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-P DECALS AND PACKAGE INCLUDES:

15254 CAUTION STAND CLEAR 2 PCS. 416052 CAUTION DECAL 2 PCS. 416084 SAFETY PROP DECAL 1 PC. 6066 PLASTIC BAG 1 PC.

VENCO MANUFACTURING, INC.	TABLE OF CONTENTS	11-11-08A	SECTION =
MANOFACTORING, INC.	VC 520 W/ LINKAGE PROP	10-21-08	520630

READ THIS FIRST

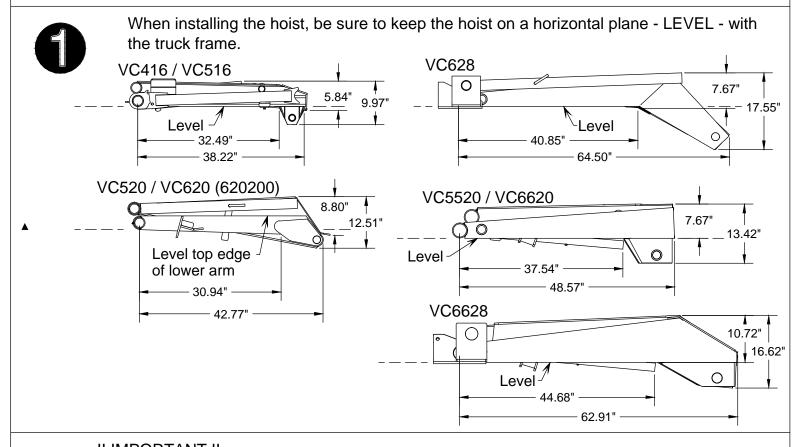
BE SURE TO DO THE FOLLOWING AND YOU WILL AVOID THE MOST COMMON INSTALLATION MISTAKES.

- 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
	-	10-1-01	416733

!! IMPORTANT WARNING !!

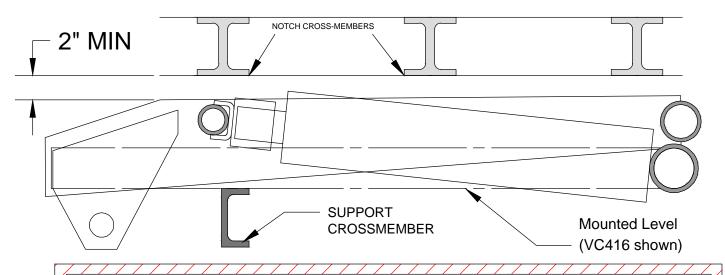
* ALL VENCO CONVERSION HOISTS → VC416 THRU VC6628 *





!! 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

IC. Body Props

One (1) body prop shall be furnished as a standard item on Venco hoists. Federal regulations require that hoists used for construction bodies require two (2) body props, and hoists used on truck beds over 15 feet should have two (2) body props:

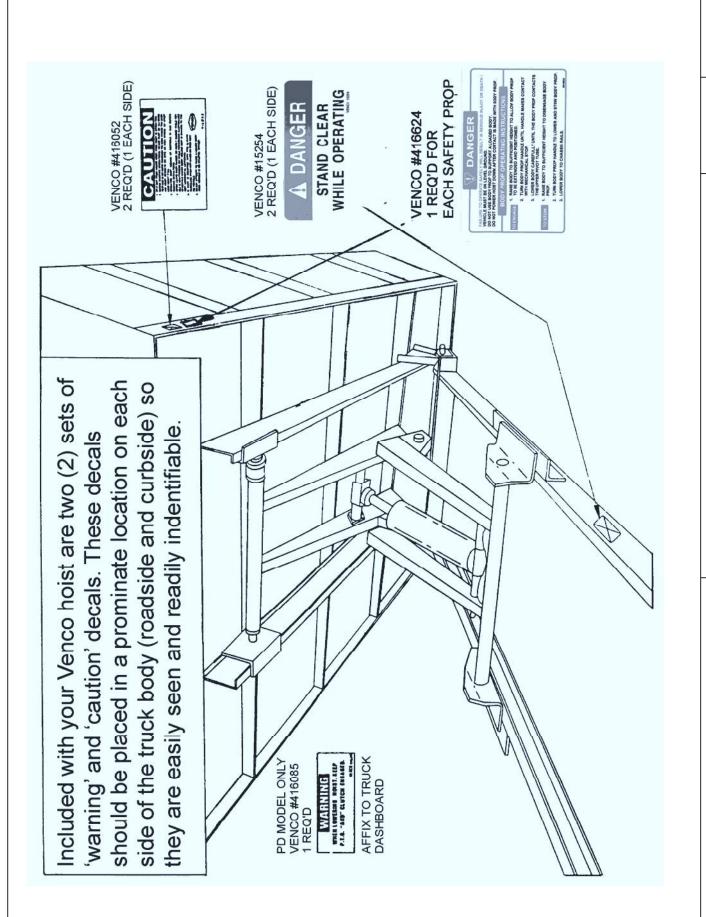
A. If additional body props are required, please designate on your purchase order, or contact our sales office.

Warning and Caution Decals

Included with your Venco hoist are two (2) sets of warning and caution decals. These decals should be placed in a visible location on each side of the truck body (roadside and curbside) so they are easily seen and readily identifiable. See drawing no. 416128 for locations.

The manufacturer recommends that the VC416/516 hoist system be installed by an authorized distributor of Venco products. No responsibility is assumed or implied as to the integrity of any Venco product not furnished, supplied and installed by an authorized distributor.

VENICE MANUFACTURING INC.	INST INSTRUCTIONS	7-14-98	H100
MANUFACTURING, INC.	VC 416/516	SUPERCEDES	416288



F



	w/ LINKAGE BODY PROP
	/w -
DECAL LOCATION	416/516/520 HOIST - v
AL LO	16/520
DEC/	416/5

416850

C100

7-28-08

SUPERSEDES

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 DUMPING 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 DISENCAGE WHEN NOT IN USE OR WHEN 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 position and engage lock.



#416084

√ DANGER

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.
- TURN BODY PROP HANDLE UNTIL HANDLE MAKES CONTACT WITH MECHANICAL STOP.
- LOWER BODY CAREFULLY UNTIL THE BODY PROP CONTACTS THE UPPER PIVOT TUBE.

- 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.

SECTION



DECAL LIST

VC416-520, Linkage Prop

DATE 11-13-08A

SUPERSEDES 7-29-08

VENCO HOIST MODEL VC520

CAPACITIES ARE BASED ON WATER LEVELS AND NON-DIMINISHING 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: 445 LBS.

POWER SOURCE:

ES - ELECTRIC SINGLE ACTING

ED - ELECTRIC DOUBLE ACTING

PD - POWER TAKE OFF DOUBLE ACTING

ADDITIONAL DATA:

5" BORE x 20" STROKE

CA: 84" - 138"

DUMP ANGLE: 40° - 50°

MOUNTING HEIGHT REQ'D: 7-1/2"

CONVERSION APPLICATIONS VC520					
BODY	CA	ОН	40° (TON)	45° (TON)	50°(TON)
12'	84"	30"	16.2	14.5	13.1
13'	84"	42"	18.9	16.9	15.3
13'	102"	24"	12.6	11.3	10.2
13'	108"	18"	11.3	10.1	9.2
14'	102"	36"	14.2	12.7	11.4
14'	108"	30"	12.6	11.3	10.2
14'	114"	24"	11.3	10.1	9.2
14'	120"	18"	10.3	9.2	8.3
14'	124"	14"	9.7	8.7	7.8
14'	126"	12"	9.5	8.4	7.6
15'	102"	48"	16.2	14.5	13.1
15'	108"	42"	14.2	12.7	11.4
15'	120"	30"	11.3	10.1	9.2
15'	124"	26"	10.6	9.5	8.6
15'	126"	24"	10.3	9.2	8.3
15'	138"	12"	8.7	7.8	7.0

DUMP BODY APPLICATIONS VC520 *					
BODY	CA	O.H.	40° (TON)	45° (TON)	50°(TON)
8'	-	12"	18.9	16.9	15.3
9'	-	12"	16.2	14.5	13.1
10'	-	12"	14.2	12.7	11.4

^{*} 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.



VC 520 HOIST	SUPERSEDES 05-12-03A	520601
CAPACITY CHART	01-22-15C	H100
TITLE	DATE	SECTION

VENCO HOIST MODEL VC520 W/ SUBFRAME

CAPACITIES ARE BASED ON WATER LEVELS AND NON-DIMINISHING 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: 675 LBS.

