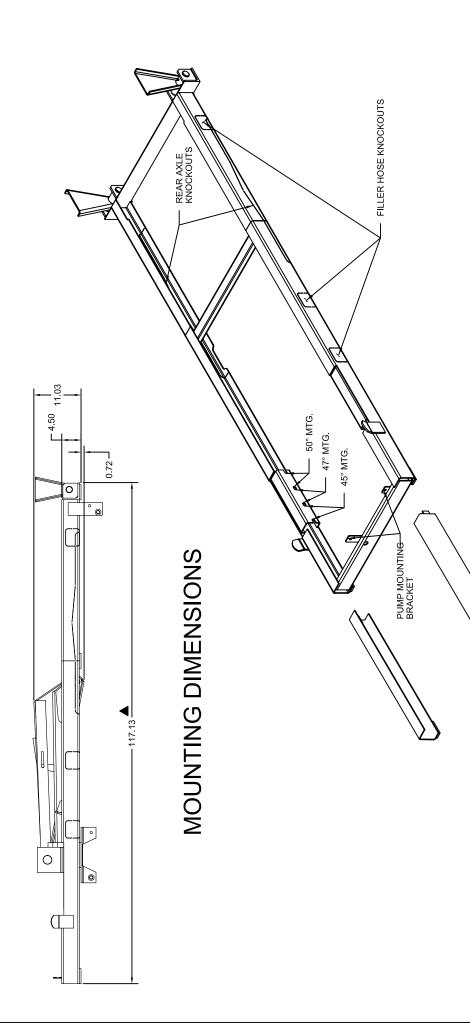
- E. Trim off any truck frame that extends beyond the rear hinge.
- F. Fasten the rear half of the subframe to the truck by welding the two frame tie down brackets onto the subframe, drilling corresponding holes through the truck frame, and using two (2) 1/2" x 1-1/2" hexhead cap screws, lockwashers, and nuts, and four (4) flatwashers (both sides). The tie down brackets should be located as close as possible to the rear hinge to insure stability.
- G. Fasten the two halves of the subframe together by welding the tabs extending from the rear half into the front half.
- H. After the two halves are welded together, place the mounting angles under the lower pivot angles and against the truck frame. Clamp them securely in place. Drill through the frame and install the mounting angle with two (2) 1/2" x 1-1/2" hex head cap screws, lock washers, and hex nuts, and four (4) flatwashers (both sides). See Figure 5.

NOTE: Do not weld the mounting angles to the truck frame. This may void the truck warranty.

I. Weld each end of the lower pivot angle to its mounting angle as shown in Dwg. 520608 Figure 4b. Note the welding symbols. Do not weld to the truck frame.

VENCO MANUFACTURING, INC.	MOUNTING INSTR.	6-18-03B	H200
	VC 520 / 620 (SUBFRAME)	3-30-99A	520606

520 & 620 SUBFRAME FEATURES (520501)





	FEATURES	
	IE FEAT	
	SUBFRAM	
_	ร	

VC 520 / 620

SUBFRAME EXTENSION CHANNELS

SECTION	H200		520607
DATE	1-11-05C	SUPERSEDES	8-26-03B

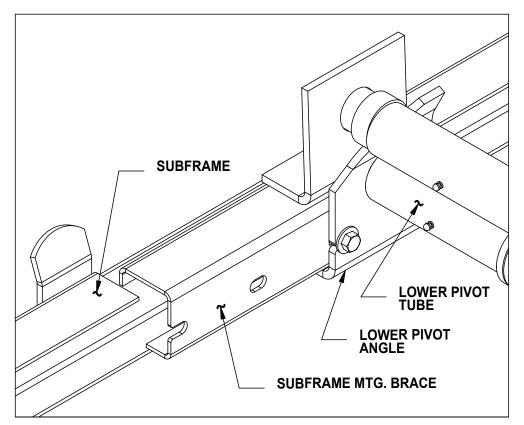


FIGURE 4a

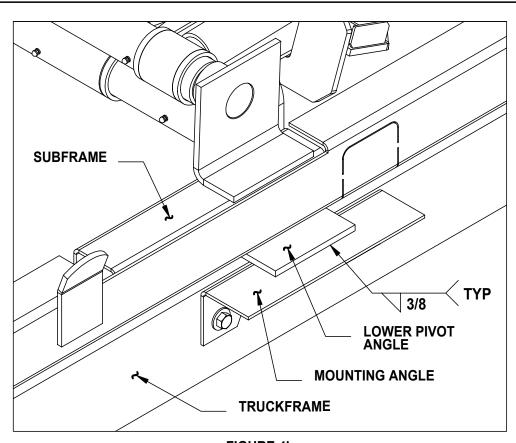


FIGURE 4b

VENCO MANUFACTURING, INC.	VC 520 / VC 620▲	SUPERSEDES	520608
	TITLE	DATE	SECTION
	MOUNTING INSTR.	6-12-03A	H200

HOIST MOUNTING INSTRUCTIONS ©

- □. Install the PTO pump per the following instructions and per the pump manufacturer's instructions.
 - 1. See Figure 5. Position and bolt each pump bracket to the pump and secure with the 3 8 x 1-1 4" bolts and hex nuts (VC-520 requires only 2 pump brackets).
 - 2. Position the pump assembly with brackets and securely clamp to the frame on the same side that the transmission mounted PTO shaft is located.
 - Note: Position the pump brackets as high on the truck frame as possible when mounting the pump.
 - 3. Two (2) 17 32" holes need to be drilled in the pump brackets and truck frame (Figure 5). Mark the hole locations as close to the truck frame flanges as possible. Drill 17 32" holes and install the 1 2" x 1-1 2" hex head cap screws with lockwashers and hex nuts.

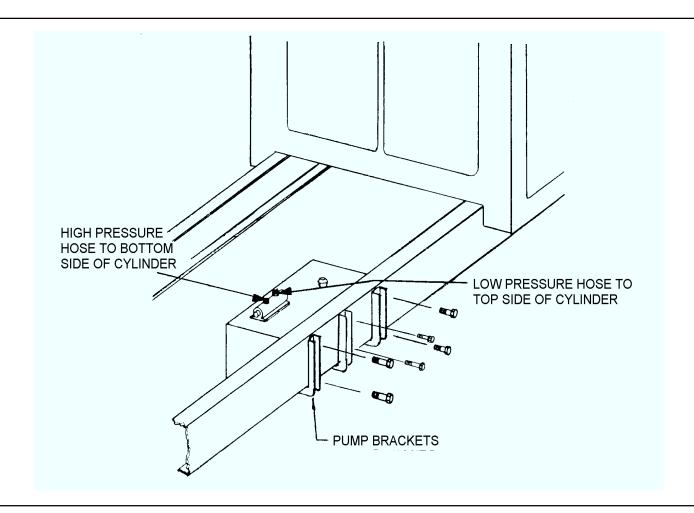


Figure 5 - Pump Installation

VENCO MANUFACTURING, INC.	MOUNTING INSTR.	9-4-97A	H200
MANOT ACTORING, INC.	VC 520 - VC 6628	SUPERCEDES -15-90	520075

HOIST MOUNTING INSTRUCTIONS ©

- 4. Install the truck PTO assembly using the manufacturer's instructions.
- 5. Determine the exact length "L" of the drive shaft (Figure 6). The drive shaft should be kept as short and level as possible.
- 6. Cut the $7 \ 8$ " square drive shaft to the length that was determined in the previous steps.
- 7. The supplied U-joint (with the 1" round x 7 8" square slip yoke) fits on the pump drive shaft. The U-joint for the PTO is not furnished.
- 8. Trial fit each U-joint to the hex drive shaft and trial fit the drive shaft assembly to the pump and PTO. At this point, mark the set screw locations of the PTO U-joint on the square drive shaft. Disassemble the drive shaft assembly and countersink the drive shaft at the marked locations.
- 9. Assemble each U-joint to the hex drive shaft and install the drive shaft assembly. After installing, secure the PTO U-joint to the drive shaft using 3 8" x 5 8" drilled hex head set screw (furnished). Safety wire all (3) screws to insure that they do not loosen.
- 10. For additional pump and drive shaft mounting instructions, refer to the manufacturer's instructions included with the pump. Refer to Figures 6 and Dwg. 520078.

