



VENCO®

HOISTS

***INSTALLATION
& OWNER'S
MANUAL***

Sold and Serviced by:

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VC 416 / 516 MANUAL

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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.
6069	PLASTIC BAG	1 PC.



MANUFACTURING, INC.

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VC 416 / 516

9-22-03

416750

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: 416272.
2. MUST HAVE 2" SPACE
SEE PAGE: 416272.
3. SUFFICIENT OVERHANG
SEE PAGE: 416266 OR 516023.
4. USE PUMP WHICH MEETS VENCO SPECIFICATION
SEE PAGE: 416138.



MANUFACTURING, INC.

TITLE

CAUTION NOTE

VC416 / 516

DATE

10-30-01

SUPERCEDES

-

SECTION

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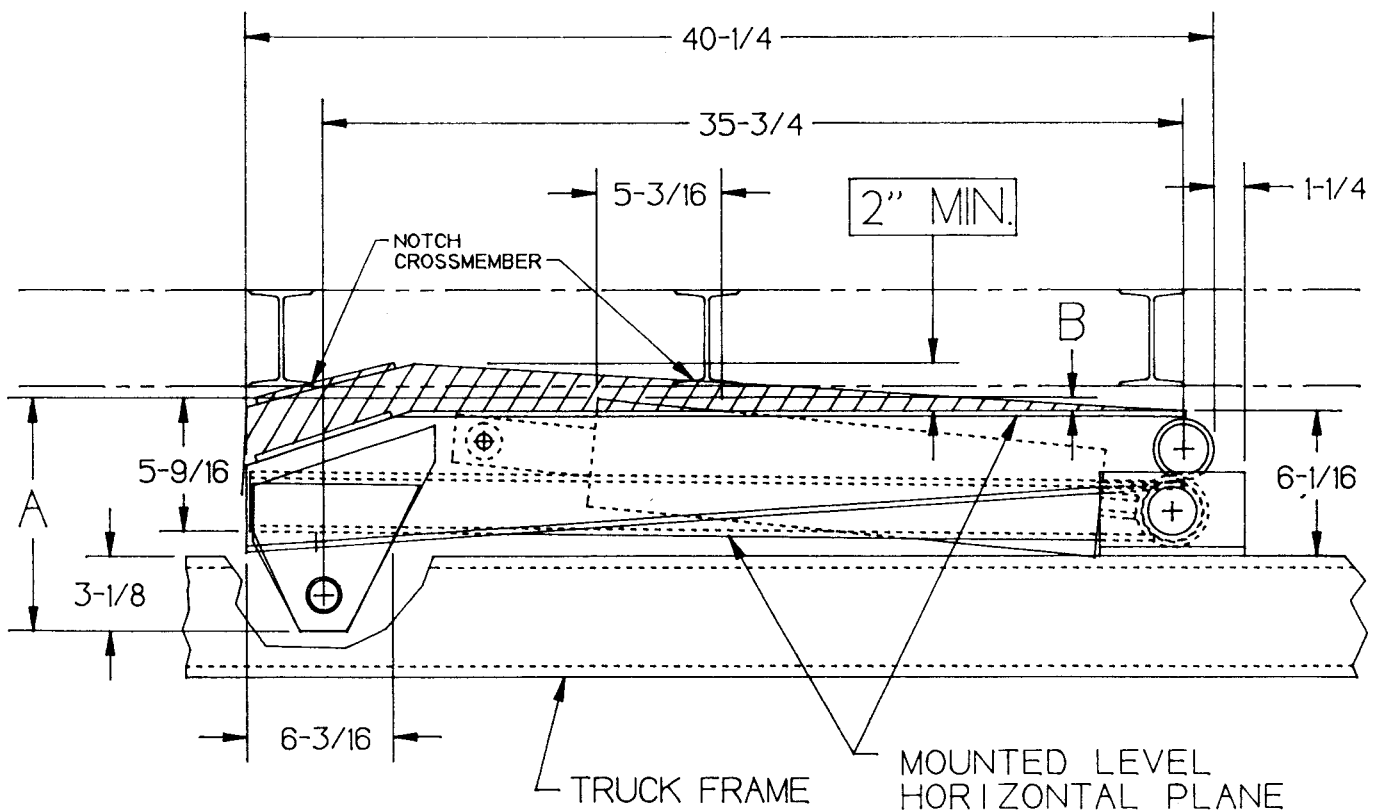
416723

IMPORTANT WARNING

416/516 MODELS

WHEN INSTALLING THE HOIST, BE SURE TO KEEP THE HOIST ON A HORIZONTAL PLANE (LEVEL) WITH THE TRUCK FRAME. SEE DIAGRAM BELOW.

A MINIMUM CLEARANCE OF 2" IS REQUIRED BETWEEN THE HOIST (UPPER ARM) AND THE CROSS MEMBERS IN ORDER TO PREVENT A MECHANICAL LOCKOUT. IF CLEARANCE IS LESS THAN 2" THEN CROSSMEMBERS MUST BE NOTCHED ABOVE ARMS.



MODEL	DIM. A	DIM. B
416	9-11/16	9/16
516	10-3/16	1-1/16

SCALE 1/8" = 1"



MANUFACTURING, INC.

TITLE
IMPORTANT WARNING

VC 416/516

DATE
7-14-98

SUPERCEDES
10-9-92

SECTION
H100

416272

I C. 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.



MANUFACTURING, INC.

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INST INSTRUCTIONS

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VC 416/516

SUPERCEDES

-

416288

Included with your Venco hoist are two (2) sets of warning and caution decals. These decals should be placed in a prominent location on each side of the truck body (roadside and curbside) so they are easily seen and readily identifiable. ▲

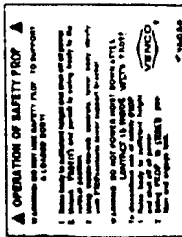
VENCO #416052
2 REQ'D (1 EACH SIDE)



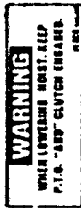
VENCO #15254
2 REQ'D (1 EACH SIDE)



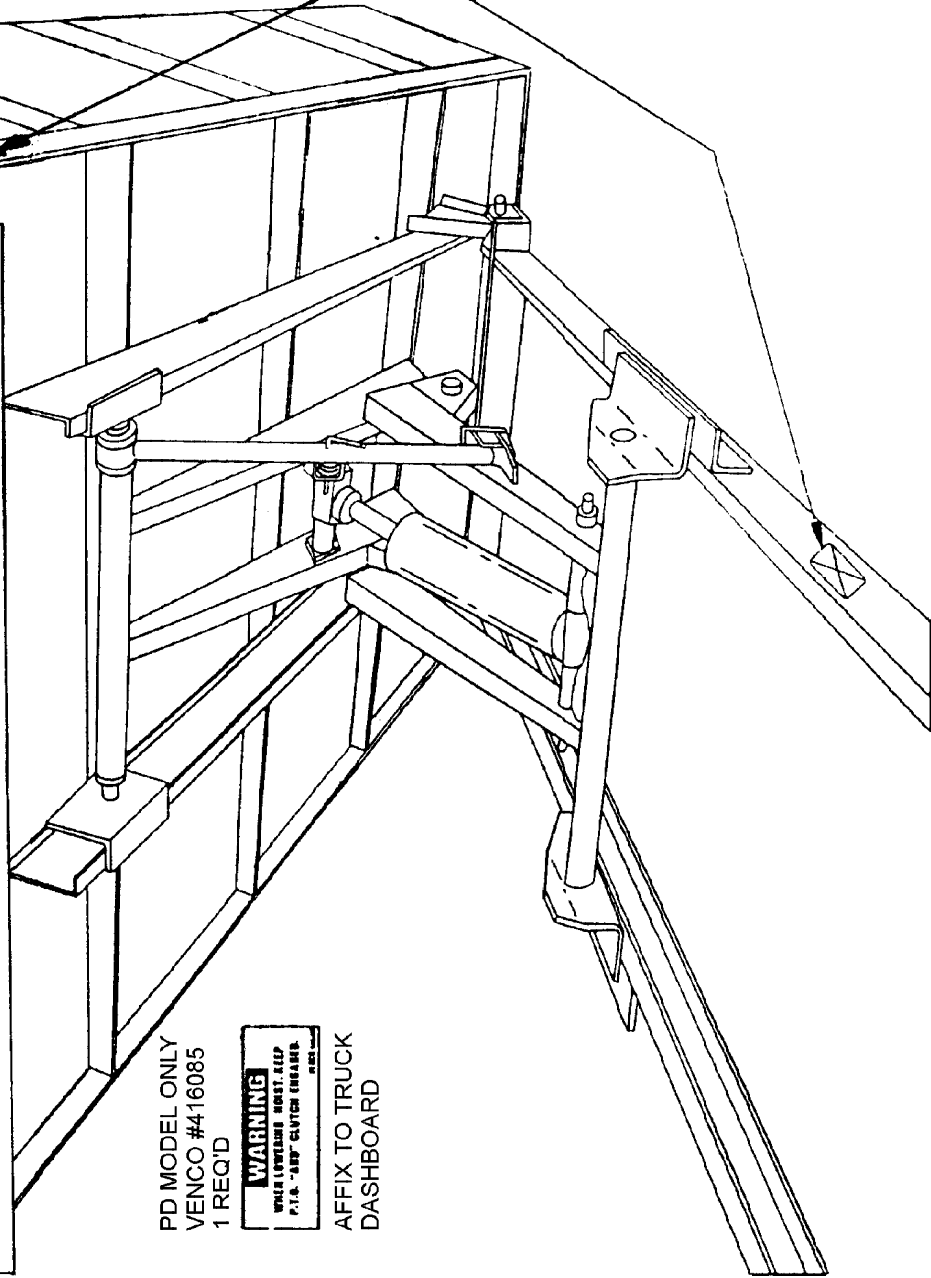
VENCO #416084
1 REQ'D FOR
EACH SAFETY PROP



PD MODEL ONLY
VENCO #416085
1 REQ'D



AFFIX TO TRUCK
DASHBOARD



VENCO MANUFACTURING, INC.