POWER SOURCE:

ES - ELECTRIC SINGLE ACTING

ED - ELECTRIC DOUBLE ACTING

PD - POWER TAKE OFF DOUBLE ACTING

ADDITIONAL DATA:

5" BORE x 20" STROKE

CA: 84" - 138"

DUMP ANGLE: 45° - 50°

MOUNTING HEIGHT REQ'D: SF: 4-1/2", ABOVE SF: 6-3/4"

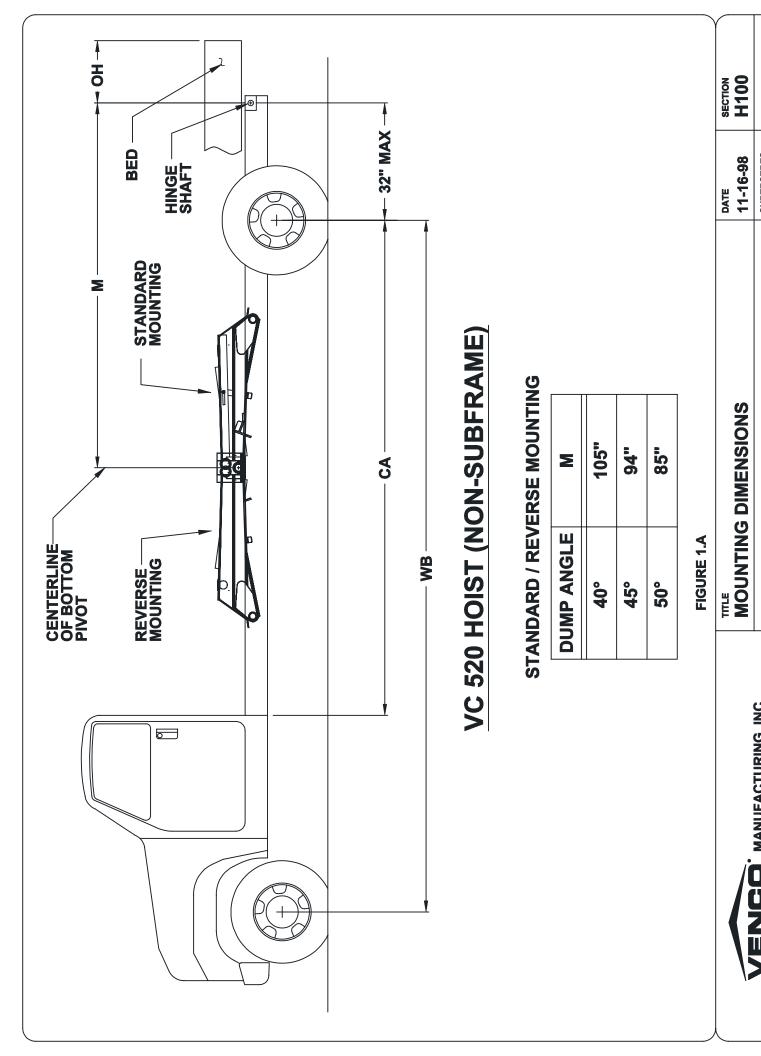
CON	IVERSION /	APPLICATION	ONS VC520	W/ SUBFR	AME
BODY	CA	ОН	45° (TON)	47° (TON)	50°(TON)
12'	84"	30"	14.7	14.1	13.2
13'	84"	42"	17.1	16.4	15.4
13'	102"	24"	11.4	11.0	10.3
13'	108"	18"	10.3	9.9	9.2
14'	102"	36"	12.8	12.3	11.5
14'	108"	30"	11.4	11.0	10.3
14'	114"	24"	10.3	9.9	9.2
14'	120"	18"	9.3	9.0	8.4
14'	124"	14"	8.8	8.5	7.9
14'	126"	12"	8.6	8.2	7.7
15'	102"	48"	14.7	14.1	13.2
15'	108"	42"	12.8	12.3	11.5
15'	120"	30"	10.3	9.9	9.2
15'	124"	26"	9.6	9.3	8.7
15'	126"	24"	9.3	9.0	8.4
15'	138"	12"	7.9	7.6	7.1

	DUMP BODY	APPLICATIO	NS VC520 W/	SUBFRAME *	
BODY	CA	O.H.	45° (TON)	47° (TON)	50°(TON)
8'	-	12"	17.1	16.4	15.4
9'	-	12"	14.7	14.1	13.2
10'	-	12"	12.8	12.3	11.5

^{*} 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.



VC 520 HOIST W/ SF	supersedes 05-12-03A	520602
CAPACITY CHART	01-22-15C	H100
TITLE	DATE	SECTION



520603

SUPERSEDES

VC 520 HOIST

ENCO. MANUFACTURING, INC.

HOIST MOUNTING INSTRUCTIONS (VC 520 NON-SUBFRAME ONLY)

Refer to drawings 520601 or 520603 (on the preceding pages).

CAUTION

If the distance between the center 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).

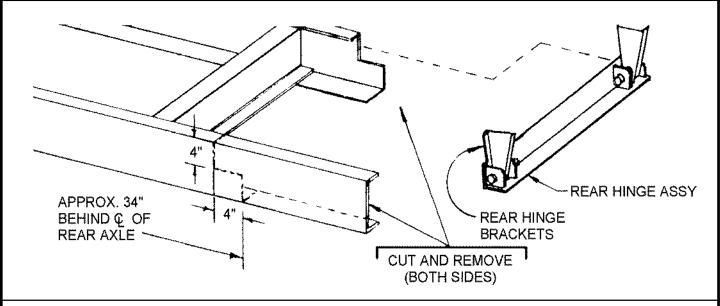


Figure 2 - Frame Modification and Rear Hinge Attachment

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 lower pivot is referred to as the "M" dimension. The table on drawing 520603 provides 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 (toward cab) decreases dump angle and increases capacity. A backward movement increases dump angle and decreases capacity (see dwg. 520601).

VENCO MANUFACTURING, INC.	MOUNTING INSTR.	11-16-98	H200
manor acroning, inc.	VC 520 (NON-SUBFRAME)	SUPERCEDES	520604

HOIST MOUNTING INSTRUCTIONS (VC 520 / 620 NON-SUBFRAME ONLY)

E. 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).

NOTE: 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.

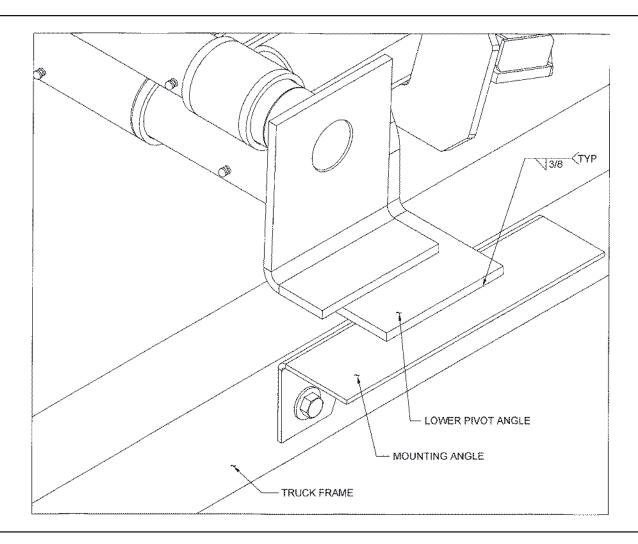


Figure 3 - Mounting Angle Assembly

VENCO MANUFACTURING, INC.	MOUNTING INSTR.	6-12-03A	H200
	VC 520, VC 620 (NON-SUBFRAME)	11-16-98	520605

STANDARD HOIST MOUNTING INSTRUCTIONS

- 1. Moving the hoist along the truck frame forward or rearward will affect the hoist's performance. A forward movement will reduce the dump angle and increase capacity. A backward movement will increase dump angle and decrease capacity.
- 2. The VC520 Hoist is designed for 34" to 29.5" frame widths.

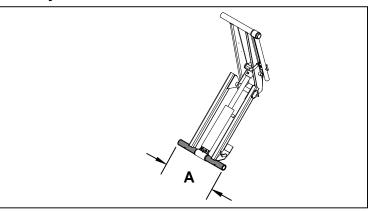
 The hoist is shipped from the factory for mounting on 34" O.D.

 frames. For a frame width O.D. smaller than 34", the following parts will have to be shortened as noted below.

QTY.	PART NO.	DESCRIPTION
1	520540	Lower Pivot Tube
2	520563	Lower Pivot Assy.
2	520562	Upper Lift Shaft Assy.

* Original length shipped from factory

Lower Pivot Tube 520540	
Frame Width	Dim A.
34	* 27-3/4"
31.3	25-1/16"
29.5	23-1/4"



Lower Pive 5205	•	<i>n</i>
Frame Width	Dim A.	
34	* 12-1/4"	
31.3	10-7/8"	
29.5	10"	A →

Upper Lift S 5205	•	
Frame Width	Dim A.	
34	* 13-1/2"	
31.3	12-1/2"	
29.5	11-5/8"	A ——

VENCO®	MANUFACTURING, INC.	INST. INSTRUCTIONS	01-14-13B	H200
VENCO	CINCINNATI, OHIO	VC520	SUPERSEDES 02-23-10A	520101

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.