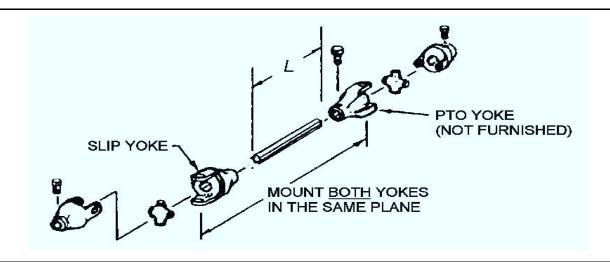


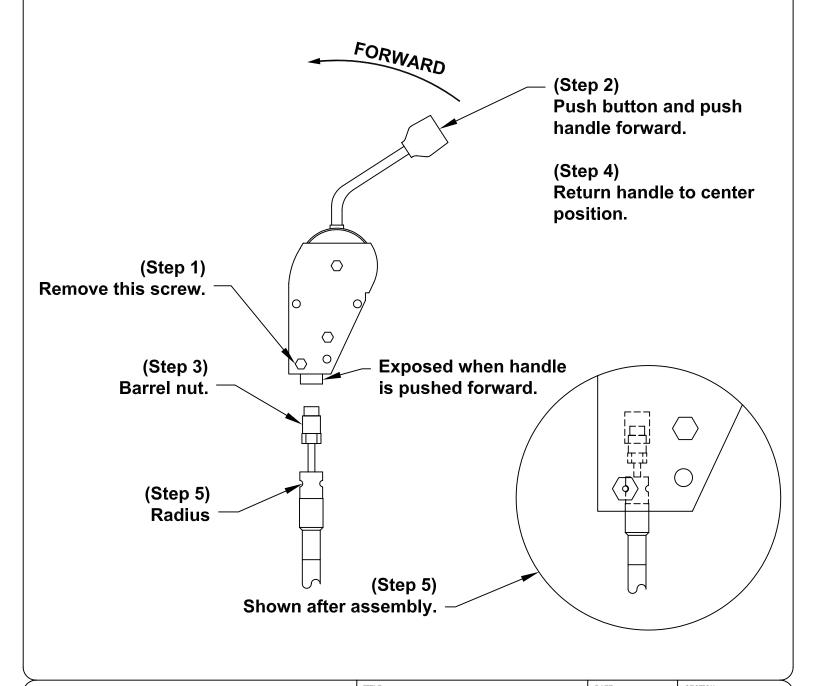
Figure 6 - Drive Shaft Assembly

- H. Install hydraulic hoses per the following instructions:
 - 1. 7' (or 7'-10") hose(s) installation Connect one end of the hose to the front pump port (low pressure). Connect the other end of the hose to the rod end of the hoist cylinder (Figure 5).
 - 2. 5' hose(s) installation Connect one end of the hose to the rear pump port (high pressure). Connect the other end of the hose to the base end of the hoist cylinder (Figure 5).

VENICO MANUE	MANUFACTURING, INC.	MOUNTING INSTR.	5-20-99D	H200
VEIGU	PACTURING, INC.	VC 520 - VC 6628	11-17-98C	520076

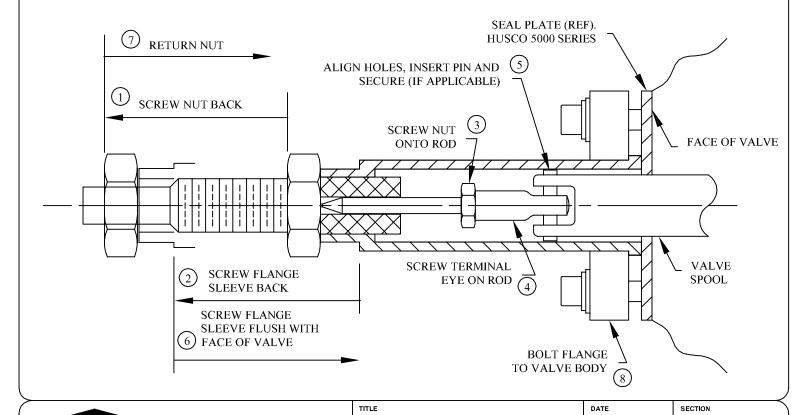
ATTACHING 620129 CABLE TO 620131 / 2 HANDLE

- Step 1. Remove lowest screw & nut.
- Step 2. Depress red button on top of handle. Push handle forward and hold.
- Step 3. While holding handle, thread "barrel nut" into threaded hole in bottom and tighten.
- Step 4. Release handle. Handle should return to center positon.
- Step 5. Replace screw & nut, making sure that radius on cable end is aligned with screw hole. After tightening screw, move handle forward and backward to make sure cable end is secure in console.



WANDFACTURING, INC.	PTO PUMP CABLE	SUPERSEDES	620246
VENCO MANUFACTURING, INC.	CABLE / HANDLE ASSEMBLY	9-17-04	SECTION

- 1. Thread .750-16 UNF jam nut entire length of threaded hub and onto cable.
- 2. Place flange on sleeve and turn flange/sleeve assembly entire length of threaded hub and onto cable.
- 3. Thread .250-28 UNF jam nut onto threaded rod unitl it bottoms.
- 4. Thread terminal eye onto threaded rod and bottom against jam nut, turn to align with spool slot and secure jam nut against terminal eye.
- 5. Slide terminal eye into slot in spool and align holes. Insert connecting pin and secure with cotter pin (if applicable).
- 6. With cable attached to valve and input device, thread the flange/sleeve assembly onto the threaded hub until it is flush with the valve face. When turning the flange/sleeve assembly, make sure the input device remains in the neutral position.
- 7. Tighten the .750-16 UNF jam nut against the sleeve to lock in position.
- 8. Bring flange into position and bolt assembly to valve housing using two (2) socket head cap screws and two (2) split lockwashers under head and two (2) flat washers under lockwashers. Tighten screws sufficiently to flatten lockwashers or secure flange. Caution any further torquing/overtightening will distort flange.



MANUFACTURING, INC.

PTO PUMP CABLE INSTALL

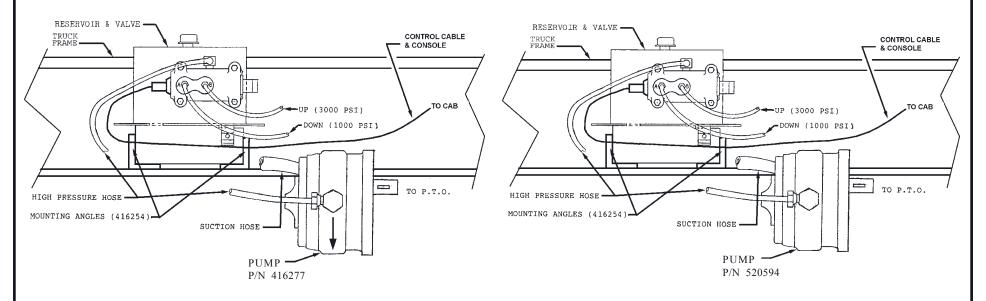
VC416 - 6628

5-11-04

SUPERSEDES

DIRECTIONAL PUMP CONFIGURATION FOR VC416 - VC620

BI-ROTATIONAL PUMP CONFIGURATION FOR VC628 & UP



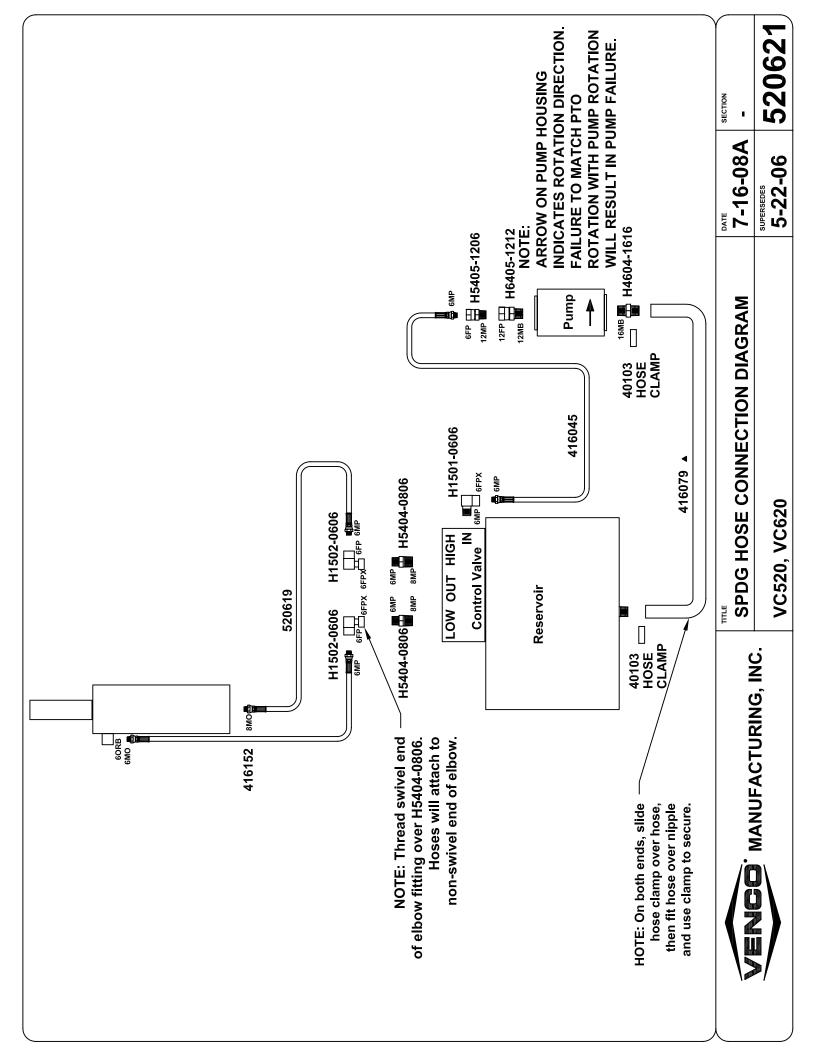
NOTE: ARROW ON PUMP HOUSING INDICATES ROTATION DIRECTION FAILURE TO MATCH PTO ROTATION WITH PUMP ROTATION WILL RESULT IN PUMP FAILURE.