TITLE
DECAL LOCATION

VC 416/516, VC 520 - 6628

SECTION

H100

DATE

12-27-99B

SUPERCEDES

7-13-98A

416128

GENERAL INFORMATION:

MODEL: VC 416*(SF)

DUMP CLASS: 10

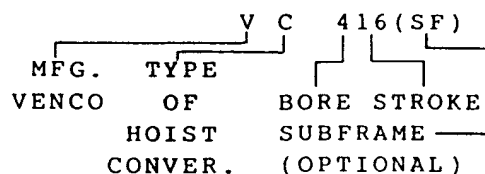
CONVERSION CLASS: B

WEIGHT: 450 lbs. W/SUBFRAME 550 LBS.

DATA: 4" BORE, 16" STROKE, CA 60"- 108"

DUMP ANGLE 40°-50°, SUBFRAME 45° or 50°

MOUNTING HEIGHT REQ'D. 5-3/4", LONG BEAMS 5".

***POWER SOURCE**

ES-ELECTRIC SINGLE ACTING

ED-ELECTRIC DOUBLE ACTING

PD-POWER TAKE-OFF DOUBLE ACTING

CAPACITIES ARE BASED ON WATER LEVELS AND NON-DIMINISHING LOADS.
 DUE TO THE VARIATIONS IN TRUCK EQUIPMENT AND CAB-AXLE (CA),
 THE DATA PROVIDED IN THIS MANUAL IS FOR GENERAL GUIDELINES ONLY.

VC 416 (SF) CONVERSION APPLICATION

BODY LENGTH	CAB TO AXLE	REAR OVERHANG	CAPACITY 40° DUMP (TON)	CAPACITY 45° DUMP (TON)	CAPACITY 50° DUMP (TON)
8'	60"	6"	7.6	6.9	6.4
9'	60"	18"	8.9	8.0	7.4
9'	72"	6"	6.7	6.0	5.5
9'6"	72"	12"	7.0	6.4	6.0
10'	60"	30"	10.7	9.7	8.8
10'	72"	18"	7.6	6.9	6.3
10'	84"	6"	6.0	5.4	5.0
12'	72"	42"	10.7	9.7	8.8
12'	84"	30"	7.6	6.9	6.3
12'	108"	6"	4.8	4.4	4.0

VC 416 (SF) DUMP APPLICATION

BODY LENGTH	REAR OVERHANG	CAPACITY 50° DUMP (TON)
8'	12"	7.1
9'	12"	6.1
10'	12"	5.3
12'	12"	4.3



MANUFACTURING, INC.

TITLE

CAPACITY CHART

VC 416

DATE

7-14-98

SUPERCEDES
2-28-90

SECTION

H100

416266

GENERAL INFORMATION:

MODEL: VC 516*(SF)

DUMP CLASS: 20

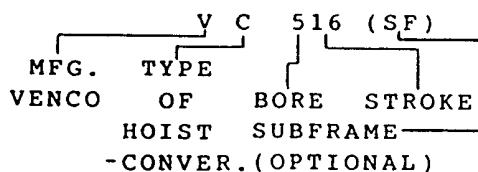
CONVERSION CLASS: C

WEIGHT: 500 lbs. W/SUBFRAME 600 LBS.

DATA: 5" BORE, 16" STROKE, CA 60"- 108"

DUMP ANGLE 40°-50°, SUBFRAME 45° OR 50°

MOUNTING HEIGHT REQ'D. 5-3/4", LONG BEAMS 5".

***POWER SOURCE**

ES-ELECTRIC SINGLE ACTING

ED-ELECTRIC DOUBLE ACTING

PD-POWER TAKE-OFF DOUBLE ACTING

CAPACITIES ARE BASED ON WATER LEVELS AND NON-DIMINISHING LOADS.
 DUE TO THE VARIATIONS IN TRUCK EQUIPMENT AND CAB-AXLE (CA),
 THE DATA PROVIDED IN THIS MANUAL IS FOR GENERAL GUIDELINES ONLY.

VC 516 (SF) CONVERSION APPLICATION

BODY LENGTH (FEET)	CA (INCHES)	REAR OVERHANG (INCHES)	CAPACITY 40° DUMP (TON)	CAPACITY 45° DUMP (TON)	CAPACITY 50° DUMP (TON)
8	60	6	11.9	10.8	10.0
9	60	18	13.9	12.6	11.5
9	72	6	10.4	9.4	8.6
9' 6"	72	12	11.1	10.0	9.3
10	60	30	16.7	15.1	13.8
10	72	18	11.9	10.8	9.8
10	84	6	9.3	8.4	7.8
12	72	42	16.7	15.1	13.8
12	84	30	11.9	10.8	9.8
12	108	6	7.7	6.9	6.4
13	84	42	13.9	12.6	11.5
13	102	24	9.3	8.4	7.6
13	108	18	8.4	7.5	6.9

VC 516 (SF) DUMP APPLICATION

BODY LENGTH (FEET)	REAR OVERHANG (INCHES)	CAPACITY 50° DUMP (TON)
8	12	11.1
9	12	9.5
10	12	8.3
12	12	6.7



MANUFACTURING, INC.

TITLE

CAPACITY CHART

VC 516

DATE

7-14-98

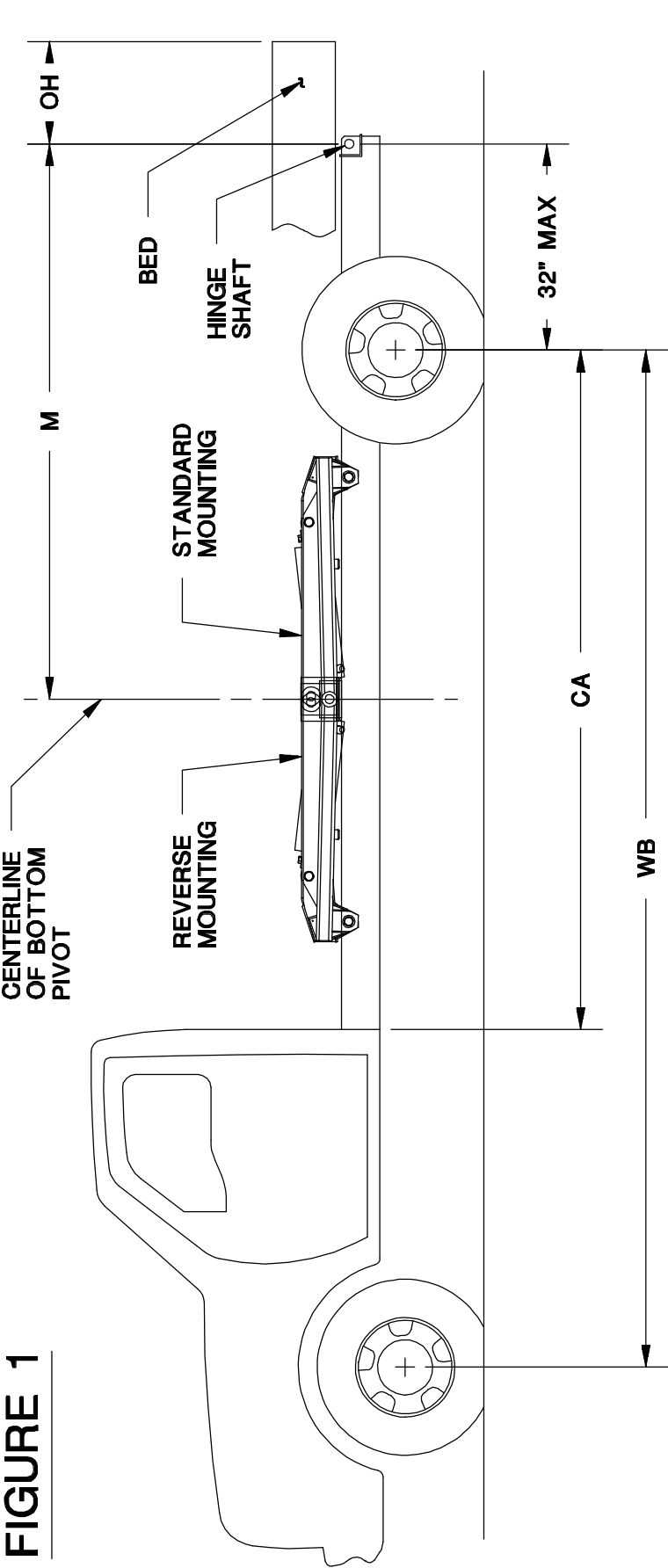
SUPERCEDES
2-28-90

SECTION

H100

516203

FIGURE 1



VC 416/516 HOISTS

STANDARD MOUNTING

DUMP ANGLE	M
40°	88
45°	78-3/4
50°	71-1/4

REVERSE MOUNTING

DUMP ANGLE	M
40°	88-1/2
45°	79
50°	71-3/4



TITLE
MOUNTING DIMENSIONS

VC 416/516 HOIST

DATE
9-30-98A

SUPERSEDES
6-3-98

SECTION
H100

416286

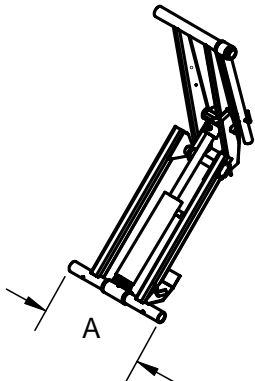
II A.

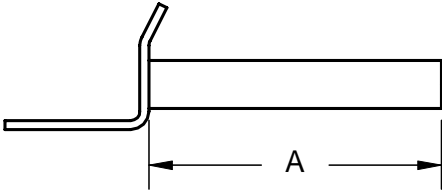
STANDARD HOIST MOUNTING INSTRUCTIONS

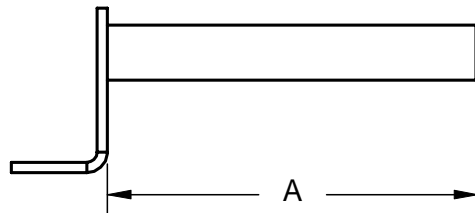
1. Moving the hoist along the truck frame forward or rearward will affect the hoist's performance. A forward movement will reduce the dump angle and increase capacity. A backward movement will increase dump angle and decrease capacity.
2. The VC-416/516 Hoist is designed for 34" to 29.5" frame widths. 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. For the Subframe Hoist, see page 9 thru 13.