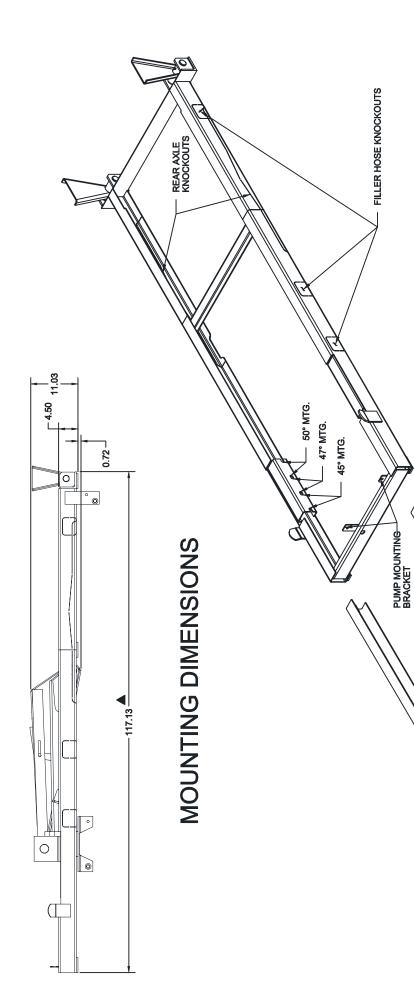
- E. Trim off any truck frame that extends beyond the rear hinge.
- F. Fasten the rear half of the subframe to the truck by welding the two frame tie down brackets onto the subframe, drilling corresponding holes through the truck frame, and using two (2) 1/2" x 1-1/2" hexhead cap screws, lockwashers, 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)





SUBFRAME FEATURES	1-11-05C	
VC 520 / 620	SUPERSEDES 8-26-03B	

SUBFRAME EXTENSION CHANNELS

520607

1-11-05C H200

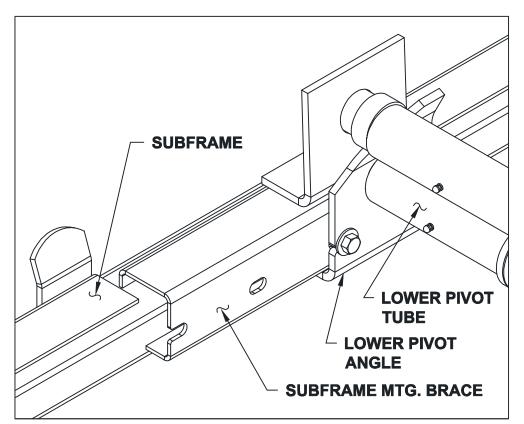
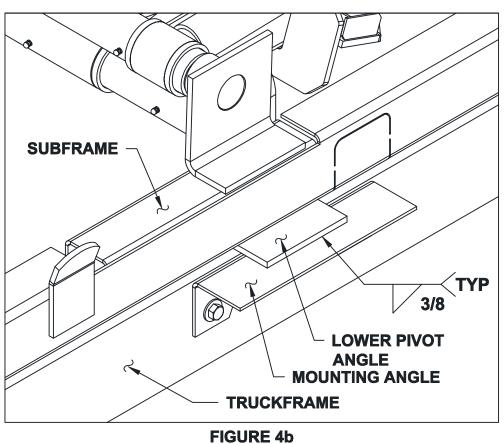


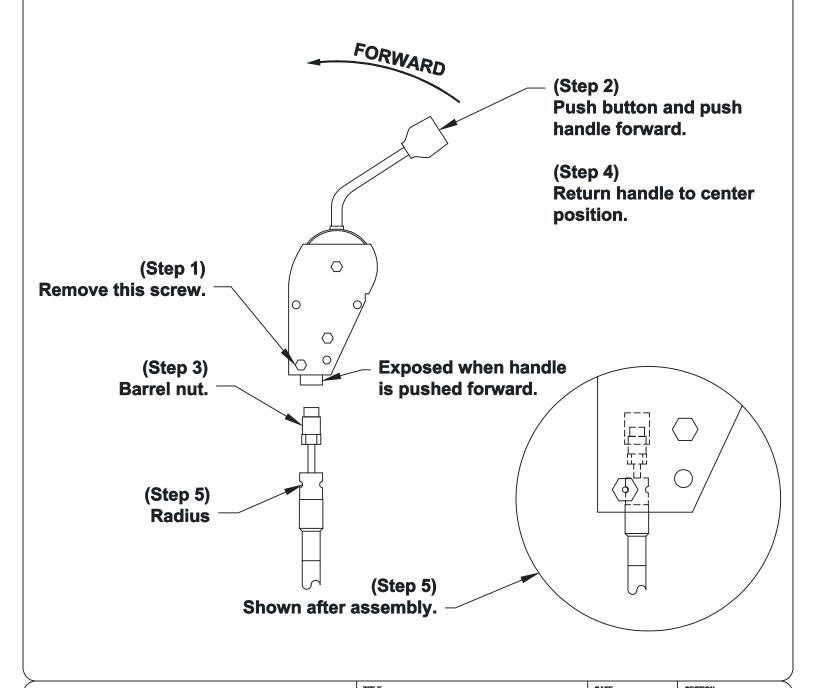
FIGURE 4a



VENCO MANUFACTURING, INC.	MOUNTING INSTR.	3-25-04B	SECTION H200
MANUPACTORING, INC.	VC 520 / VC 620 A	SUPERSEDES 6-12-03A	520608

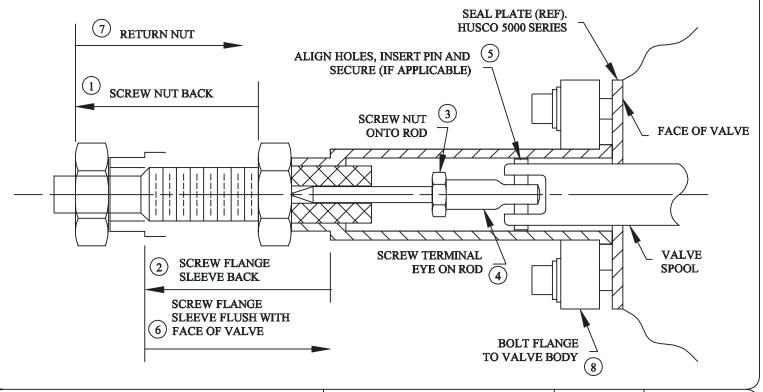
ATTACHING 620129 CABLE TO 620131 / 2 HANDLE

- 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.



WANDFACTORING, INC.	PTO PUMP CABLE	SUPERSEDES	620240
VENCO MANUFACTURING, INC.	CABLE / HANDLE ASSEMBLY	9-17-04	SECTION

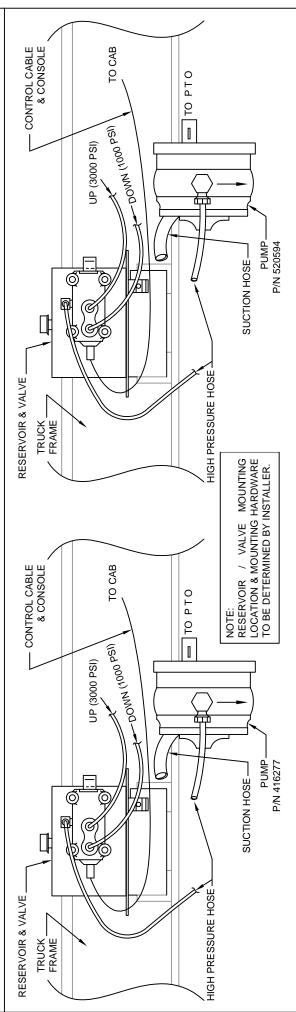
- 1. Thread .750-16 UNF jam nut entire length of threaded hub and onto cable.
- 2. Place flange on sleeve and turn flange/sleeve assembly entire length of threaded hub and onto cable.
- 3. Thread .250-28 UNF jam nut onto threaded rod unitl it bottoms.
- 4. Thread terminal eye onto threaded rod and bottom 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.



	TITLE	DATE	SECTION
VENCO MANUFACTURING, INC.	PTO PUMP CABLE INSTALL	5-11-04	-
VENCE MANORACIONINO, INC.		SUPERSEDES	44C7EE
	VC416 - 6628	-	416755

DIRECTIONAL PUMP CONFIGURATION FOR VC416-620

BI-DIRECTIONAL PUMP CONFIGURATION FOR VC628 & UP



NOTE: ARROW ON PUMP HOUSING INDICATED 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 DWG 416812 (IF APPLICABLE).

Model	VC416	VC516	VC520	VC620	VC628	VC5520 VC6620	VC6628
Control Cable & Console				620125 - Curved 620124 - Straight	- Straight		
Cylinder Up Hose	416044	144		520574		(2) 520574	4
Cylinder Down Hose			416045	16	628041	(2) 416045	(2) 628041
High Pressure Hose (pump	416045	416045 (7' LG. 3/8 HOSE)	HOSE)	620909 (10' LG, 3/8 HOSE) FOR VC620 NON-SF	39	620909 (10° LG. 3/8 HOSE)	SE)
to valve)			Ì	416045 (7 LG, 3/8 HOSE) FOR VC620 SF			Ì
Suction Hose (reservoir to	020077	- - - -	(-	620910 (10' LG, 1.00" I.D.) FOR VC620 NON-SF			í
(dwnd	4160/9	4 160/9 (/ LG, 1.00° 1.D.)	() ()	416079 (7 LG, 1.00" I.D.) FOR VC620 SF	70	520088F (10 LG, 1-1/4 1.D.)	
Pump/Valve/Tank		9	620011 (9 QUART)	UART)		662077 (21 QUART)	
Pump (Only)			416277 (5gpm)	(md£		520594 (10gpm)	



VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO

TITLE

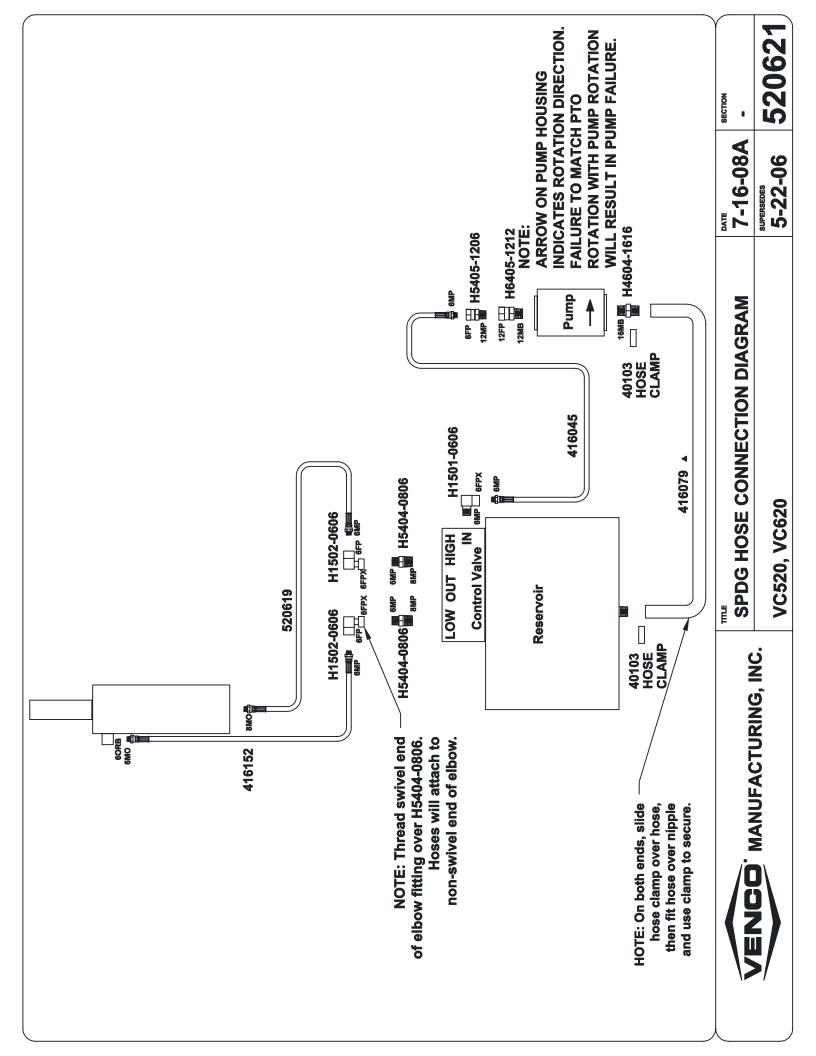
SPLIT PUMP	VC416-6628

	DATE
T PUMP	03-16-22E
	SUPERSEDES
6-6628	08-01-17D

416763

H200

SECTION



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 rotatation 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 roation.

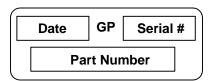
MANUFACTURING, INC. CINCINNATI, OHIO

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 roation (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 part 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



TITLE	DATE	SECTION
WILLIAMS PTO WARNING	01-14-13B	H200
	SUPERSEDES	440007
-	02-24-10A	416287

HOIST MOUNTING INSTRUCTIONS (Continued)

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

The VC 520 with subframe requires a minimum of 9-1/2" clearance above the truck frame.

The VC 520 (non-subframe) requires a minimum of 7-1/2" 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 (Non-subframe model):

Assuming that a 7-1/2" clearance is required and 6" long beams are on the truck body, a liner of at least 1-1/2" net will be required to obtain the minimum clearance required to mount the hoist. 6" + 1-1/2" = 7-1/2" 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. 520604 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.

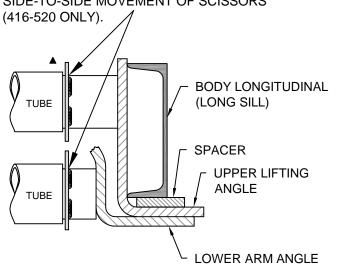
VENCO MANUFACTURING, INC.	MOUNTING INSTR.	3-21-05A	H200
VEIGO MANOPACTORING, INC.	VC 520	11-17-98	520609

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.

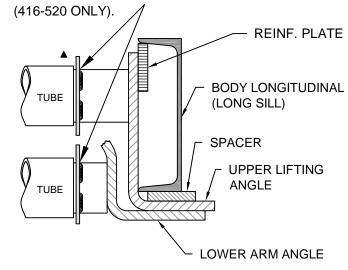
▲ COLLAR SHOULD BE PROPERLY LOCATED AND STITCH WELDED TO PIVOT ROD TO LIMIT SIDE-TO-SIDE MOVEMENT OF SCISSORS (416-520 ONLY)



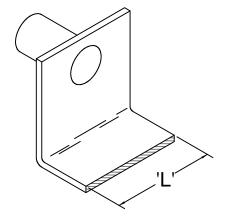
SITUATION B: LIFTING ANGLE DOES NOT ENVELOP BODY LONG SILL AND A REINFORCEMENT PLATE IS REQUIRED.

▲ COLLAR SHOULD BE PROPERLY LOCATED AND STITCH WELDED TO PIVOT ROD TO LIMIT SIDE-TO-SIDE MOVEMENT OF SCISSORS

(416-520 ONLY)

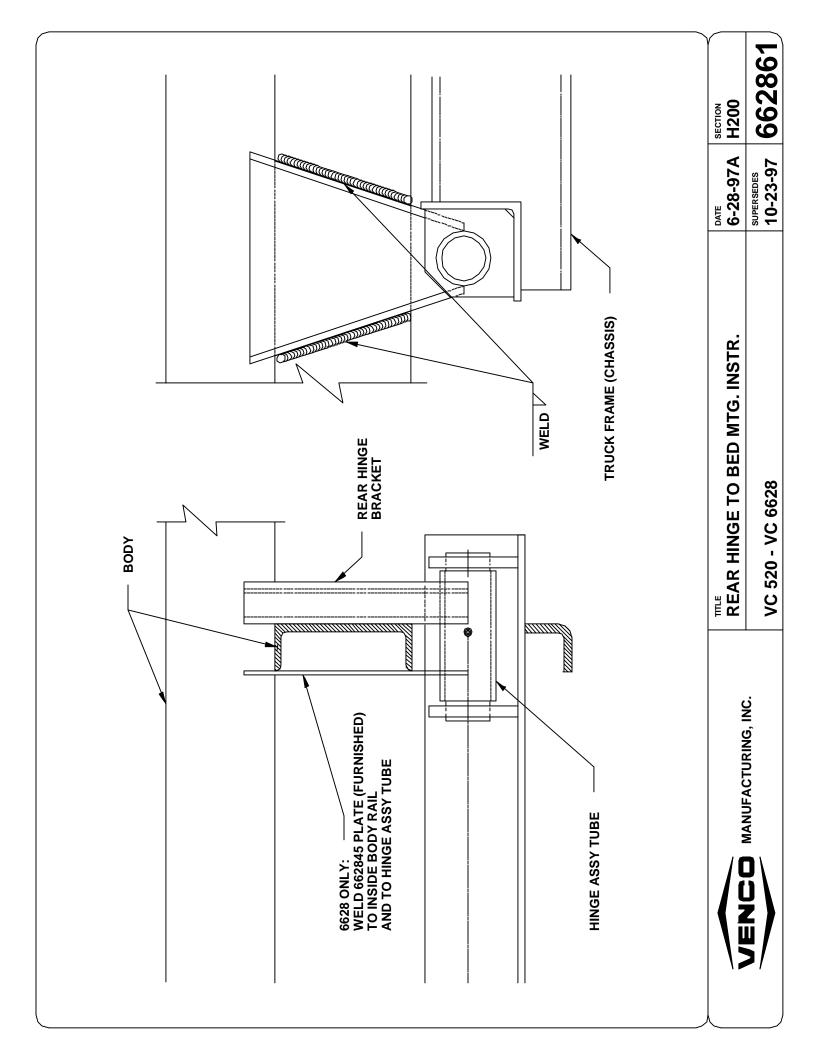


NOTE: THE SPACER AND REINFORCEMENT PLATE SHOULD BE THE SAME LENGTH AS THE LIFTING ARM. SEE 'L' DIMENSION BELOW.