NOTE: FOR BI-ROTATIONAL PUMP MOUNTING AND HOSE CONNECTION INFORMATION, SEE DRAWING 416812.

Model	VC416	VC516	VC520	VC620	VC628	VC5520	VC6620	VC6628
Control Cable Console			62012	5 - Curved	620124 - S	traight		
Up Hose	416	151		520619			(2) 520619	
Down Hose		416	152		628043	(2) 41	16152	(2) 628043
High Pressure Hose				416	152			•
Suction Hose		416	079			5200	088F	
Pump\\Dalve\Tank		620011 (9	D □UART)			662077 (2	1 □UART)	
Pump (Only)		416	277			520	594	
Mounting Spline Information	SA□ "A	" 2 BOLT M	OUNTIN□ F	LAN□□,	SA□ "B	" 2 BOLT M	OUNTIN F	LAN□□,
	518"-9 SF	PLIN SHA	FT, CCW RO	NOITATC		7ß"-13 SPL	.IN□ SHAF	г



SPLIT PUMP	5-22-06	H200
VC 416 516, VC 520 - 6628	SUPERCEDES	41676



Williams. Machine & Tool Co.

MANUFACTURERS OF HYDRAULIC PISTON PUMPS



The Gear Pump you have purchased is a single rotation Gear Pump. Installation of this Gear Pump into a system that does not match the rotation of the Gear Pump may result in Personal Injury and/or Property Damage.

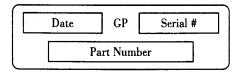
The Gear Pump you have purchased is a single rotation Gear Pump. The direction of rotation can be found by using the Williams Machine and Tool Co.'s Model Number. Directly following the Model Number are the letters CCW or CW. These letters indicate the direction of rotation for the Gear Pump. CCW indicates a counter-clockwise rotation. CW indicates a clockwise rotation. Pump shaft rotation is determined by viewing pump from the shaft end.

Example: GP1538 CCW. The CCW indicates a counter-clockwise rotation.

To verify the direction of rotation of your Gear Pump, perform the following steps:

- 1.) Locate the Part Number on the Gear Pump. The Part Number, Serial Number, and date code are located on the rear of the Gear Pump.
- 2.) Part Numbers ending in an even number are clockwise rotation (CW). Part Numbers ending in an odd number are counter-clockwise rotation (CCW).

Example: 1830201. The last number is 1 (an odd number). This indicates a counter-clockwise rotation (CCW).



The following chart specifies torque requirements for the SAE O' ring plugs installed into the side or rear ports of the Gear Pump. Any combination of inlet and outlet ports may be used, ie., inlet large rear port, outlet small side port; inlet large side and outlet small rear ports; or both side ports or both rear ports. One inlet and one outlet port must be plugged for proper Gear Pump operation.

PORT SIZE (SAE)	TORQUE (FT. LBS.)
3/4 - 16	15 - 20
7/8 - 14	20 - 25
1-1/16 - 12	30 - 35
1-5/16 - 12	45 - 50
1-5/8 - 12	65 - 70

VENCO MANUFACTURING, INC.	TITLE ☐ ILLIAMS PTO ☐ ARNING	^{DATE} 7-1 □-98	SECTION H200
MANOI ACTORING, INC.	-	SUPERCEDES	416287

HOIST MOUNTING INSTRUCTIONS (Continued)

I. Position and secure the filler strips (liner or sleeper) to the truck frame.

The VC 620 (non-subframe) requires a minimum of 11" clearance above the truck frame.

Note: If the hoist needs to be mounted higher due to interference between the hoist knuckle and the truck frame, additional clearance above the truck frame will be required.

Example:

Assuming that a 11" clearance is required and 6" long beams are on the truck body, a liner of at least 5" net will be required to obtain the minimum clearance required to mount the hoist.

6" + 5" = 11" min.

J. Position the body longitudinals (long beams) onto the truck frame / subframe.

Note: At least 2" clearance between the cab and closest point on the truck body is required.

- K. Place the rear hinge brackets in the vertical position (Dwg. 520072 Figure 2). Weld and/or bolt the brackets to the longitudinals. If bolted, mark and drill each bracket four (4) places (17/32" holes) and secure the brackets to the longitudinals using eight (8) 1/2"-13 x 1-1/2" Grade 8 hex head cap screws, eight (8) 1/2" lockwashers, and eight (8) 1/2"-13 hex nuts. See installation drawing 662861 for more information regarding the mounting of the rear hinge brackets to the body.
- L. Refer to Drawing 520093 on the following page. Make sure that the dump body longitudinals are resting flush on the top of the lifting angles. Weld the top of both lifting angles (the vertical "leg") to the top flanges of the body longitudinals a reinforcement plate may be required to fill the space between the lifting angles and body longitudinals. Weld all around the lifting angles, body longitudinals, and reinforcement plates (if used). Be sure that your installation follows the method shown on the following page Drawing 520093.

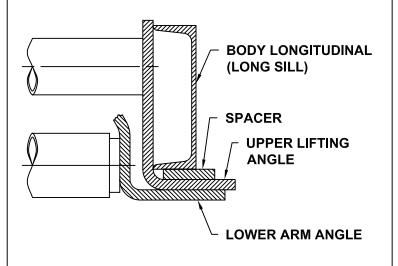
Note: Step "L" (above) is a critical installation procedure that must be carefully followed to ensure a successful hoist installation. Deviation from the suggested installation method may result in damage to the hoist.

VENCO MANUFACTURING, INC.	MOUNTING INSTR.	6-12-03	H200
WANDI ACTORING, INC.	VC 620	SUPERCEDES =	620114

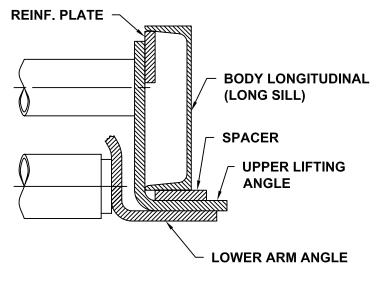
IMPORTANT!

WHEN INSTALLING THE UPPER LIFTING ANGLES, THE GOAL IS TO COMPLETELY "BOX IN" THE LIFTING ANGLE, BODY LONG SILL SPACER, AND REINFORCEMENT PLATE - 100% WELD.

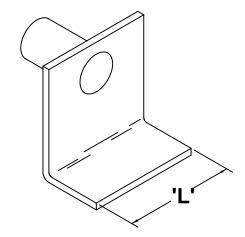
SITUATION A: LIFTING ANGLE FULLY ENVELOPS BODY LONG SILL.



SITUATION B: LIFTING ANGLE DOES NOT ENVELOP BODY LONG SILL AND A REINFORCEMENT PLATE IS REQUIRED.

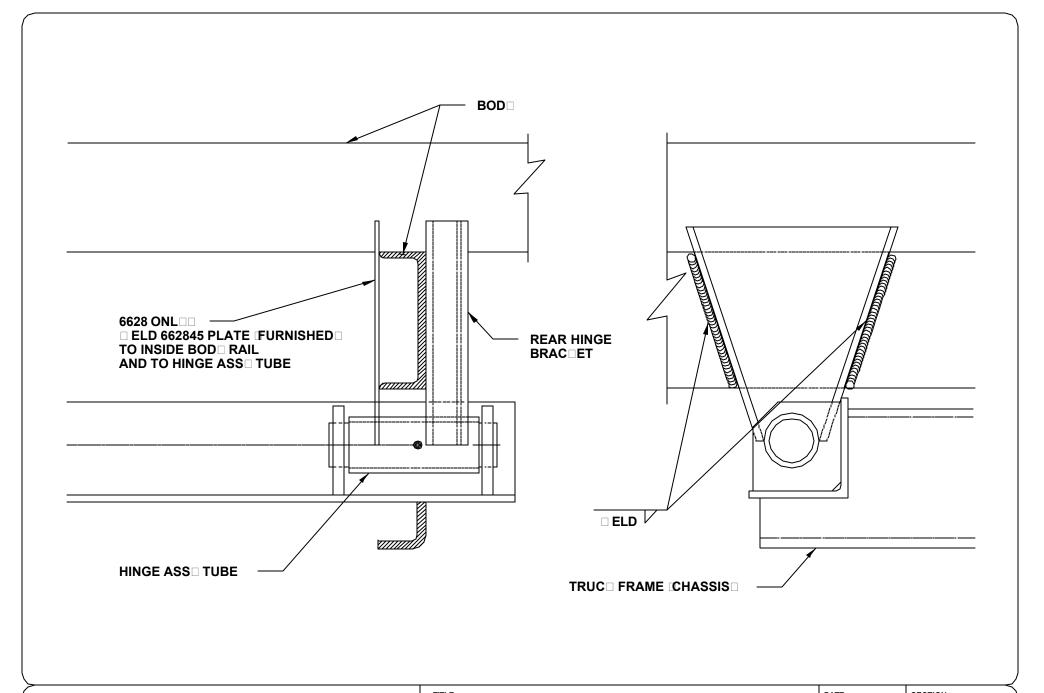


NOTE: THE SPACER AND REINFORCEMNT PLATE SHOULD BE THE LENGTH AS THE LIFTING ARM. SEE 'L' DIMENSION BELOW.