QTY.	PART NO.	DESCRIPTION
1	416421	Lower Pivot Tube
2	416405	Lower Pivot Assy.
2	416258	Upper Lift Shaft Assy.

* - Original length shipped from factory

Lower Pivot Tube 416420		
Frame Width	Dim A.	
34	27-3/4"*	
31.3	25-1/16"	
29.5	23-1/4"	

Lower Pivot Assy. 416420		
Frame Width	Dim A.	
34	12-1/4"*	
31.3	10-7/8"	
29.5	10"	

Upper Lift Shaft Assy. 416258		
Frame Width	Dim A.	
34	13-1/2"*	
31.3	12-1/2"	
29.5	11-5/8"	



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INST INSTRUCTIONS

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6-7-01

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VC 416/516

SUPERSEDES

-

416489

3. Refer to figures 1 and 2.

CAUTION

If a distance of more than 38" is exceeded between the centers of the rear axle and rear hinge assembly, additional reinforcement of the truck frame will be required.

- a. Mark the location for the rear hinge. This location should be immediately behind a truck crossmember. The hole center of the rear pivot angle should not be more than 6" rearward of the rear spring hanger.
- b. See Figure 2, cut a 90° cut-out in the truck frame (both sides).
- c. Position the angle iron frame of the rear hinge assembly in the truck frame cut-outs. Make sure the rear pivot angle assembly is properly positioned on the truck frame. Weld all around truck frame and hinge assembly joint.

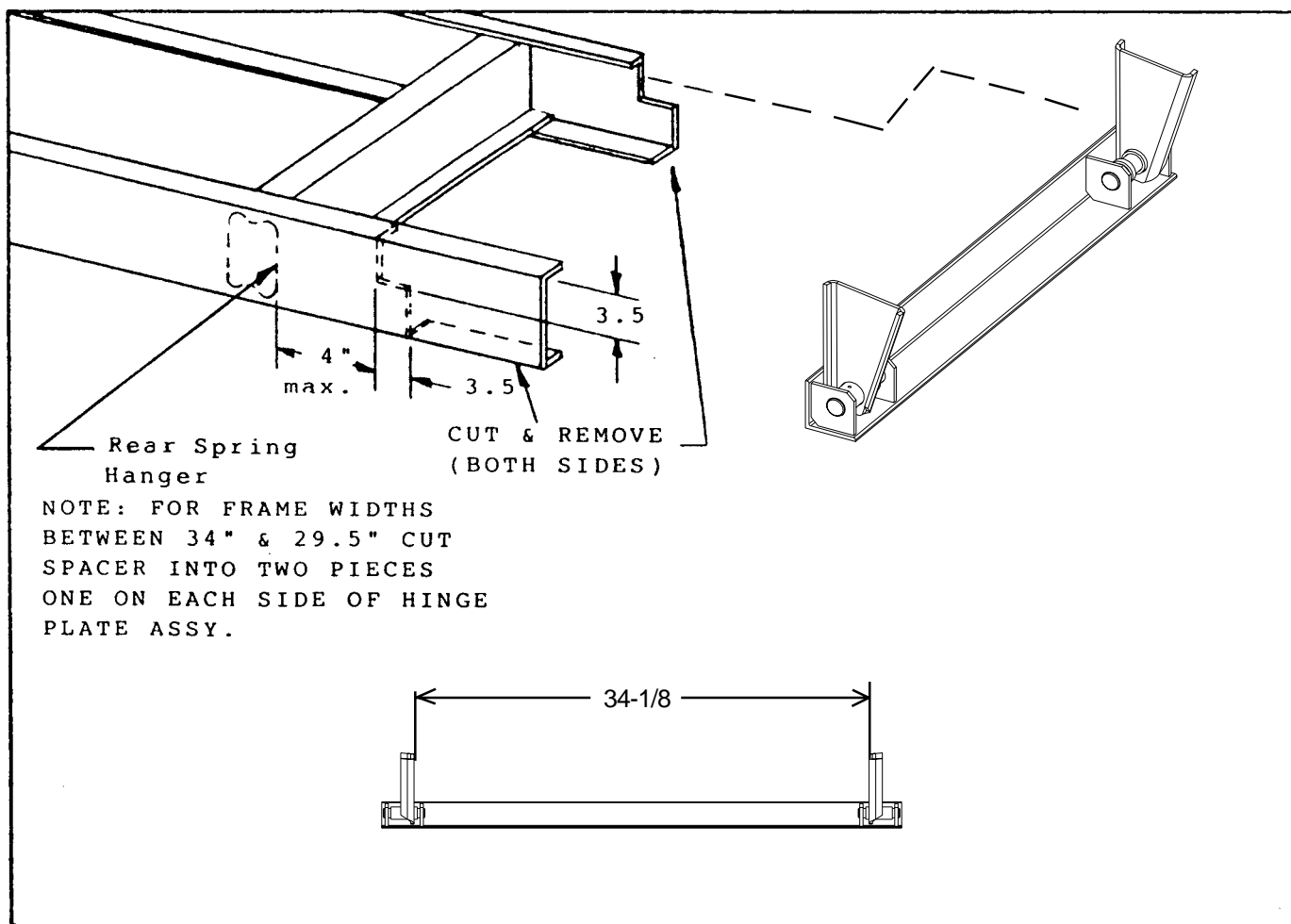


FIGURE 2 - FRAME MODIFICATION AND REAR HINGE ATTACHMENT



MANUFACTURING, INC.

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INST INSTRUCTIONS

VC 416/516

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5-24-01A

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416290

4. Locate the hoist on the truck frame, making sure to center and square the hoist to the truck frame. The VC-416/516 hoist is designed to rest on the truck frame as shown in Fig. 3. A section of the hoist extends below the truck frame level, thus the hoist may have to be moved slightly forward or backward to avoid frame crossmembers. The distance between the rear hinge assembly center and hoist dimension. Table "A", figure 1 refers to dump angles associated with the "M" dimension.
5. After the hoist is positioned, place a mounting angle (Fig. 3) under each of the lower pivots and against the truck frame. Clamp securely in place. Drill through the mtg. angle and frame ($17/32"$) and fasten mounting angle with two (2) 1-1/2" hex head grade 8 bolts, lock washers and hex nuts (both sides).

Caution

The hoist lower pivot assy. 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 assy. Do not weld hoist mounting angle to truck frames. This may void the truck warranty.

6. With the hoist lower pivot assys. clamped to the mounting angles ($3-1/2 \times 3-1/2 \times 5/16 - 10"$ lg.), weld the lower pivot assy. to the mounting angles. Position and secure the filler strips (wood or steel) to the truck frame (see fig. 3) The VC416/516 hoist requires at least $5-3/4"$ clearance above the truck frame.

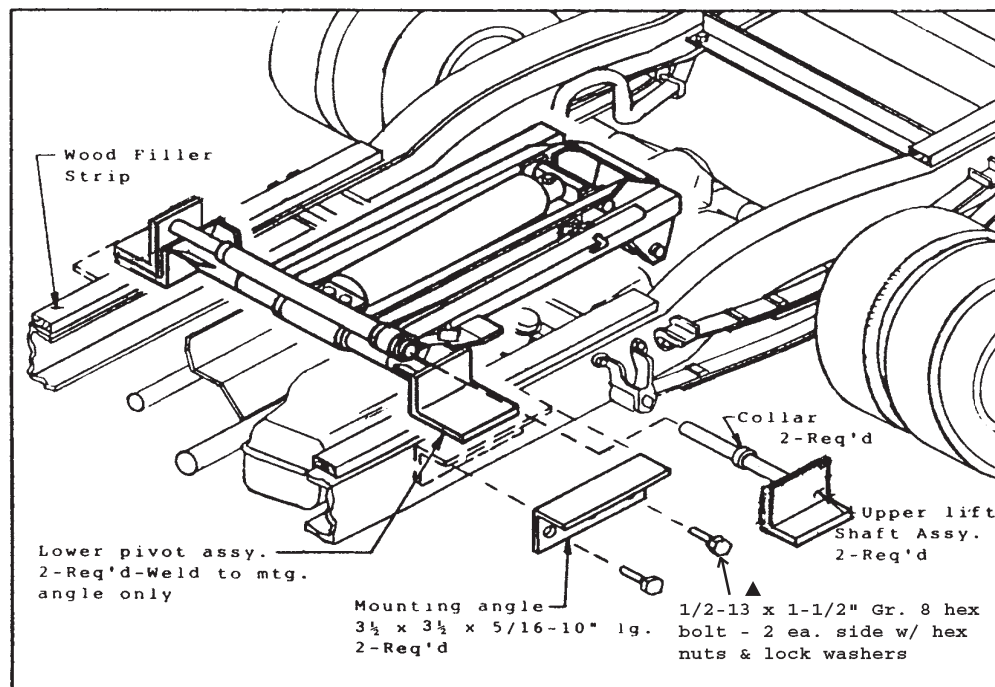


Figure 3 Mounting Angle/Lower Pivot Assembly



MANUFACTURING, INC.