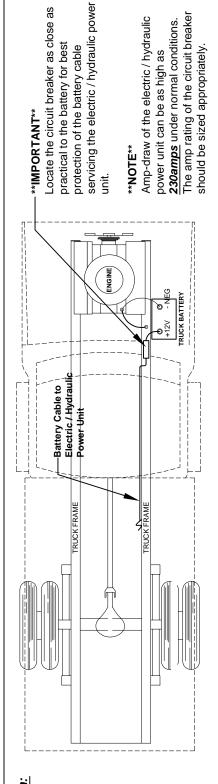
VC416-6628, TRI R313-6628	SUPERSEDES 01-14-13D	520093
INSTLL. INSTRUCTIONS	08-20-14E	H200
TITLE	DATE	SECTION



	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	40058MHD / 416081M	6426 / 6425 40058M / 416081M 40058M / 416081M 40058M / 416081M 40058M / 416081M 40058MHD / 416081M 40058MHD / 416081M
	Reservoir Capacity (Quarts)	3.4 / 3.4	4.6 / 3.4	4.6 / 3.4	4.6 / 3.4	4.6 / 3.4	5.4 / 3.4	5.4 / 3.4
	Total Hydraulic Fluid Required (Quarts)	4	4	9	œ	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.							
2a	With the hoist in the down position, add the indicated indicated amount (Quarts) of hydraulic fluid.	2	8	3.5	3.5	3.5	3.5	3.5
2 p	Raise hoist one-quarter of the way (approximately 12° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.				-	rč.	2	ю
2c	Raise hoist one-half of the way (approximately 22-25° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.	8	8	1.5	-	z;	7	ю
2d	Raise hoist three-quarters of the way (approximately 36° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.	,			-	rċ	7	м
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	-	.t.	-	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
	 / C		FILLING F	LLING HYDRAULIC	RESERVOIR		_{вате} 6-16-05С	SECTION
	MANOFACIORING, INC.	i	VP/VC6-62	P/VC6-628, TRL313-628	528		6-18-03B	416140

ELECTRICAL CONNECTIONS - HYDRAULIC POWER UNITS

+12 Volt Power Connection:



Grounding: 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 illustrations below.

Non Sub-frame Grounding

Long Plated HHCS

Torque to 36 ft*lbs 3/8-16 x 2-3/4" 3/8 Lock Washer Spacer P/N 6081 (2x) places) and apply dielectric Clean truck frame to bare metal on both sides (4 Truck Frame. grease 3/8-16 Threaded holes in the aluminum pump Use the two provided 0 housing 0

Profile View

Sub-frame Grounding

0 truck frame with Grounding Strap Kit P/N 6474 ——7 Attach ground cable to the provided 5/16-18 threaded GND hole in the aluminum Ground Hyd. Pwr. Unit to pump housing Truck Frame

Sub-frame

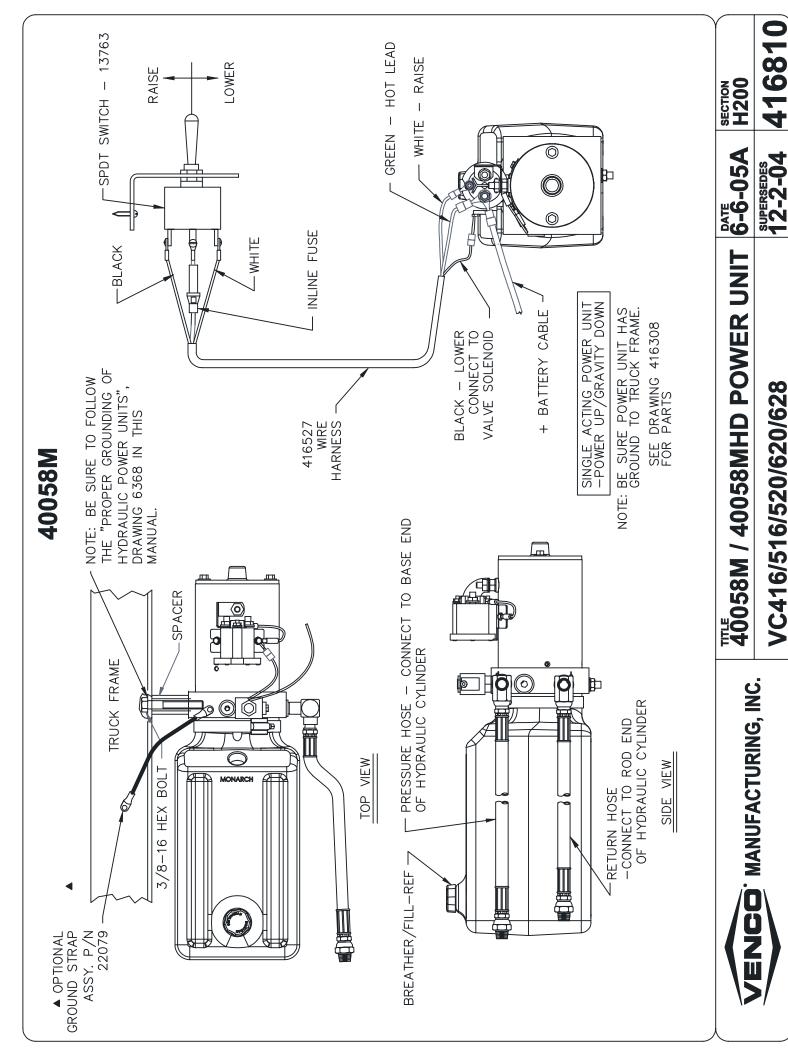
DO NOT APPLY THREAD LOCK LIQUIDS TO BOLT THREADS, AS THEY WILL INSULATE THE BOLTS FROM THE ALUMINUM PUMP HOUSING.