VENCO.	MANUFACTURING, INC.	
AFIAGO	WIANUFACTURING, INC.	

VC416-6628, TRL313-6628	SUPERSEDES 3-21-05A	520093
INST. INSTRUCTIONS	DATE 4-28-05B	SECTION H200



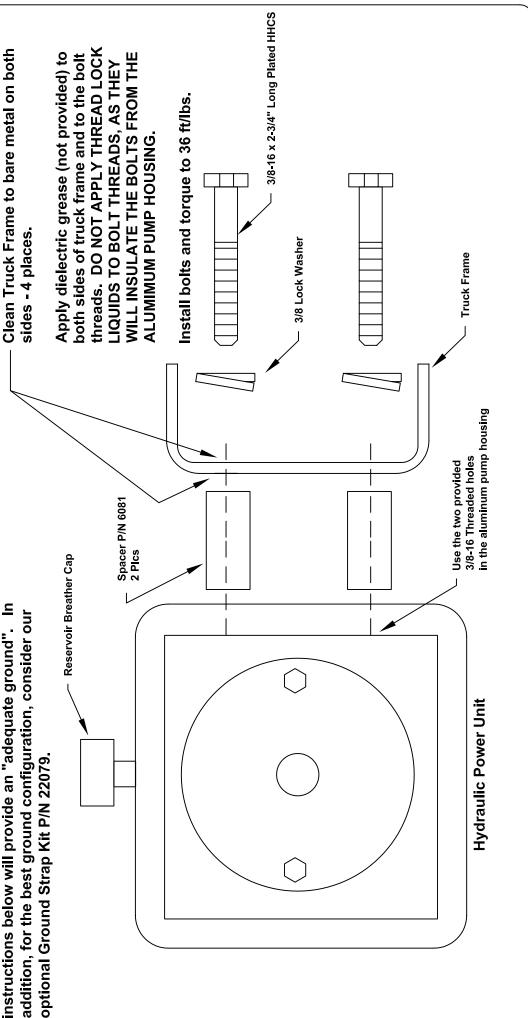
VENCO	MANUFACTURING, INC.

REAR HINGE TO BED MTG. INSTR.	6-28-97A	H200
VC 520 - VC 6628	supersedes 10-2 -97	662861

	HOIST MODEL(S)	VP/VC6	TRL313	VC416, TRL416	VC516, TRL516	VC520, TRL520	VC620, TRL620	VC628, TRL628
	ES/ED Hyd Pwr Unit Part Number	6426 / 6425	40058M / 416081M	40058M / 416081M	40058M / 416081M	40058M / 416081M	6426 / 6425 40058M / 416081M 40058M / 416081M 40058M / 416081M 40058M / 416081M 40058MHD / 416081M 40058MHD / 416081M 40058MHD / 416081M	40058MHD / 416081M
	Reservoir Capacity (Quarts)	34/34	4.6 / 3.4	4.6 / 3.4	4.6 / 3.4	4.6 / 3.4	5.4 / 3.4	5.4 / 3.4
	i otal Hydraulic Fiuld Required (ଏuarts)	4	4	9	8	6	12	15
Step 1	Attach base-end hose to cylinder. Do NOT attach the Rod-end hose at this time.	YES	YES	YES	YES	YES	YES	YES
Step 2	Fill the hydraulic reservoir as recommended below. Use only hydraulic fluid - Tellus 32 or equivalent is recommended.							
	With the hoist in the down position, add the indicated indicated amount (Quarts) of hydraulic fluid.	2	2	3.5	3.5	3.5	3.5	3.5
2b	Raise hoist one-quarter of the way (approximately 12° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.	1	•	•	-	1.5	2	ю
2c	Raise hoist one-half of the way (approximately 22-25° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.	2	2	1.5	-	1.5	2	ю
2d	Raise hoist three-quarters of the way (approximately 36° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.		1	•	-	1.5	2	က
2e	Raise hoist completely (45-50° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid. DO NOT "TOP OFF" or you will likely have overflow when the hoist is lowered.	0	0	1	1.5	-	2.5	2.5
Step 3	Attach the remaining hose to the Rod-end of they cylinder (not req'd on VP/VC6 & TRL313 hoists w/ ES hyd pwr unit)	ED ONLY	ED ONLY	YES	YES	YES	YES	YES
			FILLING H	LING HYDRAULIC RESERVOIR	RESERVOIR		_{рате} 6-16-05С	SECTION
	MANOFACIORING, INC.	;	VP/VC6-62	VP/VC6-628, TRL313-628	328		SUPERSEDES 6-18-03B	416140

Proper Grounding of Hydraulic Power Units - IMPORTANT!!!

Note: Hydraulic power units WILL run with a poor ground connection, BUT the service life of the motor and control valve coils WILL be greatly reduced unless a proper ground connection is made - see illustration below. The mounting instructions below will provide an "adequate ground". In addition, for the best ground configuration, consider our optional Ground Strap Kit P/N 22079.