TITLE
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VC 416/516

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10-14-02A
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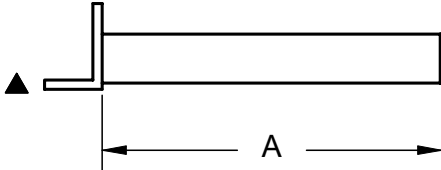
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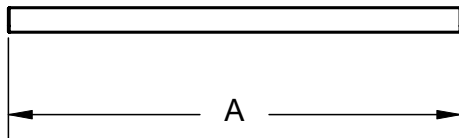
SUBFRAME HOIST MOUNTING INSTRUCTIONS

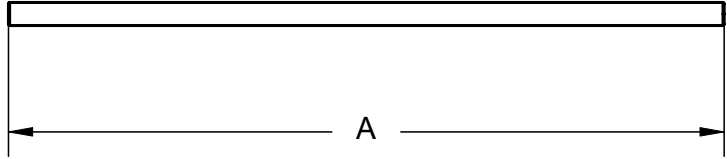
- Before mounting the VC-416/516 subframe hoist, the following parts will have to be shortened for truck frame widths smaller than 34". The minimum frame width is 29.5"

QTY.	Part No.	Description
2	416739 ▲	Upper lift shaft assy.
1	416221	Shaft-lower pivot subframe
1	416222	Shaft-rear hinge subframe
2	416420	Lower pivot assy.
1	416253	bar 1/4" x 2" x 33" long
1	416254	Angle 2" x 2" x 1/8" - 33" long

* - Original length shipped from factory

Upper Lift Shaft Assy. 416739 ▲		
Frame Width	Dim A.	
34"	13-7/8"	
31.3"	12-1/2"	
29.5"	11-5/8"	

Shaft-lower pivot subframe 416221		
Frame Width	Dim A.	
34"	36-3/8"	
31.3"	33-11/16"	
29.5"	32-7/8"	

Shaft-rear hinge subframe 416222		
Frame Width	Dim A.	
34"	39"	
31.3"	36-5/16"	
29.5"	34-1/2"	



MANUFACTURING, INC.

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9-23-03A

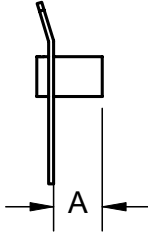
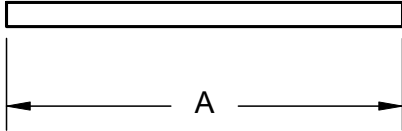
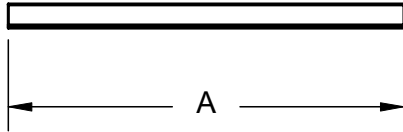
SUPERSEDES

6-8-01

SECTION

H200

416492

Lower Pivot Assy. 416420		
Frame Width	Dim A.	
34"	3-1/16"*	
31.3"	1-23/32"	
29.5"	13/16"	
Bar 1/4" x 2" - 33" 416253		
Frame Width	Dim A.	
34"	33"*	
31.3"	30-5/16"	
29.5"	28-1/2"	
Channel W/ Power Unit Mtg. Bracket ▲ 416506		
Frame Width	Dim A.	
34"	▲ 33"*	
31.3"	▲ 30-5/16"*	
29.5"	▲ 28-1/2"*	

2. a. See Fig. 1 and Dwg. #416257
Position the right and left subframe assemblies on the truck frame. A wood filler strip will be required below each subframe assembly. The wood filler strips will have to be drilled out in the frame rivet areas to provide a flat surface for the subframe. Holes can also be drilled in the bottom flange of the subframe, but wait until after step 3a.
- b. Check the distance from the hoists lower pivot to the lowest point on the hoist scissors assembly to be sure there are not any obstructions, crossmembers, etc., that will interfere with the hoist mounting level with the truck frame. See Dwg. 416086.
- c. Be sure that the hole center of the rear hinge pivot is not more than 6" rearward of the rear spring hanger. See Dwg. 416257. This location should be immediately behind a truck crossmember. Mark the location for the rear hinge.
3. a. The 2-9/16" Dia. hole in the front of the subframe is set up for a 45° dump angle and the hole closer to the rear hinge pivot is for a 50° dump angle. See fig.
Note: For mounting on a Ford, the gas tank filler tube may be too close to the body prop keeper on the hoist lower frame left side. Thoist will have to be shifted forward or rearward to avoid the gas filler tube.



MANUFACTURING, INC.

TITLE

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9-12-02A

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H200

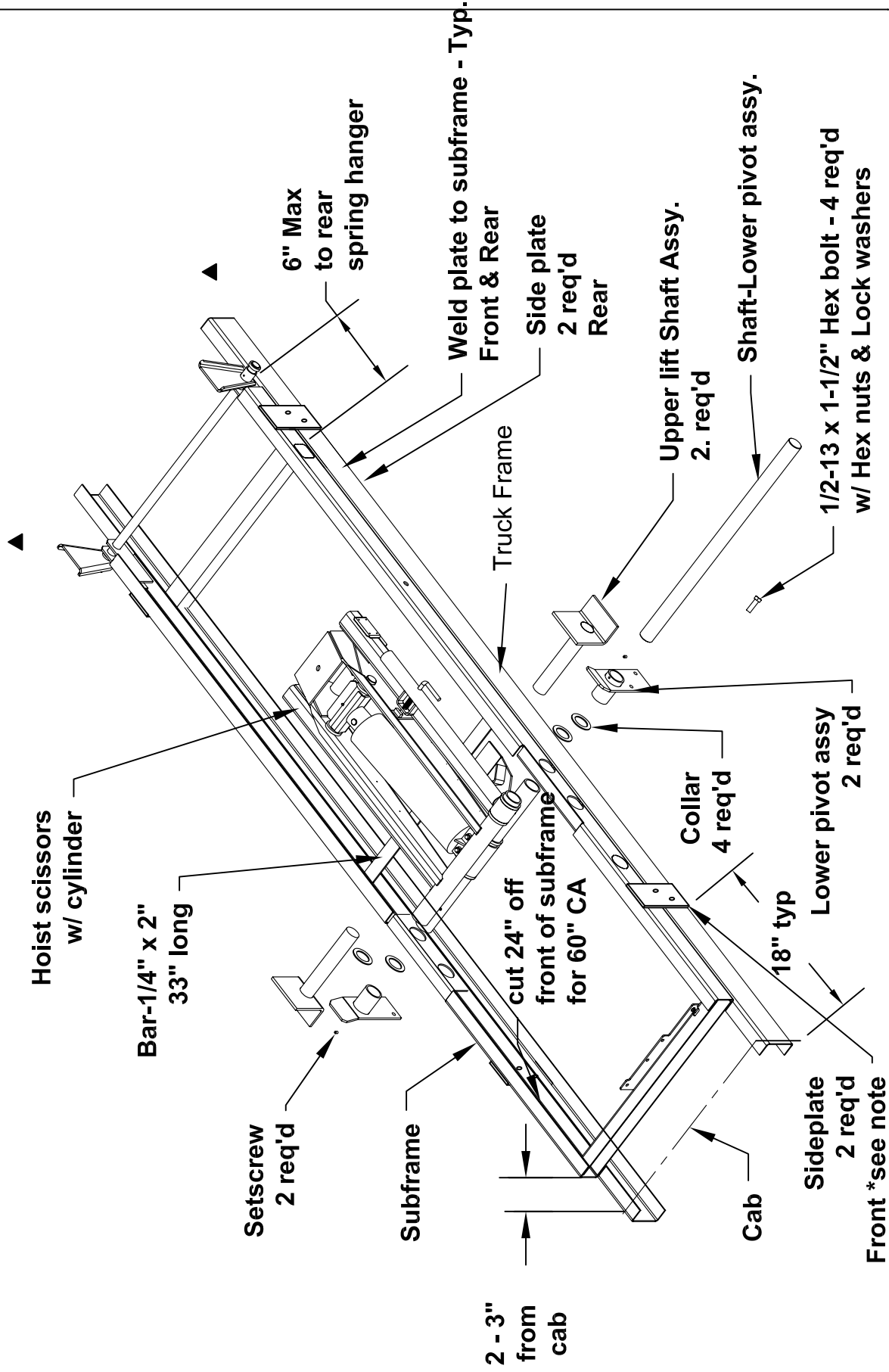
VC 416/516


SUPERSEDES

6-8-01

416493

***NOTE: Do not fasten side plates less than 18" from the cab**



 Venco MANUFACTURING, INC.	TITLE SUBFRAME MOUNTING		SECTION H200	416746
	DATE 4-27-10B		SUPERSEDES 11-14-03A	

- 3.b. Clamp the subframe to the truck frame. Put a 2 x 4 in between the subframe rails to support the rear of the hoist scissors.
- 4.a. Slide a lower pivot assembly through the subframe 2-9/16" Dia. hole. (Front holes 45° - Rear holes 50° dump)
- b. Put the lower pivot shaft (2" Dia. C.F. Steel) through the tube on the lower pivot inserted in the previous step.
- c. Slide one collar onto the shaft.
- d. Set the hoist scissors w/ cylinder between the right and left subframe. Slide the lower pivot shaft through the lower pivot tube on the hoist.
- e. Slide another collar onto the shaft.
- f. Slide the other lower pivot assembly through the subframe and over the lower pivot shaft.
Note: The bend on the lower pivot assemblies should be outward for body guides.
- g. The hoist should be centered and squared to the truck frame. The collars should then be slid up against the lower pivot tube. Weld the outside edges of the collars to the lower pivot shaft.
5. Slide one collar onto each upper lift shaft assembly. Slide the upper lift shaft assemblies into the upper pivot tube, one on each side.
- ▲
- 6.a. Clamp the lower pivot assemblies to the subframe so they are flush with the outside surface of the truck frame.
- b. Be sure that the mounting holes in the lower pivot assemblies are not in the area of wiring or brake cables running on the inside of the truck frame. Drill 17/32" Dia. holes through the truck frame using the holes in the lower pivot assemblies as guide holes. Fasten the lower pivot assemblies to the truck frame w/ 1/2-13 x 1-1/2" hex bolts, 1/2-13 hex nuts and 1/2" lock washers, 2 each on each assembly.
7. Cut the truck frame channels off just behind the rear hinge pivot plates.
- 8.a. Do not fasten the side plates less than 18" from the truck cab. Clamp the side plates to the front of the subframe.

Note: The front side plates might not be required on a 60" CA truck when using the mounting for a 45° dump angle.
- b. Clamp the side plates to the rear of the subframe just behind the rear spring hanger bracket.