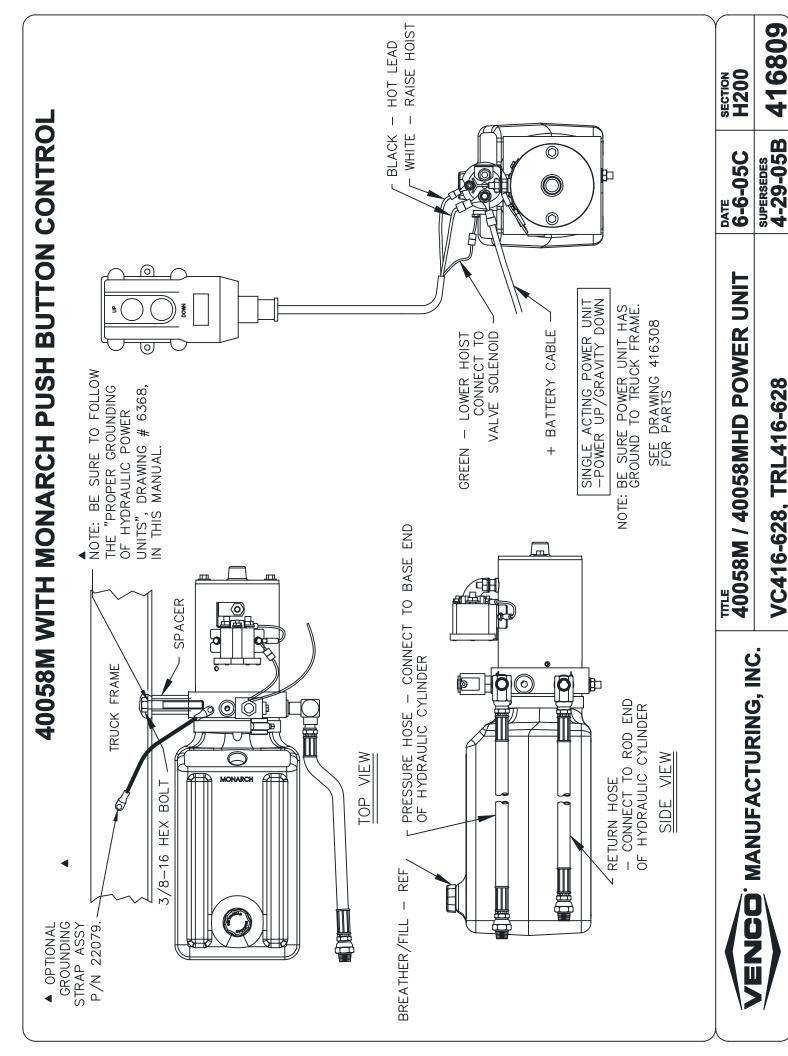
PWR UNITS 09-23-20D	SUPERSEDES
ELECTRICAL CONNECTIONS - HYD PWR UNITS 09-23-20D	

6368

Top View

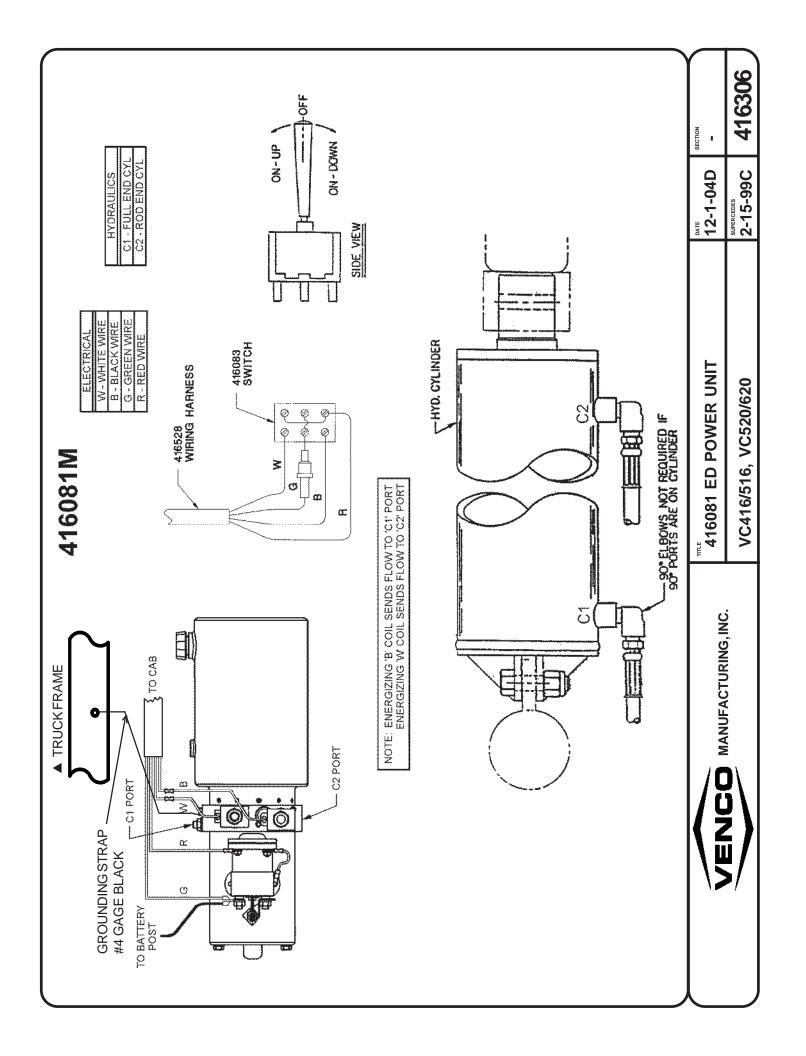


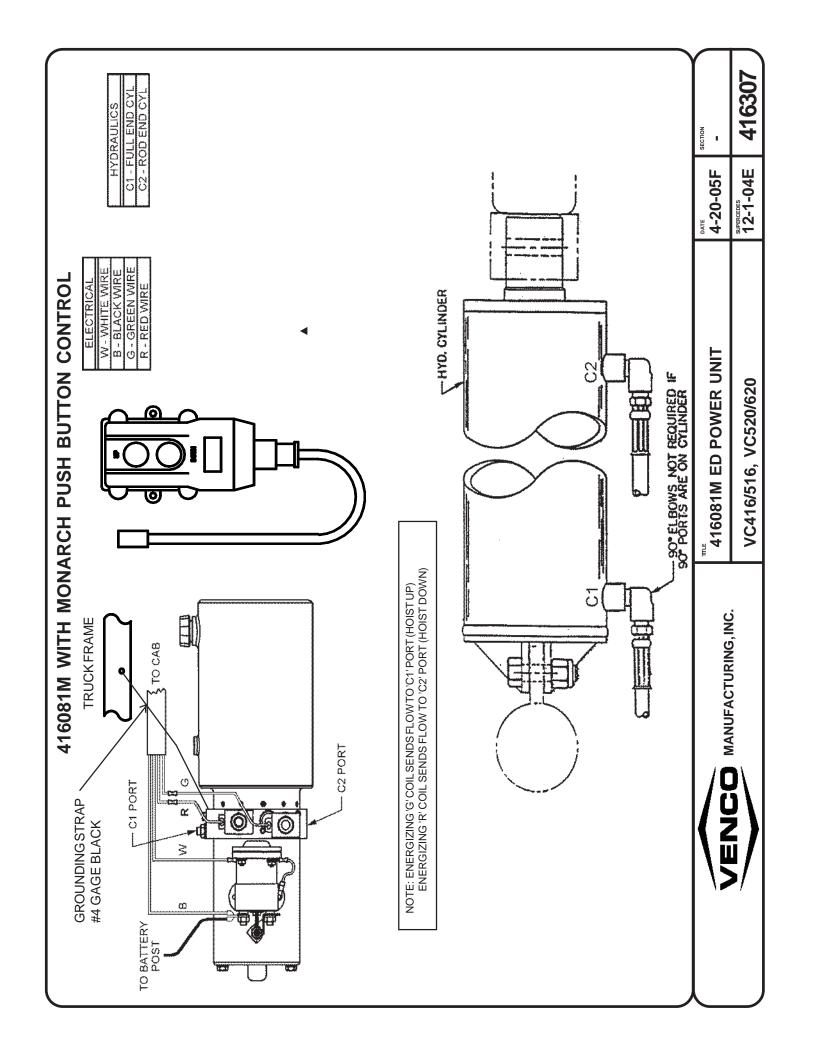
VC416/516/520/620/628



416809

VC416-628, TRL416-628





HOIST MAINTENANCE AND OPERATION INSTRUCTIONS

A. Hoist Unit Lubrication

- 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.

WARNING

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:

- Engage 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>.

NOTE

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.

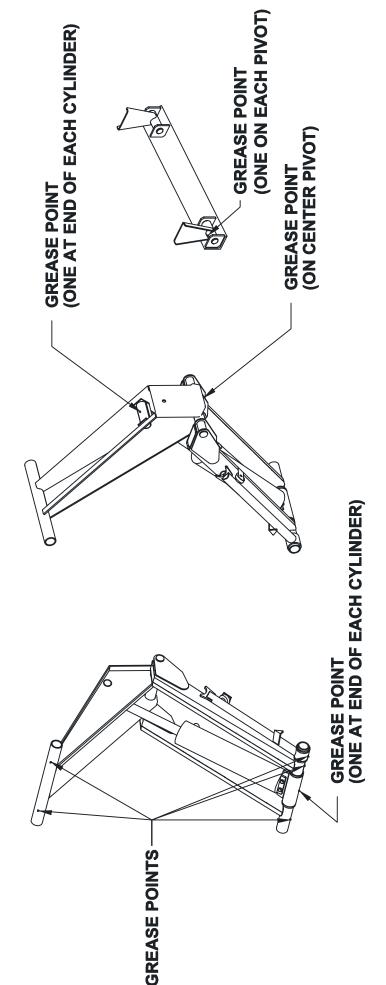
WARNING

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.

VENCO MANUFACTURING, INC.	MAINT. & OPER. INSTR.	9-4-97A	H200
	VC 520 - VC 6628	3-15-90	520079

HOIST GREASE POINTS

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



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



Ē

07/21/0	SUPERSEDES	•
GREASE POINTS FOR HOISTS		VC416/516/520 w/LINKAGE BODY PROP

520625

SECTION

DATE

8

BODY PROP USE AND WARNINGS

D. Body prop(s): Federal Regulation 1926.601, Paragraph 10, requires the use of a body prop. Accordingly, all Venco Hoist Units will have included as a standard item a body prop (safety strut). See Paragraphs D.1. & D.2. below.

WARNING

Do not place arms, hands, or any part of the body between the truck longitudinals (long beams) or moving parts.

Do not use the body prop(s) to support a loaded truck body.

Read operation of safety strut and caution labels before operating the hoist.

- 1. The body prop is designed for use only when the truck body is empty. The purpose of the body prop is to provide a safety strut for use when maintenance or inspection are performed on an unloaded truck body in the raised position.
- 2. One (1) body prop shall be furnished for truck bodies up to and including 15 feet. For bodies longer than 15 feet in length, two (2) body props should be used.

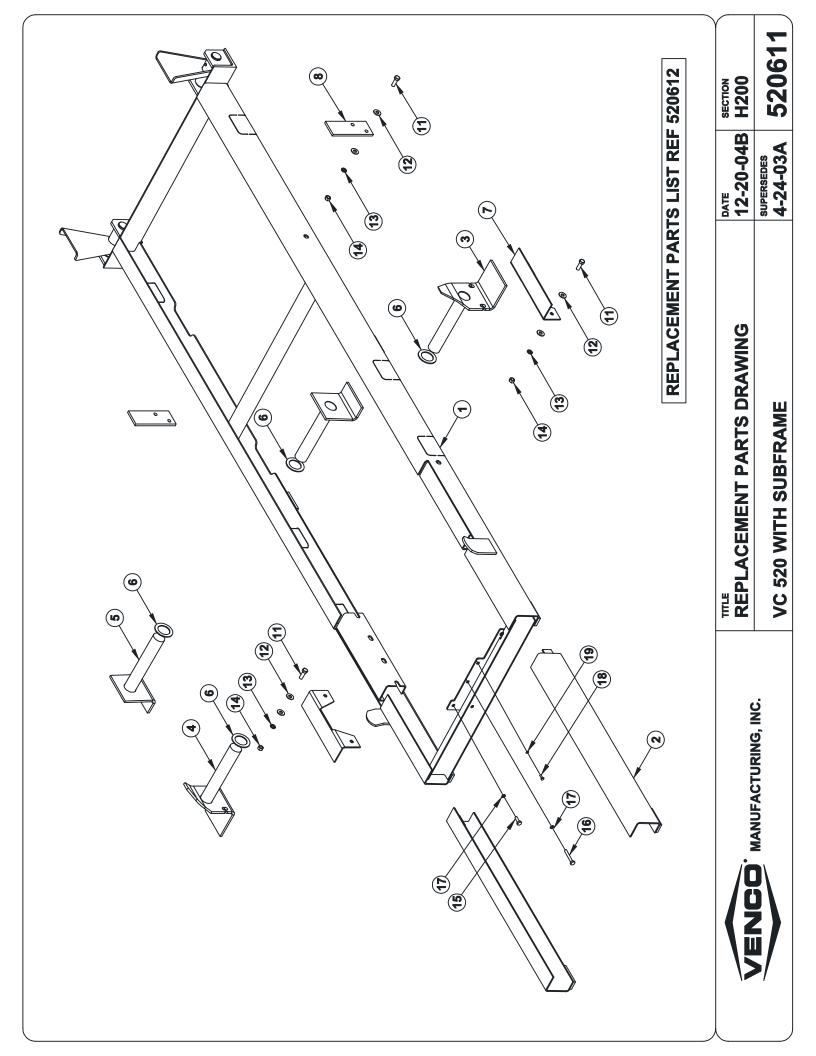
Note: For all dump bodies two (2) body props are required.