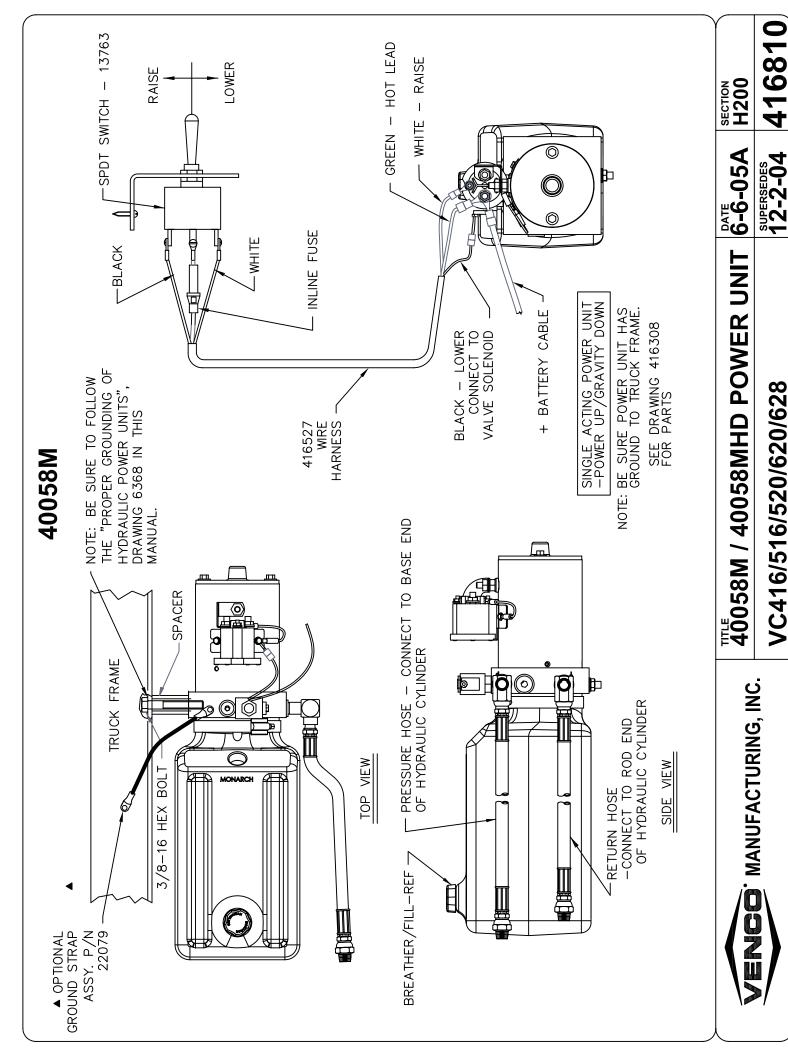




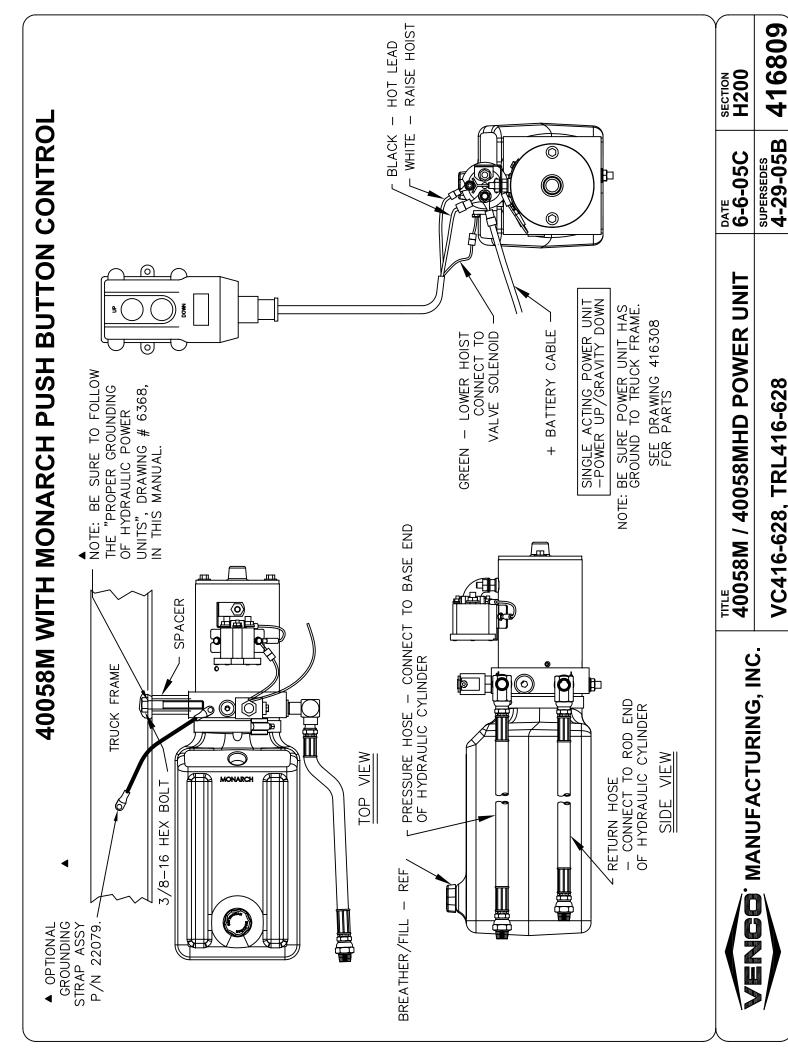
HYDRAULIC POWER UNIT GROUNDING	6-3-05
	SUPERSEDES
VP6, VC416/516, VC520/620, VC628, TRL HOISTS	•

6368

SECTION

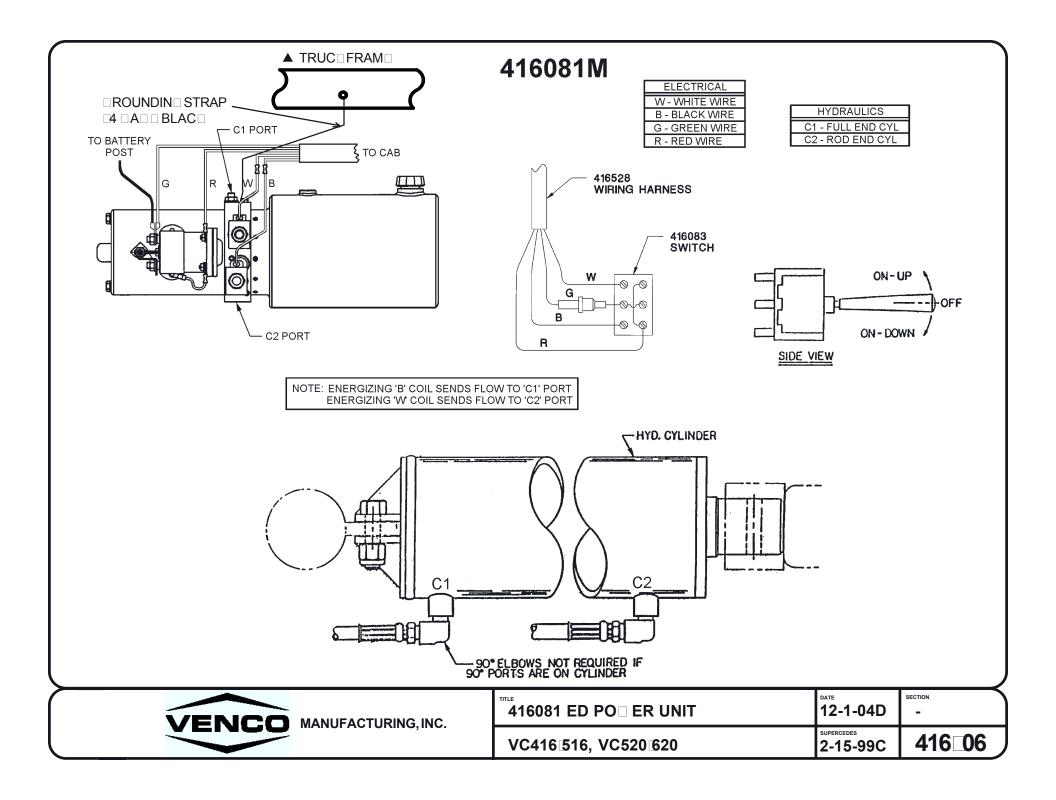


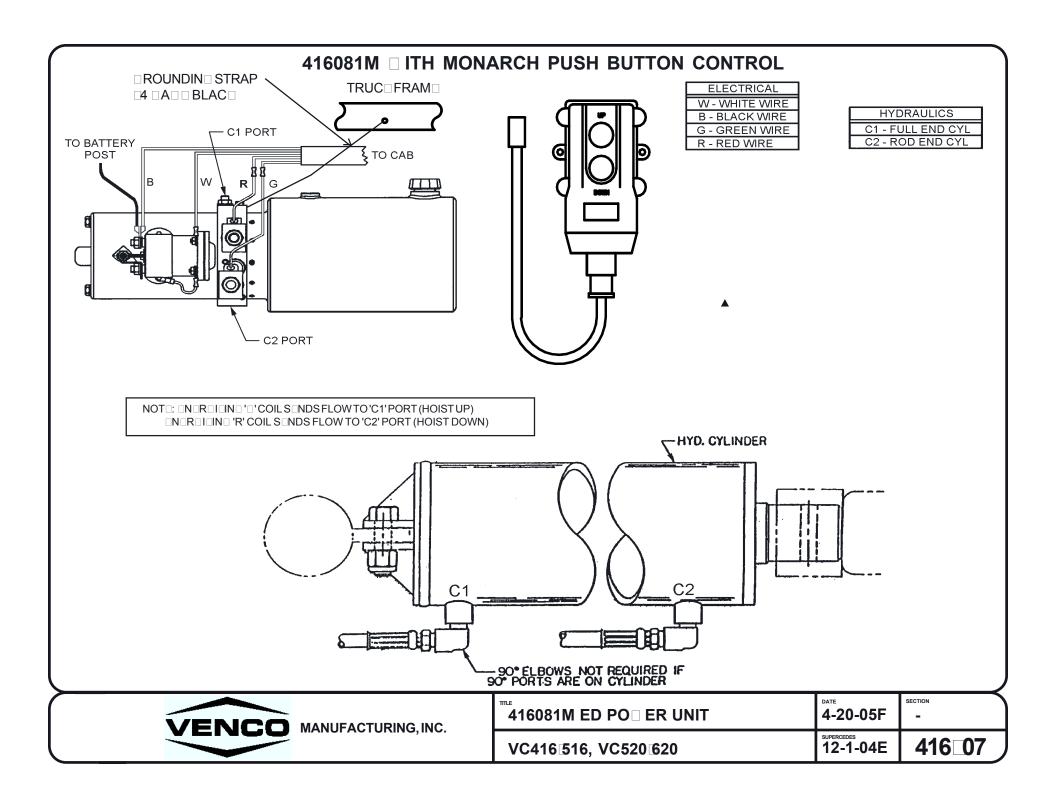
VC416/516/520/620/628



416809

VC416-628, TRL416-628





HOIST MAINTENANCE AND OPERATION INSTRUCTIONS

A. Hoist Unit Lubrication

- 1. PTO Driven Pump Tighten and grease (with high quality commercial grade grease) the lube fittings located in the PTO drive shaft assembly.
- 2. Lubricate all grease fittings on the hoist unit.
- 3. Lubricate the rear hinge assembly.
- 4. The hoist system should be serviced at the same time the truck is serviced, and sooner if the hoist unit is performing heavy duty service.
- 5. Pump Reservoir Shall be filled with the recommended oil per the manufacturer's instructions. Periodically check the hydraulic fluid and change when the truck engine oil is changed.

B. PTO Pump Operation

With the hoist and body completely installed, cycle the hoist several times to purge the hydraulic system of air. Operate the hoist system per the instructions in this manual and per the PTO manufacturer's instructions.

WARNIN

Do not operate the pump at more than 1000 RPM. Severe hoist system damage could result. The PTO speed to engine speed is governed by the gear ratio of the PTO drive installed in the truck transmission.