CAUTION

Be sure to cover all gas tanks and gas filler necks with a nonflammable covering before welding hoist parts or subframe together



MFG., INC.
CINCINNATI, OHIO

TITLE

INST INSTRUCTIONS

VC 416/516

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9-23-03B

SUPERCEDES

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416294

- 8.c. Weld the front and rear side plates to the right and left subframe described in steps 8a. and 8b.
- 9.a. Weld the 2 x 2 x 1/8" angle between the front of the right and left subframe
- b. Weld the 1/4" x 2" bar to the lower flange on the front channel of the right and left subframe as far rearward as possible- shown on Dwg. 416257.
10. Slide the shaft for the rear hinge through the pivot plates on the rear of the right and left subframe. Center the shaft so an equal amount is extending outward on each side of the subframe. Spot weld the shaft to the inside pivot plates on the right and left subframe.
11. Add a machine bushing, hinge plate and collar to each side of the rear hinge shaft. Do not weld collars to the rear hinge shaft at this time.



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

7-15-98

SUPERCEDES

-

SECTION

H200

416295

III Power Sources

Pump - Proceed to the following paragraphs for installation instructions on your specific pump. Also, see the manufacturers instructions.

A. P.T.O. Unit

-Standard PD (Reg. P.T.O. D/A) Pump - See Fig. 6

-Option PD Split Pump (P.T.O. D/A) - See 416138

- 1.a. See Fig.4 , position and bolt each pump bracket to the pump and secure with the $\frac{3}{8}$ x $1\frac{1}{4}$ " bolts and hex nuts.
- b. Position the pump assembly with brackets and securely clamp to the frame on the same side that the transmission mounted P.T.O. shaft is located.
- c. Two (2) $\frac{17}{32}$ " Dia. holes need to be drilled in the pump brackets and truck frame (see Fig.4). Mark the hole locations as close to the truck frame flanges as possible. Drill $\frac{17}{32}$ " Dia. holes and install the $\frac{1}{2}$ x $1\frac{1}{2}$ " hex head cap screws with lockwashers and hex nuts.
Note: See Warning listed under III.B.1.

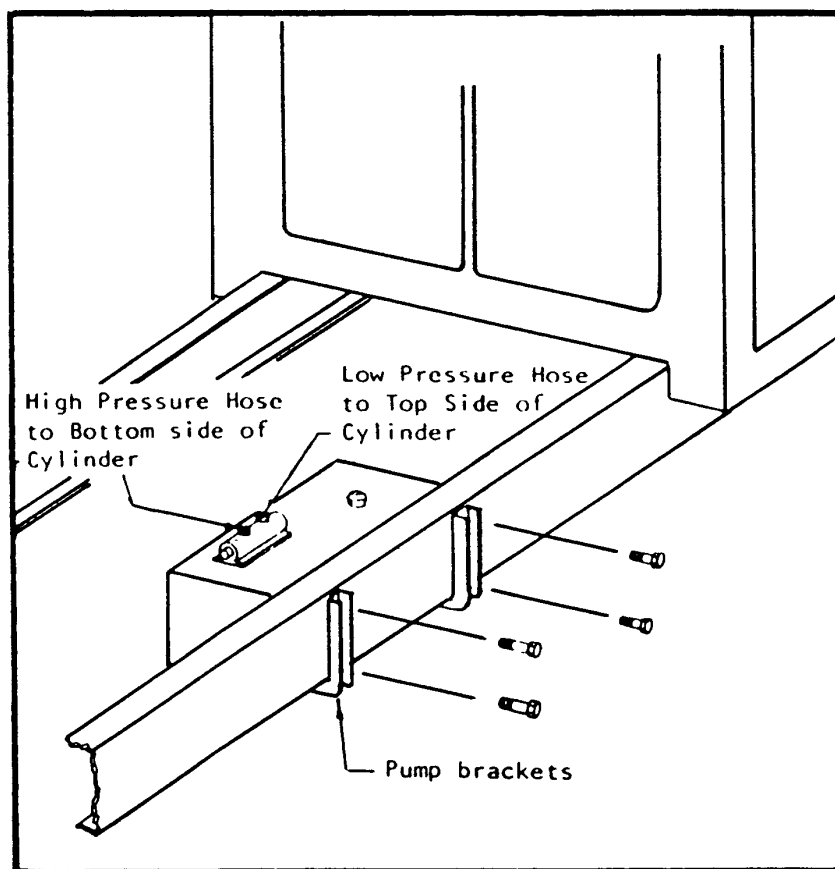


FIGURE 4 - PUMP INSTALLATION



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

7-15-98

SUPERCEDES

-

SECTION

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416296

- 2.a. Install the truck P.T.O. assembly, using the manufacturers instructions enclosed with it.
 - b. Determine the exact length "L" of the drive shaft (see Fig. 5). The drive shaft should be kept as short and level as possible.
 - c. Cut the 7/8" hex drive shaft to the length that was determined in step 2.b. above.
 - d. The two (2) supplied U-joints are not identical, the U-joint with the 1" round x 7/8" hex slip is to go on the pump drive shaft and the 7/8" round x 7/8" hex U-joint (not furnished) or other size - is to go on the truck P.T.O.
 - e. Trial fit each U-joint to the hex drive shaft and trial fit drive shaft assembly to pump and P.T.O. at this point, mark the set screw locations of the P.T.O. U-joint on the hex drive shaft. Disassemble drive shaft assembly and counter-sink drive shaft at marked locations.
 - f. Assemble each U-joint to the hex drive shaft and install the drive shaft assembly. After installing, secure P.T.O. 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 come loose.
 - g. For additional pump and drive shaft mounting instructions, refer to the manufacturers instructions included with the pump.
3. Hose Connections - (See Fig.4, See 416138 for split pump)
 - a. Connect one end of the 7' hose to the front pump port (low pressure). Connect the other end of the hose to the rod end of the hoist cylinder.
 - b. Connect one end of the 5' hose to the rear pump port (high pressure). Connect the other end of the hose to the bottom end of the hoist cylinder (base).
 4. Fill the pump reservoir with DEXRON 220 oil or equivalent.

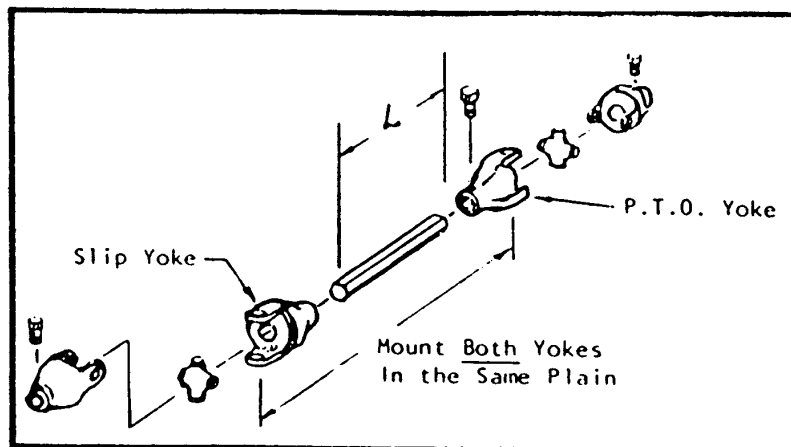


FIGURE 5 - DRIVE SHAFT ASSEMBLY



MANUFACTURING, INC.

TITLE
INST INSTRUCTIONS

VC 416/516

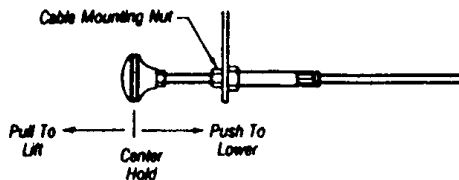
DATE
7-15-98

SUPERCEDES
-

SECTION
H200

416297

CORRECT CONTROL CABLE OPERATION



NOTE When installing cable control make sure lever moves full distance before knob hits cable mounting nut (When pushed in to lower hoist)

LEVER LOCATED TO THE REAR OF RESERVOIR ON THIS MODEL

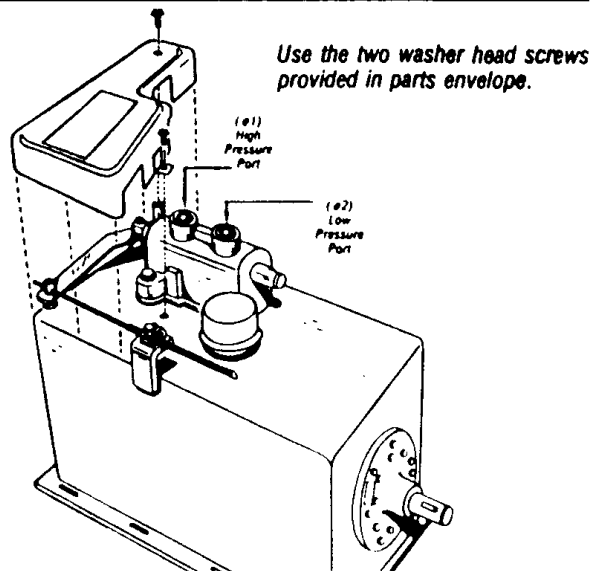
HOIST CONTROL VALVE CONNECTIONS

The high pressure port 1 must be connected to the lifting end of the hoist cylinders in order for the pump to produce maximum lifting pressure.

The low pressure port 2 should be connected to the rod end of hoist cyl.

FOR DOUBLE ACTING HOIST

(Power Up — Hold — Power Down)
If hose connections are reversed hoist will not lift full loads.