- 3. On models equipped with a indexing type body prop, rotate the body prop until the body prop pin drops into the slot on the indexing plate, this will correctly position the body prop in preparation for lowering the truck body onto the body prop.
- 4. With the body prop in the 'up' & 'indexed' position lower the truck body until 'contact' is made between the body prop and the upper pivot tube. Warning: DO NOT CONTINUE TO POWER 'DOWN' THE TRUCK BODY AFTER CONTACT IS MADE.
- 5. To disengage the body prop, raise the truck body until the body prop is well clear of the upper pivot tube. Then raise the body prop to clear the slot on the indexing plate and rotate the body prop on to the body prop rest.

WARNING

Use care when reseating the body prop(s).

VENCO MANUFACTURING, INC.	BODY PROP INSTR.	11-5-08	H200
	VC 416 / 516/ 520	SUPERCEDES	520626

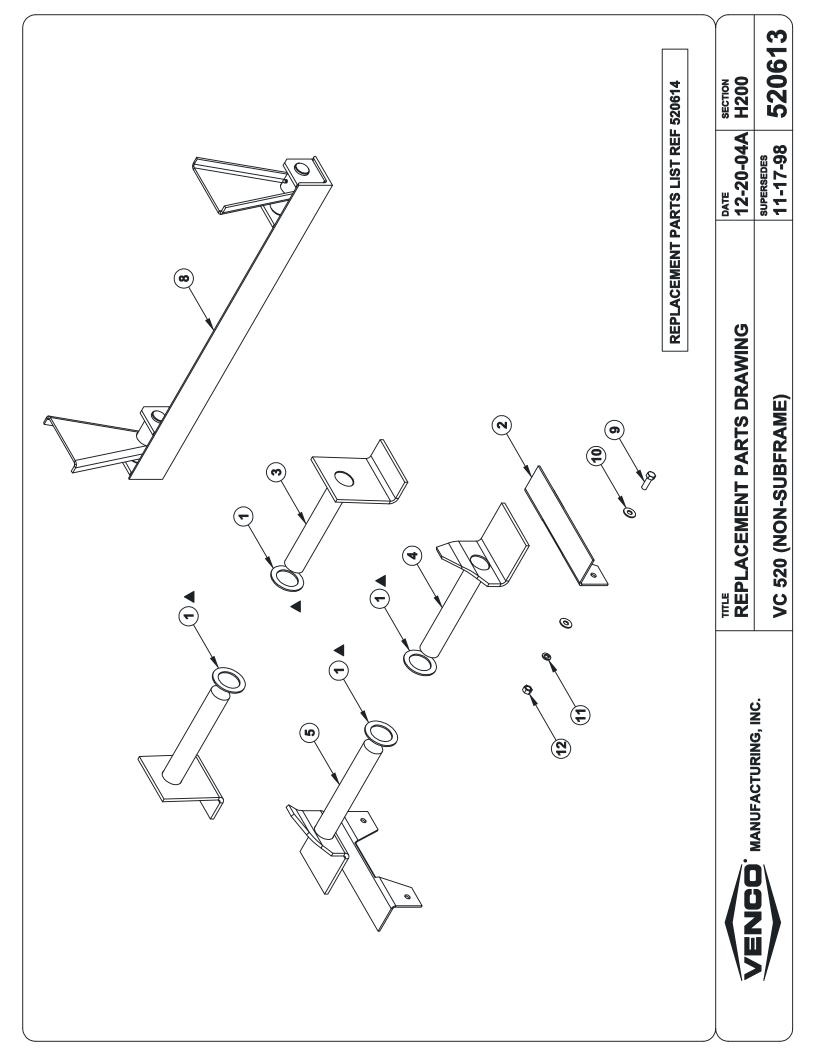


VC 520 WITH SUBFRAME REPLACEMENT PARTS LIST

ITEM	PARTNUMBER	QTY	DESCRIPTION
1 2 3 4 5	520590 520588 520524-1 520524-2 520527	1 - 1 1 2	SUBFRAME WELDED ASSEMBLY SUBFRAME EXTENSION KIT (OPTIONAL) LOWER PIVOT ASSEMBLY - RIGHT LOWER PIVOT ASSEMBLY - LEFT UPPER PIVOT ASSEMBLY
6 7 8 9 10	416220 520063 ▲ 520532 -	4 2 2 -	COLLAR - UPPER PIVOT FRAME MOUNTING ANGLE BRACKET - FRAME TIE DOWN
11 12 13 14 15	!HHCS05013150 !FWSH-050 !LWSH-050 !HNUT-05013 !HHCS03816075	12 24 12 12 1	HEX HEAD CAP SCREW - 1/2"-13 x 1-1/2" LG. FLAT WASHER - 1/2" LOCK WASHER - 1/2" HEX NUT - 1/2"-13 HEX HEAD CAP SCREW - 3/8"-16 x 3/4" LG.
16 17 18 19 20	!HHCS03816200 !LWSH-038 !HHCS02520075 !LWSH-025	1 2 1 1	HEX HEAD CAP SCREW - 3/8"-16 x 2" LG. LOCK WASHER - 3/8" HEX HEAD CAP SCREW - 1/4"-20 x 3/4" LG. (ES ONLY) LOCK WASHER - 1/4" (ES ONLY)
21 22 23 24 25	- - - -		
26 27 28 29 30	- - - -	- - - -	- - - -
31 32 33 34 35	- - - -	- - - -	- - - -

REPLACEMENT PARTS DWG REF 520611

VENCO MANUFACTURING, INC.	REPL. PARTS LIST	7-16-08D	H200
WEIGH MARKET ACTORING, INC.	VC 520 WITH SUBFRAME	5-22-06C	520612

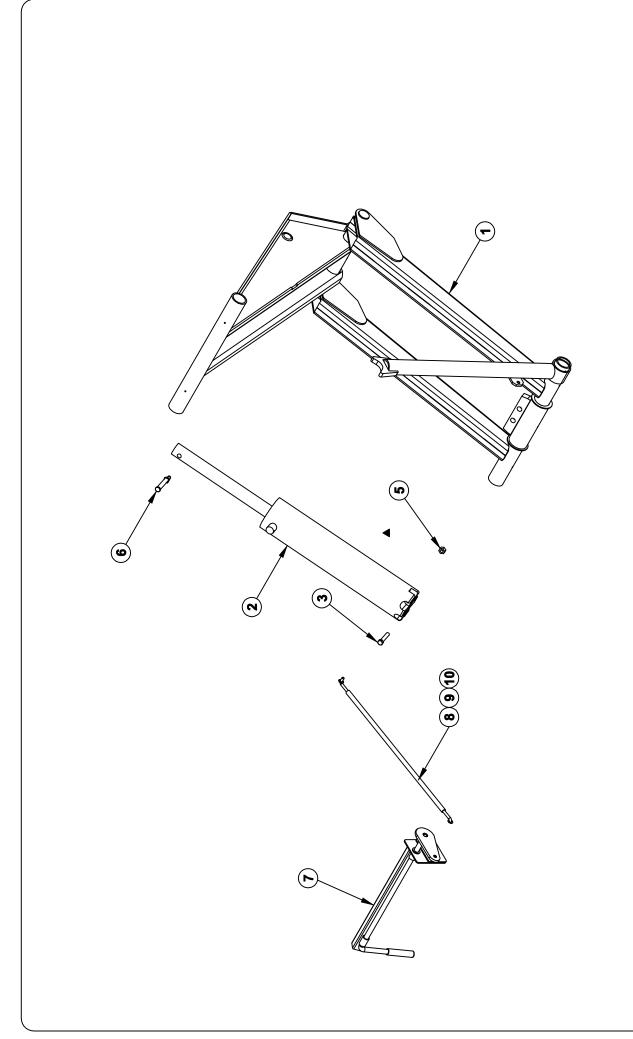


VC 520 (NON-SUBFRAME) REPLACEMENT PARTS LIST

ITEM	PARTNUMBER	QTY	DESCRIPTION
1 2 3 4 5	416220 520063 ▲ 520562 520563-1 520563-2	4 2 2 1 1	COLLAR - UPPER & LOWER PIVOTS FRAME MOUNTING ANGLE UPPER PIVOT ASSY LOWER PIVOT ASSEMBLY LOWER PIVOT ASSEMBLY
6 7 8 9 10	- - 662057 !HHCS05013150 !FWSH-050	- - 1 4 8	- REAR HINGE ASSY HEX HEAD CAP SCREW - 1/2"-13 x 1-1/2" LG. FLAT WASHER - 1/2"
11 12 13 14 15	!LWSH-050 !HNUT-05013 - - -	4 4 - -	LOCK WASHER - 1/2" HEXNUT - 1/2"-13
16 17 18 19 20	- - - -	- - - -	- - - -
21 22 23 24 25	- - - -	- - - -	- - - -
26 27 28 29 30	- - - -	- - - -	- - - -
31 32 33 34 35	- - - -	- - - -	- - - -