CAUTION

For long service and safety from VC Hoists, it is important that the following procedure be followed each time the hoist is operated:

- Ingage the PTO from the truck cab and adjust the engine speed to obtain the correct PTO and lift speed desired.
- 2. Pull the pump knob out. This will cause the hoist to raise. Refer to Drawing 520078.
- 3. When the hoist has reached its maximum capacity, the pump will bypass through the relief valve. To prevent the pump from bypassing, push the pump knob to the center middle position. Whenever the pump knob is centered, the hoist will stop moving and hold its position.

CAUTION

Do not allow the pump to bypass for long periods of time, as this will put stress on the hydraulic and electrical systems of the hoist.

4. To <u>lower</u> the hoist, push the pump knob <u>in</u>.

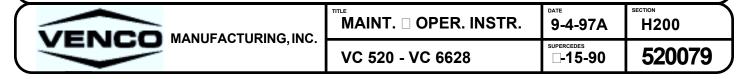
NOT 🗆

The Venco Hoists powered by PTO drive pumps must be "powered down". Failure to "power down" will cause the reservoir to overflow.

- 5. To lock the hoist against the truck frame when it is in the down position, push the pump knob in. When the pump bypasses, place the knob in the center "hold" position.
- 6. Disengage PTO from transmission per the manufacturer's instructions.

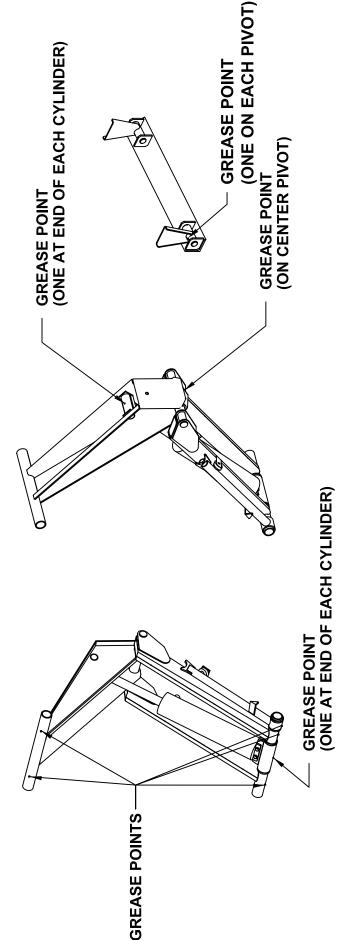
WARNIN

Do not drive the truck without first disengaging the PTO drive shaft. Failure to disengage the PTO drive shaft may result in severe damage to the pump and pump drive unit.



HOIST GREASE POINTS

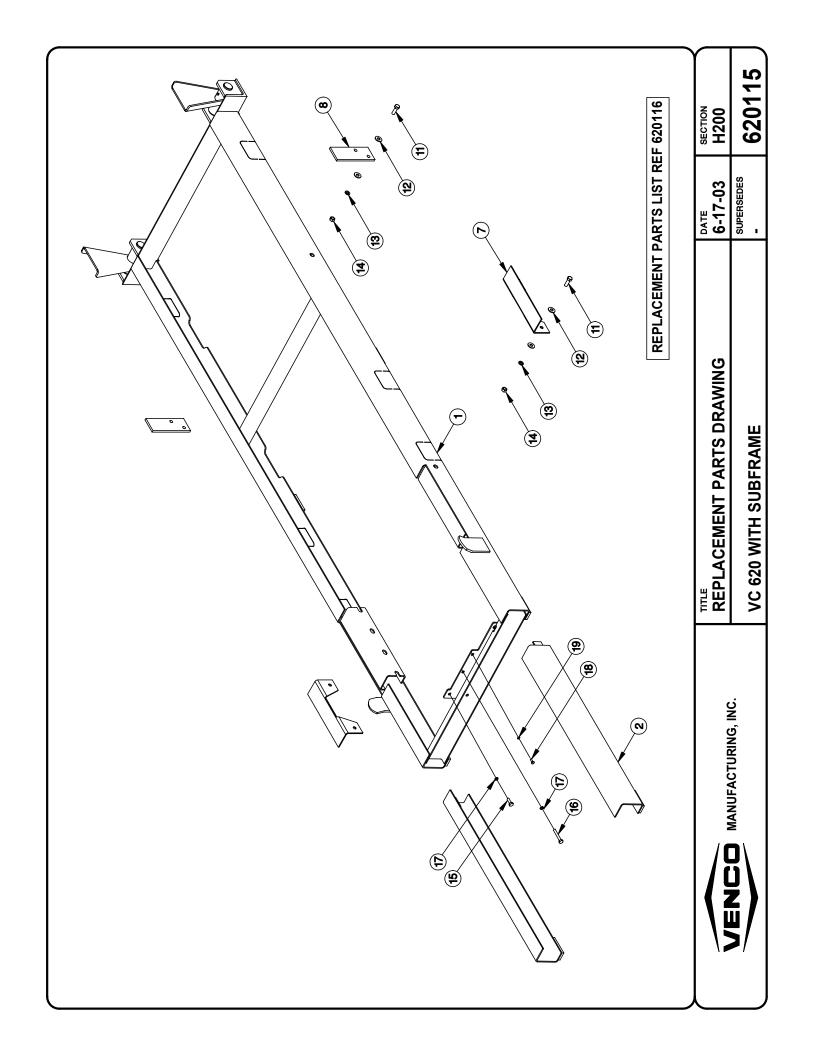
— GREASE POINT (ONE ON PIVOT TUBE OF EACH BODY PROP)



10 ENSURE THE RELIABLE PERFORMANCE OF YOUR VENCO HOIST, IT IS NECESSARY THAT YOU GREASE ADDITIONAL FITTINGS FOR TWIN CYLINDER HOISTS AND ADDITIONAL BODY PROPS ARE ALSO NOTED. THE HOIST AT THE TIME OF TRUCK SERVICE WITH CHASSIS GREASE. THE GREASE POINTS FOR THE HOIST SCISSORS AND REAR HINGE ARE SHOWN ABOVE.



	1100	
GREASE POINTS FOR HOISTS	07/21/08	Ī
	SUPERSEDES	70000
VC416/516/520 w/LINKAGE BODY PROP	-	270075



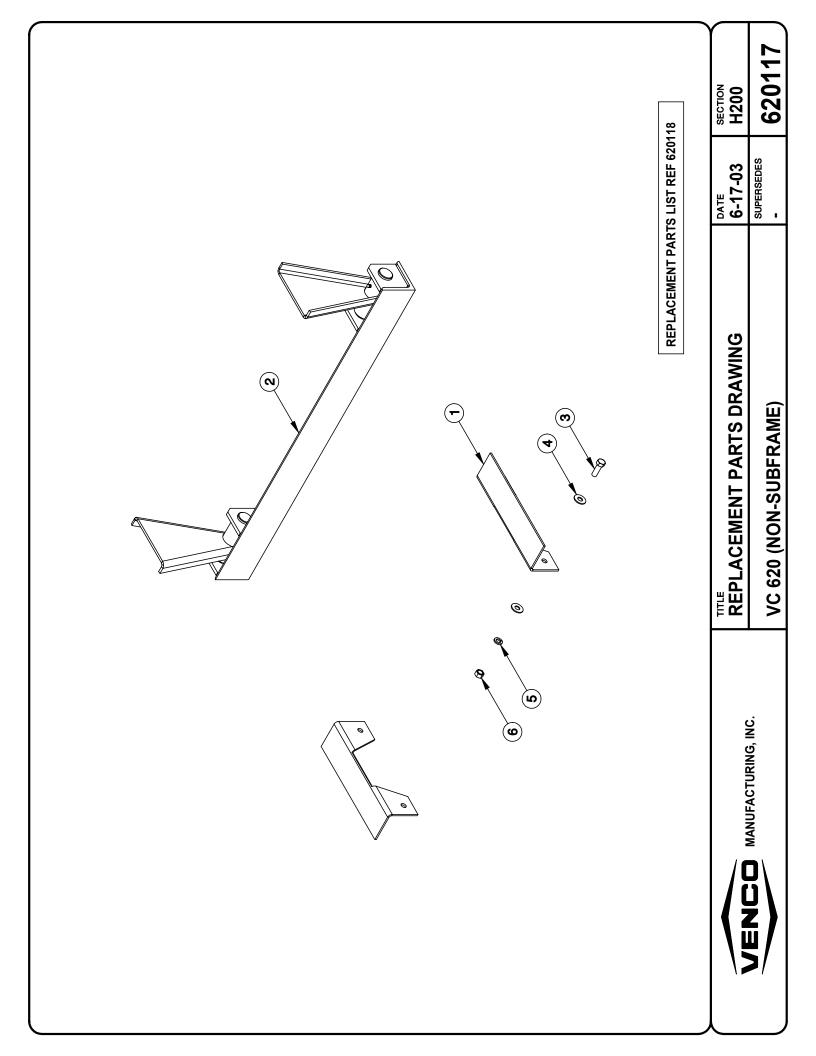
VC 620 □ ITH SUBFRAME REPLACEMENT PARTS LIST

IT□M	PARTNUMB□R	пΤп	D□SCRIPTION		
1 2 3 4 5	520590 520588 - - -	1 - - -	SUBFRAM W DD D ASS MBL SUBFRAM DT NSION DIT (OPTIONAL)		
6 7 8 9 10	- 520531 520532 □ - ▲	- 2 2 - -	- FRAM MOUNTIN AN L BRAC T - FRAM TI DOWN		
11 12 13 14 15	IHHCS05013150 IFWSH-050 ILWSH-050 IHNUT-05013 IHHCS03816075	4 8 4 4 1	H		
16 17 18 19 20	□HHCS03816200 □WSH-038 □HHCS02520075 □WSH-025	1 2 1 1	H		
21 22 23 24 25	- - - -	- - - -	- - - -		
26 27 28 29 30	- - - -	- - - -	- - - - -		
31 32 33 34 35	- - - -	- - - -	- - - -		