"VALVE LEVER GUARD MUST BE INSTALLED" Operate Hoist Only From Cab

LEVER LOCATED TO THE FRONT OF RESERVOIR ON THIS MODEL

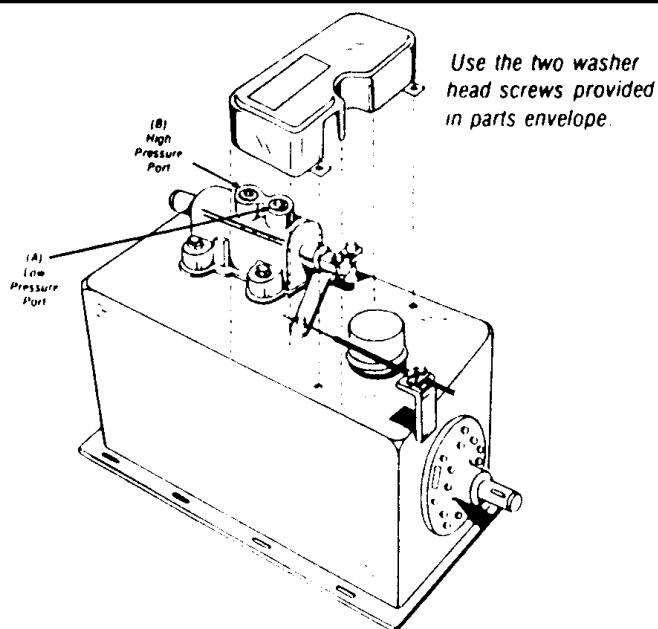
HOIST CONTROL VALVE CONNECTIONS

The high pressure port B must be connected to the lifting end of the hoist cylinders in order for the pump to produce maximum lifting pressures

The low pressure port A should be connected to the rod end of hoist cyl.

FOR DOUBLE ACTING HOIST

(Power Up — Hold — Power Down)
If hose connections are reversed hoist will not lift full loads



MANUFACTURING, INC.

TITLE

PTO PUMP CABLE INST

VC 520 - 6628

DATE

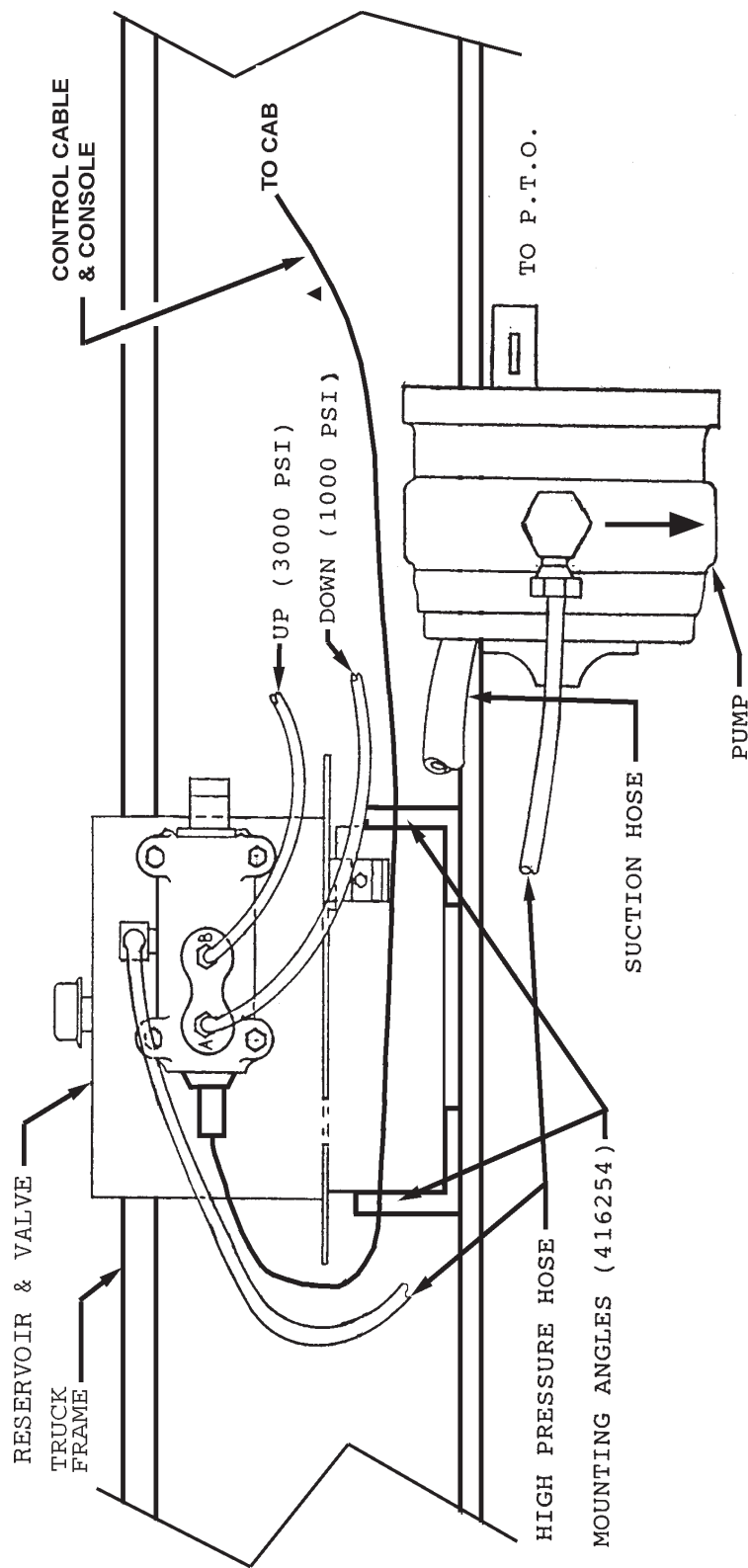
7-13-98A

SUPERCEDES
3-15-90

SECTION

H200

520078



Model	VC416	VC516	VC520	VC620	VC628	VC5520	VC6620	VC6628
Control Cable & Console	620125 - Curved 620124 - Straight							
Up Hose	416044 (2) 416044							
Down Hose	416045	628041				(2) 416045	(2) 628041	
High Pressure Hose	416045							
Suction Hose	416079					520088F		
Pump/Valve/Tank	620011					662077		
Pump (Only)	416277					520090		
Mounting/Spline Information	SAE "A" 2 BOLT MOUNTING FLANGE, 5/8"-9 SPLINE SHAFT. CCW ROTATION				SAE "B" 2 BOLT MOUNTING FLANGE, 7/8"-13 SPLINE SHAFT. CCW ROTATION			

VENCO MANUFACTURING, INC.

TITLE
SPLIT PUMP

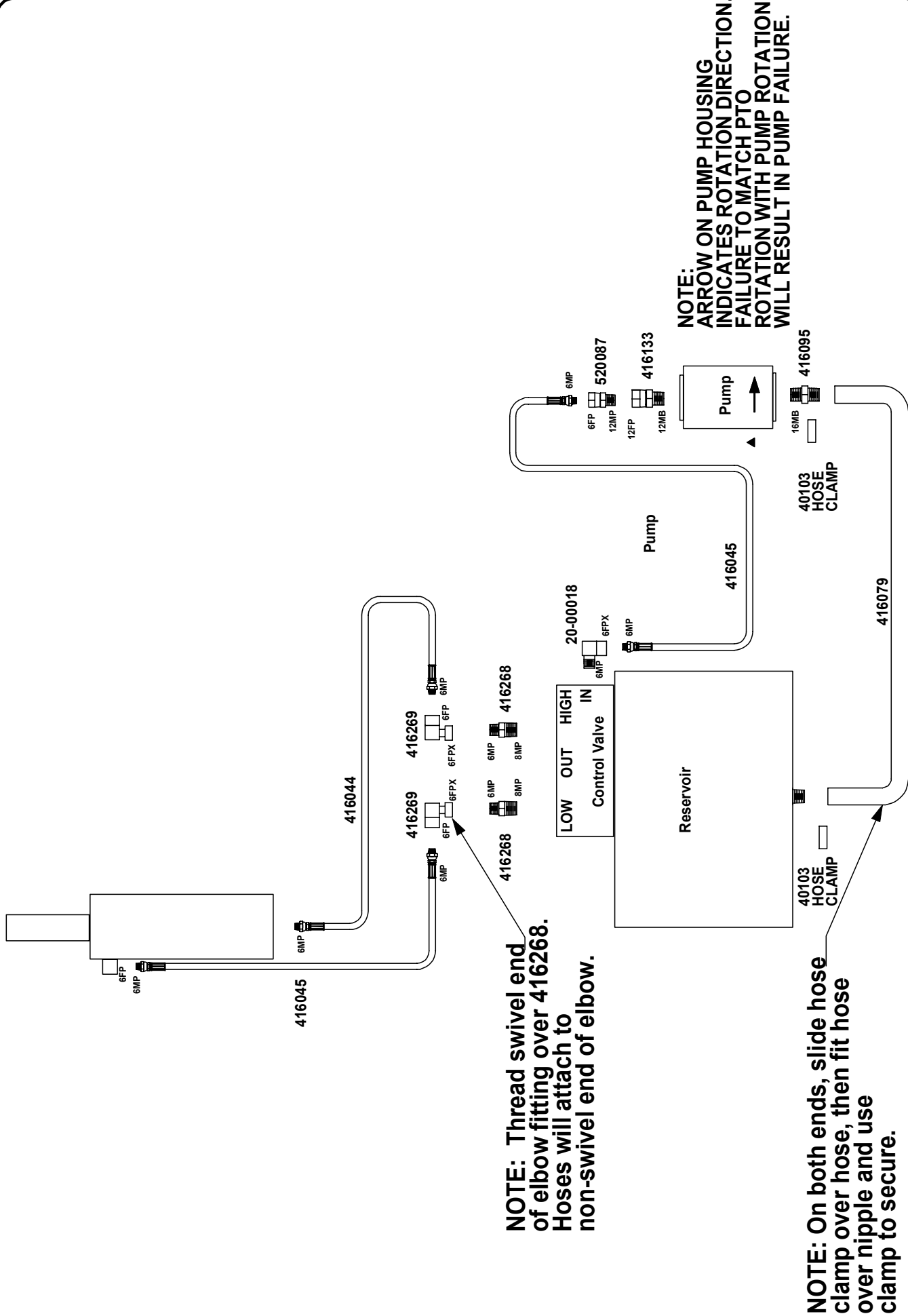
VC 416/516, VC 520 - 6628


DATE
5-11-04H

SECTION
H200

SUPERCEDES
4-15-04G

416138



 VENCO MANUFACTURING, INC.			
TITLE	SPDG HOSE CONNECTION DIAGRAM		
DATE	5-10-04C		SECTION -
	SUPERSEDES 2-24-04B		416735
VC416, VC516			

III POWER SOURCES

B. Electric Double and Single Acting Pump Information

Note: Pumps should be mounted in a horizontal position. Check hose lengths when choosing a pump mounting location.