REPLACEMENT PARTS DWG REF 520613

VENCO MANUFACTURING, INC.	REPL. PARTS LIST	7-16-08D	SECTION H200
	VC 520 (NON-SUBFRAME)	5-22-06C	520614



REPLACEMENT PARTS LIST REF 520632



REPLACEMENT PARTS DRAWING	12-03-12B H200	section H200
VC 520 W/ LINKAGE BODY PROP	supersedes 11-10-10A	11-10-10A 520631

VC520 HOIST W/ LINKAGE BODY PROP REPLACEMENT PARTS LIST

ITEM	PART NUMBER	QTY.	DESCRIPTION
1	520700-ALT01	1	SCISSORS ASSEMBLY
2	520904	1 1	HYDRAULIC CYLINDER
A 3	!HHCS05013250-8	2	HEX HEAD CAP SCREW; 1/2-13 X 2 1/2" LG. GR. 8
4	-	_	-
▲ 5	!LNUT-05013	2	LOCK NUT; 1/2-13
6	416545	1	5/8 X 3 1/2 CLEVIS PIN
7	520646	1 1	WELDED HANDLE ASSY.
8	520633-1	1 1	LINKAGE ROD ASSY., 31" LONG
9	520633-2	1	LINKAGE ROD ASSY., 15" LONG
10	520633-3	1	LINKAGE ROD ASSY., 55 1/4" LONG
	0_000	<u> </u>	
11	-	-	-
12	-	-	-
13	-	-	-
14	-	-	-
15	-	-	-
16	_	_	
17	_	_	_
18	_		_
19	_		_
20	_		_
21	_	_	-
22	-	_	-
23	_	_	-
24	_	_	-
25	-	-	-
26			
26 27	-	-	-
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29	-	-	-
30	<u>-</u>		
31	-	_	-
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33	_	-	_
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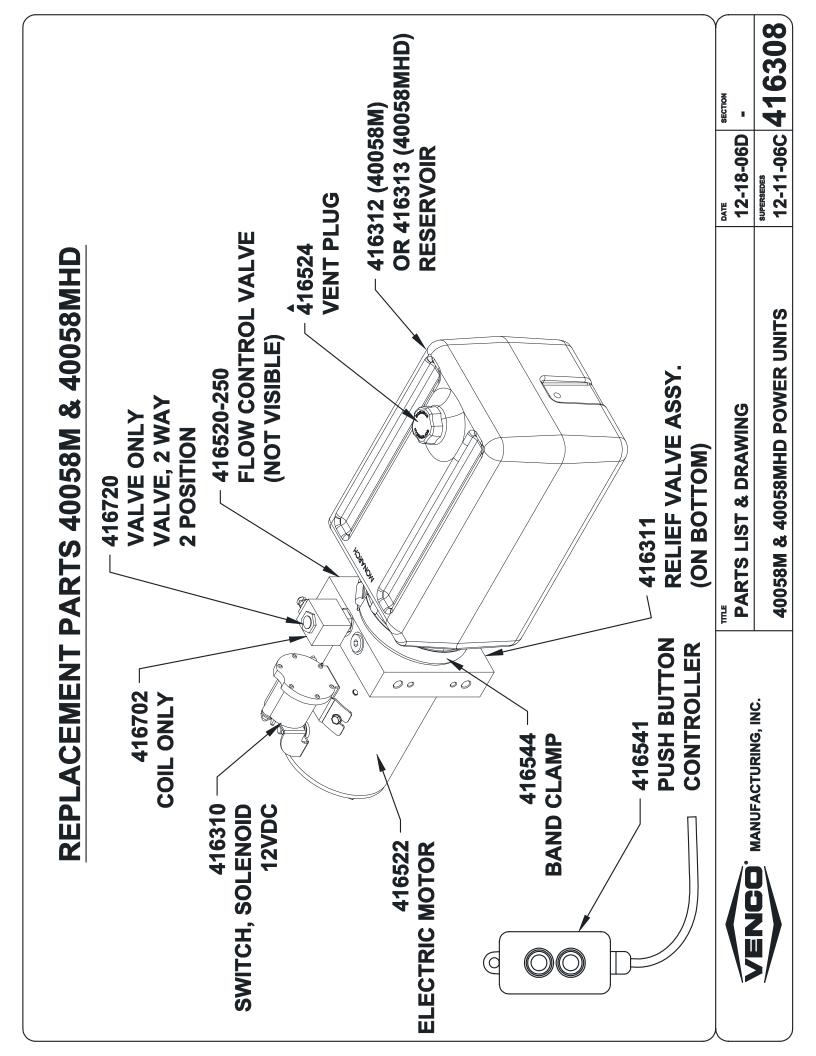
REPLACEMENT PARTS DWG REF 520631



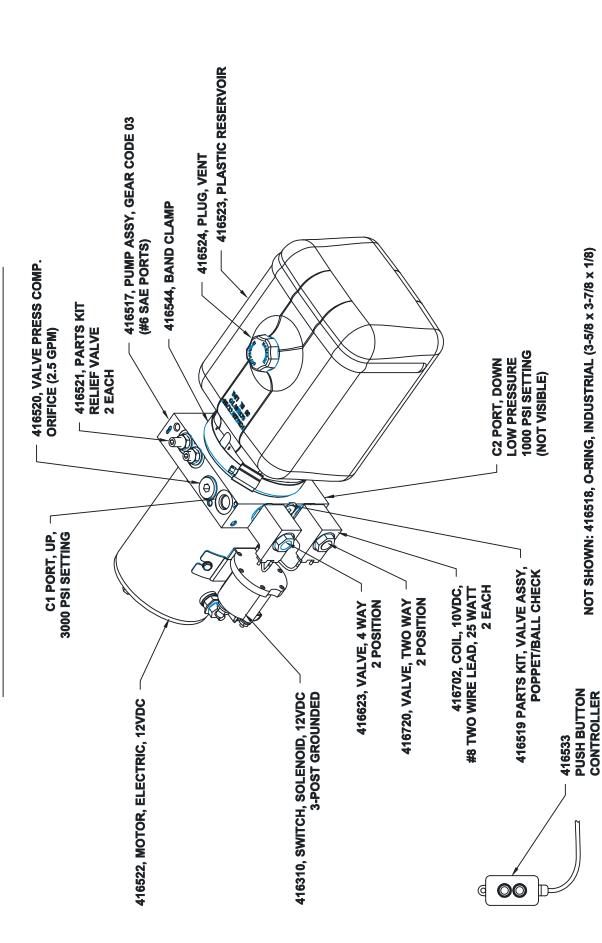
MFG., INC.	
CINCINNATI,	OHIO

TITLE
REPLAC. PARTS LIST
INCI LAG. I AINTO LIGI

VC 520 SUPERSEDES 11-10-10A



REPLACEMENT PARTS 416081M



MANUFACTURING, INC.

<u>O</u>ZW

REPLACEMENT PARTS DRAWING

416081M POWER UNIT

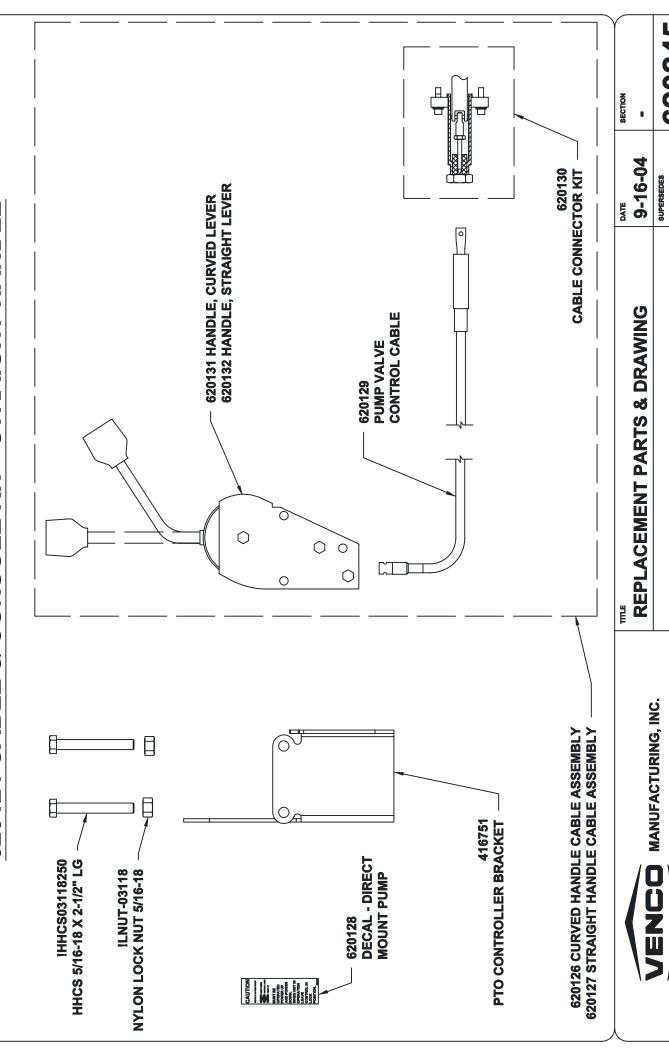
12-11-06E 7-27-05D

SECTION

DATE

416508

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



620245

SUPERSEDES

PTO PUMP CABLE

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