 $\Box T \Box M$ NOT SHOWN ON DRAWIN \Box

R PLAC M NT PARTS DW R F 620115

VENCO MANUFACTURING, INC.	REPL. PARTS LIST	5-22-06A	H200
WARDI ACTORING, INC.	VC 620 □ ITH SUBFRAME	6-17-0	620116

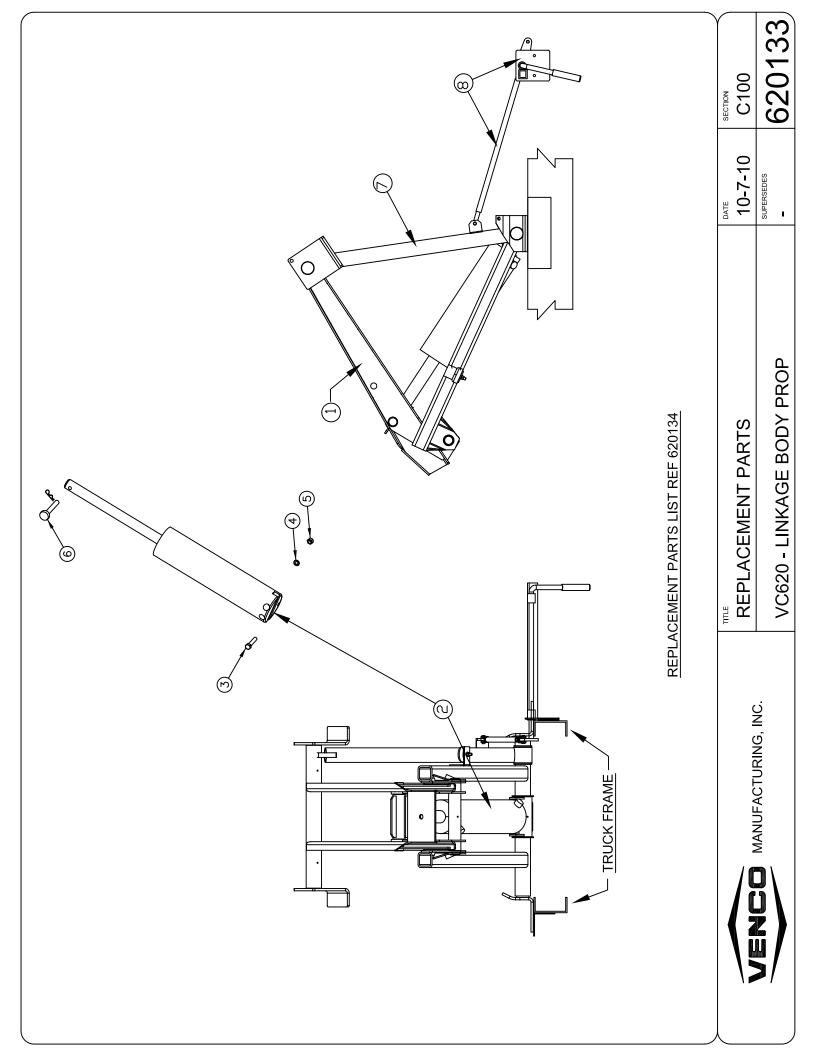


VC620 NON-SUBFRAME REPLACEMENT PARTS LIST

		r	
IT□M	PARTNUMB□R	□Τ□	D□SCRIPTION
1 2 3 4 5	520531 662057 [HHCS05013150 [FWSH-050 ①LWSH-050	2 1 4 8 4	FRAM MOUNTIN AN L RAR HIN ASS MBL HOR HOR SCR W - 1 12"-13 x 1-1 12" L RAR HIN AND CAP SCR W - 1 12"-13 x 1-1 12" L RAR HIN AND CAP SCR W - 1 12"-13 x 1-1 12" L RAR HOR - 1 12" LOC WASH R - 1 12"
6 7 8 9 10	⊞NUT-05013 - ▲ - ▲ -	4 - - -	H = NUT - 1 12-13 - - - -
11 12 13 14 15	- - - -	- - - -	
16 17 18 19 20	- - - -	- - - -	- - - -
21 22 23 24 25	- - - -	- - -	- - - -
26 27 28 29 30	- - - -	- - - -	- - - - -
31 32 33 34 35	- - - -	- - - -	- - - -

R PLAC M NT PARTS DW R F 620117

VENCO MANUFACTURING INC.	REPL. PARTS LIST	5-22-06A	H200
VENCO MANUFACTURING, INC.	VC 620 NON-SUBFRAME	6-17-0	620118



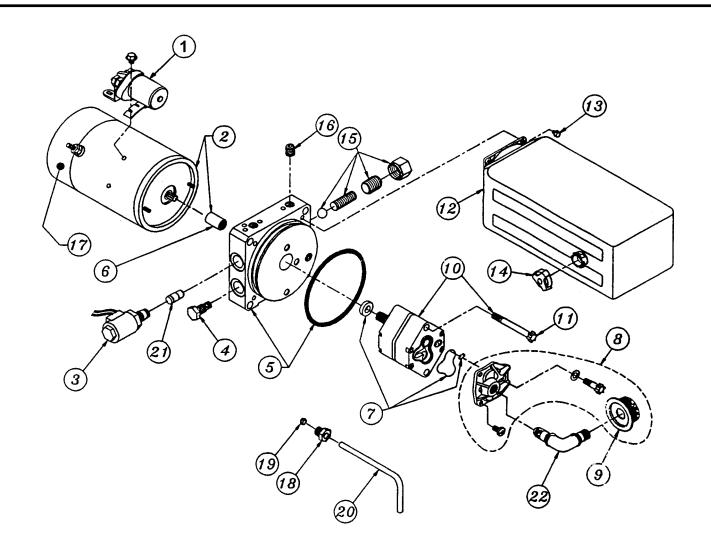
6201 ☐4 REPLACEMENT PARTS LIST

IT□M	PART NUMB□R	□Т□	D□SCRIPTION
1 2 3 4 5	620203 620907 ▲ ⊞HCS05013275-8 ⊞WSH-050 ⊞NUT-05013	1 1 2 2 2	SCISSORS ASS MBL HDRAULIC COLINDOR HO HO HO CAP SCROW - 1/2"-13 x 2-3/4" LO. OR 8 LOCO WASHOR - 1/2" HO NUT 1/2" - 13
6 7 8 9 10	416545 620025 520638-ALT01 - -	1 1 1 -	5 8 - 3-1 2 CL OVIS PIN ASSOMBLO BODO PROP WOLDOD ASSOMBLO CONTROL HANDLO WOLDOD ASSO. WO31 ADO LINO - -
11 12 13 14 15	- - - -	- - - -	
16 17 18 19 20		- - -	
21 22 23 24 25	- - - -	- - - -	- - - -
26 27 28 29 30	- - - -	- - - -	- - - -
31 32 33 34 35	- - - -	- - - -	- - - -