See Dwgs. 416306 and 416307.

1. Position electric pump on truck frame, mark mounting holes on frame and drill through 7/16" dia. holes (2 places). Mount pump to frame with 3/8"-16 x 1" hex head bolts (grade 5).

Warning

High pressure (3000 psi) is developed by these pumps. Do not use hydraulic hoses that are crimped, cut, abraided, worn or damaged in anyway. Replace hydraulic hose(s) if any damaged condition exists. Use only hydraulic hose rated at a working pressure of 3000 PSI.

Use only steel fittings rated at a working pressure of 3000 PSI in the electric pump hydraulic system. Replace the fittings if found damaged (bent, cracked, threads damaged, etc.). Do not overtighten connections.

C. Double Acting Electric Pump Installation.

- 1a. Attach one end of 7' hose to elbow at port "B" (rod end) of the hoist cylinder. Elbow fittings are not required if 90° elbow ports are on the cylinder. Attach one end of the 5' hose to the hoist cylinder at port "A" (full end). See Dwgs. 416306 and 416307.

Note: The double acting power unit does not require an external flow control (it is built into the power unit).

- b. Attach free end of the 7' hose to the swivel elbow on the pump at port marked "B". Attache free end of the 5' hose directly to the pump port.
- 2a. Locate and attach electric pump switch and switch mount on truck dash.
- b. Attach proper color coded wiring from switch to solenoid and in-line fuse to center posts and lead under dash as shown. See Dwgs. 416306 and 416307.
- c. Attach positive lead (#4 gauge) from positive terminal of batter to other large post on motor solenoid. See Dwgs. 416306 and 416307.
3. Fill pump with commercial grade ATF-DEXRON III OIL 1/2" from the top of the reservoir.



MANUFACTURING, INC.

INST INSTRUCTIONS

VC416/516

3-10-04A

9-29-00B

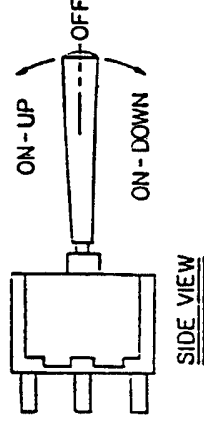
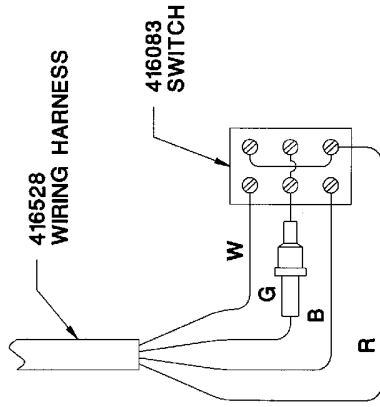
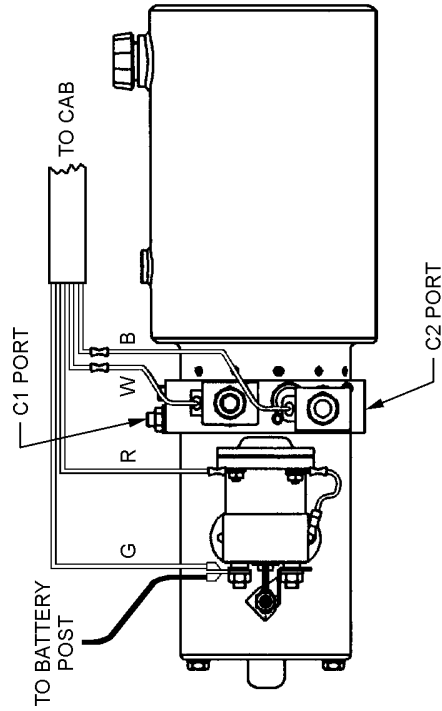
H200

416298

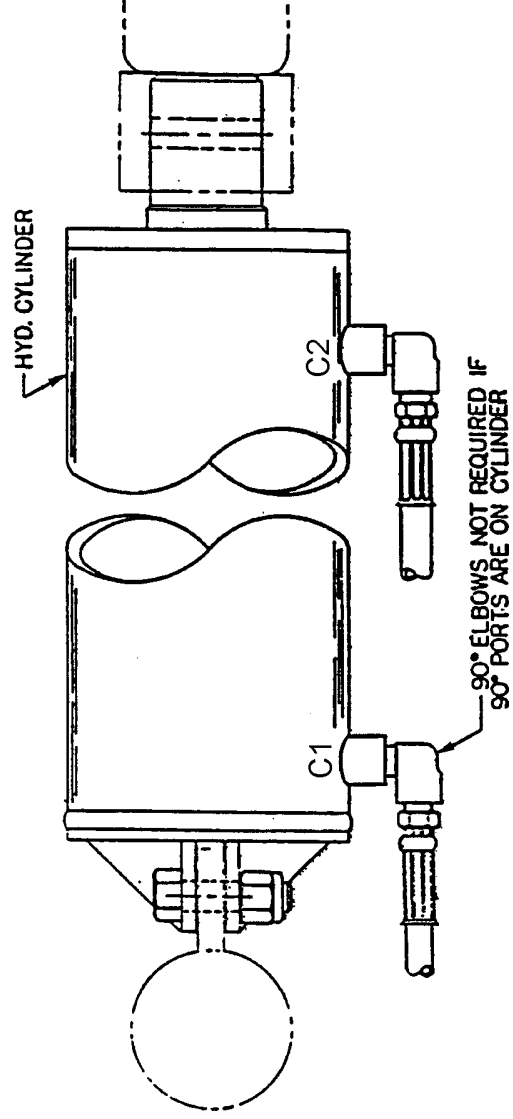
416081M

ELECTRICAL
W - WHITE WIRE
B - BLACK WIRE
G - GREEN WIRE
R - RED WIRE

HYDRAULICS
C1 - FULL END CYL
C2 - ROD END CYL



NOTE: ENERGIZING 'B' COIL SENDS FLOW TO 'C1' PORT
ENERGIZING 'W' COIL SENDS FLOW TO 'C2' PORT



VENCO MANUFACTURING, INC.