R PLAC M NT PARTS DW R F 620133

VENCO MANUFACTURING, INC.	REPL. PARTS LIST	5-2 -06A	H200
WEIGH MARKET ACTORING, INC.	VC 620 □ □LIN□. PROP	6-17-0	6201 4

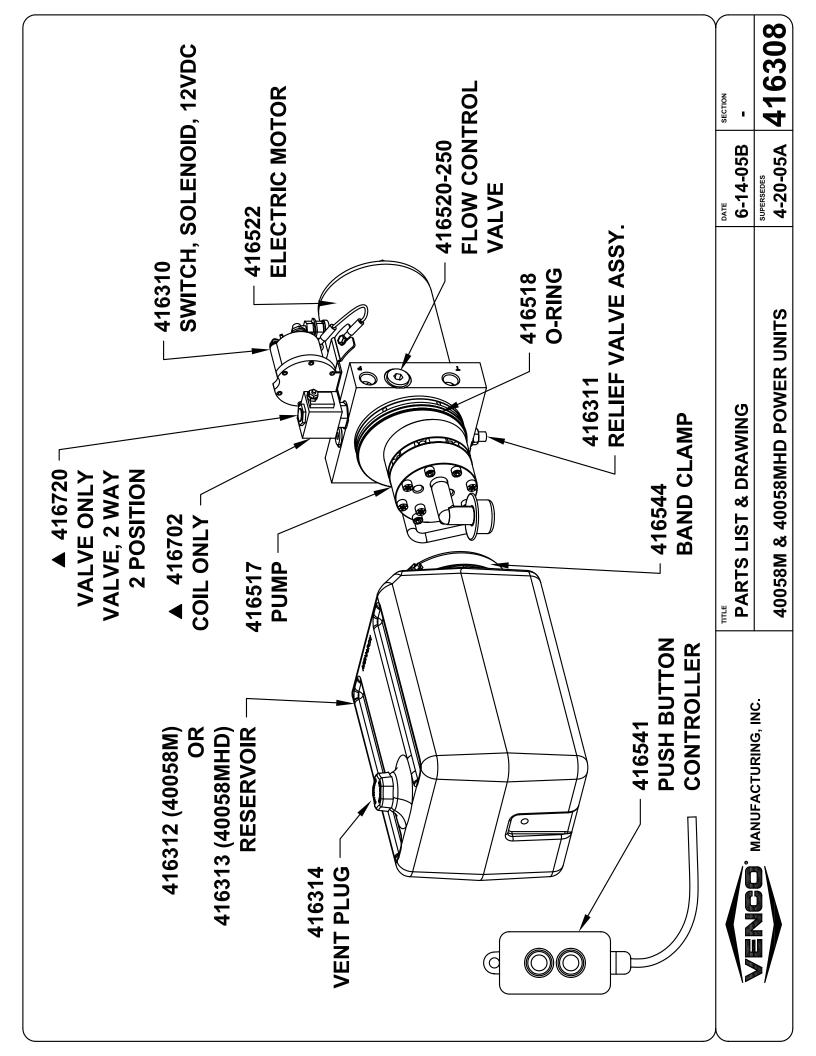
40058-HD SINGLE-ACTING H□DRAULIC PO□ ER UNIT SERVICE PARTS LIST



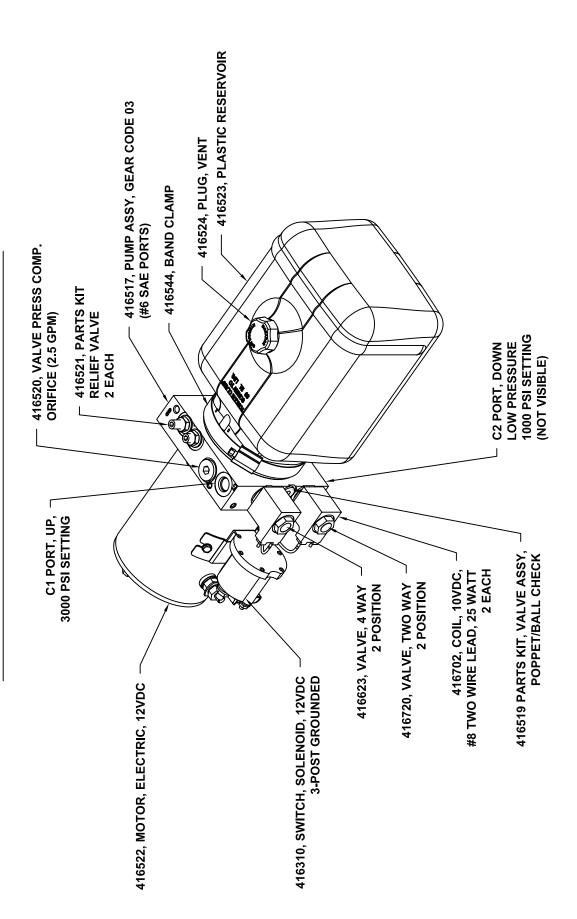
ITEM NO.	DESCRIPTION	FENNER P/N	QTY.
1	SOLENOID 12 VDC	2145-AA	1
2	MOTOR 12 VDC, EXT. DUTY	1789-AC	1
3	VALVE NC 12 VDC	EI-1019-04	1
4	VALVE CARTRIDGE CHECK	2507-AA	1
5	RESERVOIR O-RING	G1-1073-48	1
6	COUPLING	1118-AA	1
7	PUMP Q-RING KIT	K-40	1.
8	INLET PLUMBING KIT	KH	1
9	FILTER	1611-AA	1
10	PUMP ASSEMBLY	PS-2.0	1
11	PUMP MOUNTING BOLT	2825-AA	2

ITEM NO.	DESCRIPTION	FENNER P/N	QTY.
12	RESERVOIR	4454-AC	1
13	RESERVOIR SCREW	3346-AA	4
14	BREATHER	8060-CC	1
15	ADJ. RELIEF VALVE ASSY	RV-2	1
16	PLUG	1456-AA	1
17	MOTOR BRUSH KIT	K-90	1
18	COMPRESSION NUT	816-217	1
19	TUBE SLEEVE	816-218	1
20	RETURN TUBE	T2-1006-28	1
21	FLOW CONTROL	FC-2.5	1
22	INLET ELBOW ASSEMBLY	57-4000-09	1

VENICO MANUEACTURING INC	SERVICE PARTS LIST	12- - -98	H400
MANUFACTURING, INC.	VC 620 628	SUPERCEDES	40058-HD



REPLACEMENT PARTS 416081M



NOT SHOWN: 416533, PUSH BUTTON PENDANT, YELLOW & GREY 416518, O-RING, INDUSTRIAL (3-5/8 x 3-7/8 x 1/8)



REPLACEMENT PARTS DRAWING	416081M POWER UNIT
---------------------------	--------------------

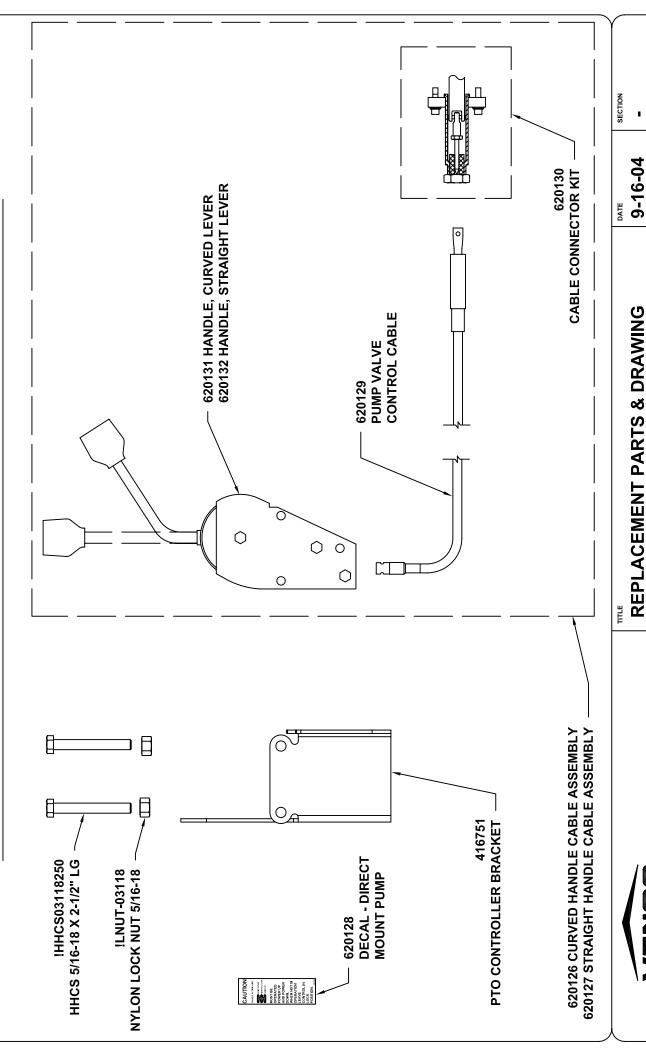
416508

6-14-05C

SECTION

7-27-05D

620124 CABLE & CONSOLE KIT - STRAIGHT HANDLE 620125 CABLE & CONSOLE KIT - CURVED HANDLE



620245

SUPERSEDES

PTO PUMP CABLE

MANUFACTURING, INC.

VENCO HOISTS LIMITED WARRANTY POLICY



Venco products are built to last...we guarantee them.

As a purchaser of any new Venco product covered by warranty, you will receive 3 years of the most complete coverage available...and, at no added cost to you.

3-Year Limited Warranty Policy

This limited policy warrants new products of Venco to be free from defects in material and workmanship for a period of three (3) years from date of original installation. OEM products or accessories purchased by Venco 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. Venco hoists are designed for and intended to be used on stationary trucks dumping on firm and level ground. Spreading applications and/or shock unloading are strictly prohibited and will void this warranty. 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 Venco 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, Venco requires the model and serial number. Only authorized Venco Distributors can perform warranty. For the name and address of your local Venco 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 Venco Distributor. No modifications or alterations may be made to any Venco product without the expressed written consent of Venco Venturo Industries LLC. Installation of any Venco product must be done by an authorized Venco 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_VNC3-D