TITLE
416081 ED POWER UNIT

DATE
2-15-99C

SECTION
-

SUPERCEDES
VC416/516, VC520/620

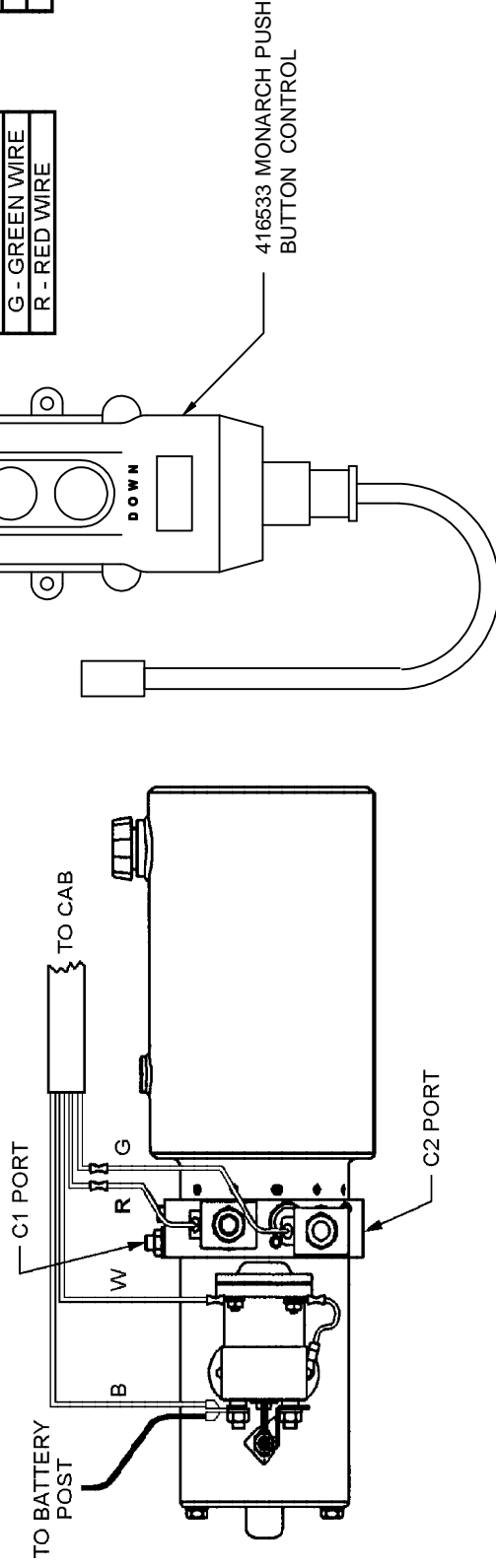
DATE
12-10-98B

SECTION
416306

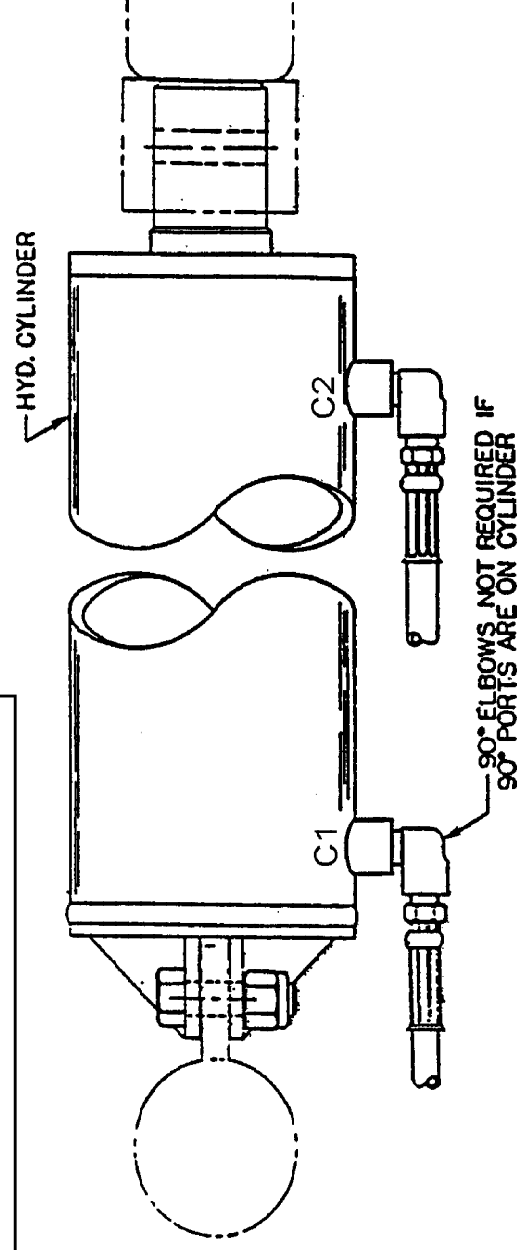
416081M WITH MONARCH PUSH BUTTON CONTROL

ELECTRICAL
W - WHITE WIRE
B - BLACK WIRE
G - GREEN WIRE
R - RED WIRE

HYDRAULICS
C1 - FULL END CYL
C2 - ROD END CYL



NOTE: ENERGIZING 'G' COIL SENDS FLOW TO 'C1' PORT (HOIST UP)
ENERGIZING 'R' COIL SENDS FLOW TO 'C2' PORT (HOIST DOWN)



VENCO MANUFACTURING, INC.

TITLE 416081M ED POWER UNIT

DATE 9-21-99D

SECTION -

VC416/516, VC520/620

SUPERCEDS 2-15-99C

416307

III POWER SOURCES

D. SINGLE ACTING ELECTRIC HYDRAULIC PUMP

See Dwgs. 416315 and 416316.

1. a. Mount the electric hydraulic power unit in a horizontal position with reservoir breather upward. Check the hose lengths before mounting the power unit. See Dwgs. 416315 and 416316.

b. Position the power unit on the truck frame. Check inside of frame channel before marking hole locations. (wires or brake may be in this area.) Mark mounting holes on the frame and drill 7/16" dia. through two places. Mount the power unit to the frame with a 3/16-16 x 1" hex head bolts (grade 5).
2. a. Install 90° elbow adapter to the pressure port on power unit. Attach end of 5' hose to elbow fitting in pressure port.
3. a. Locate and attach the toggle switch and mounting plate to the truck dash or other suitable location inside cab.
b. Attach proper color wire from toggle switch to motor solenoid (start switch). Attach other lead to the toggle switch bottom post and the other end to the linear solenoid on the side of the power unit. Connect the inline fuse to the center post on the toggle switch and the other end to the hot lead under the dash.

c. Attach the battery cable to the solenoid post indicated Dwgs. 416315 and 416316. Connect the other end of the battery cable to the positive terminal on the battery.
4. a. Install the 5' hose to the elbow in the pressure port of the power unit.

b. To prime the hydraulic system and force most of the air out of the system, obtain a clean container, place the loose end of the 5' hose into the container. Alternately cycle switch, one second on, one second off until oil comes out of the 5' hose. Attach the loose end of the 5' hose to the cylinder base port. If there is not a 90° port on the cylinder, add a 90° st. elbow to the cylinder baseport, then attach the hose to the elbow.

c. Fasten the 7' hose to the rod end of the cylinder. If the cylinder doesn't have a 90° port, add a 90° st. elbow to the rod end cylinder port, then attach the hose to the elbow.

d. Connect the other end of the 7' hose to the elbow fitting on the return port of the power unit.



MANUFACTURING, INC.

INST INSTRUCTIONS

VC416/516

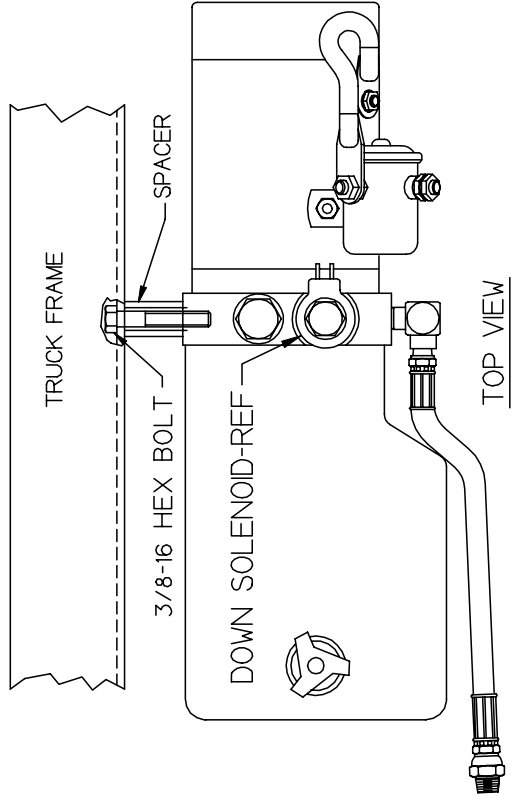
3-10-04A

7-15-98

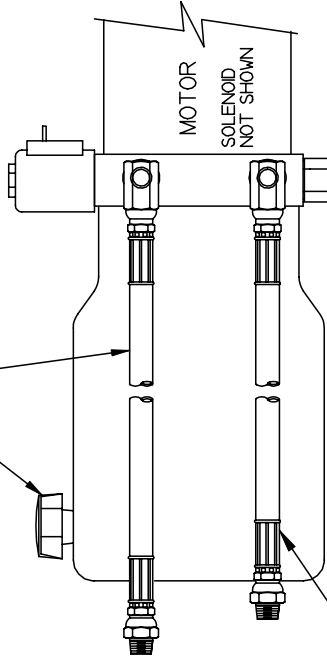
H200

416299

* IF SPACERS ARE NOT USED USE 1" LG. BOLTS

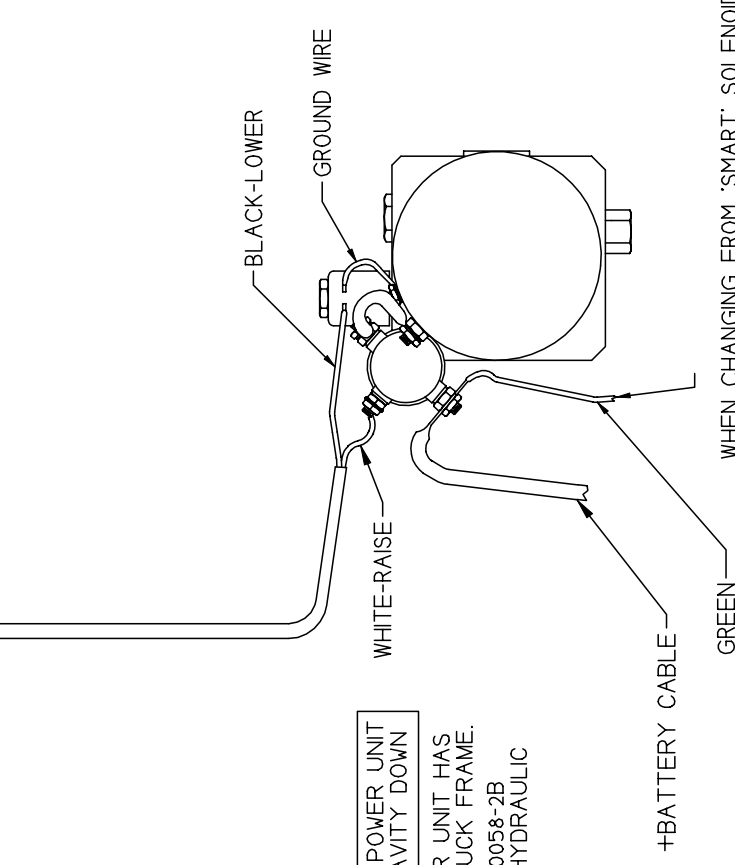
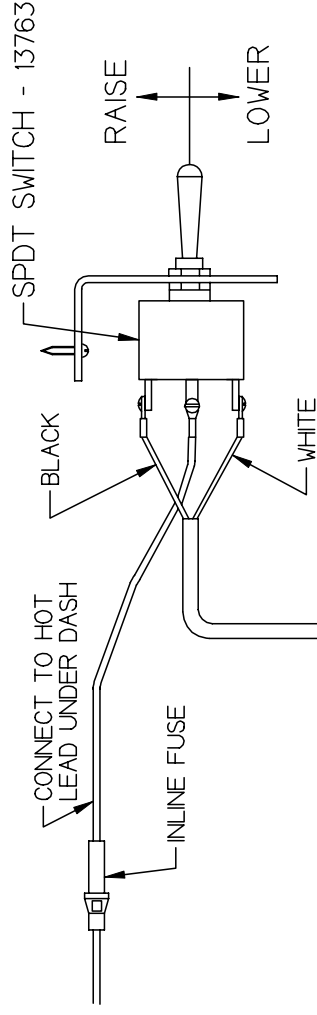


BREATHER/FILL-REF
PRESSURE HOSE - CONNECT TO BASE END OF HYDRAULIC CYLINDER



-RETURN HOSE ONLY ON VC416/516 AND LARGER HOISTS
-CONNECT TO ROD END OF HYDRAULIC CYLINDER
-RETURN HOSE NOT REQUIRED ON VP/VC6R & VP/VC6D

SIDE VIEW



SINGLE ACTING POWER UNIT
-POWER UP/GRAVITY DOWN

NOTE: BE SURE POWER UNIT HAS
GROUND TO TRUCK FRAME.
SEE DRAWING 40058-2B
FOR PARTS & HYDRAULIC
SCHEMATIC.

WHEN CHANGING FROM 'SMART' SOLENOID
TO OLD STYLE CONNECT GREEN
WIRE HERE. CONNECT BLACK TO
EITHER WIRE ON RELEASE SOLENOID AND
GROUND THE OTHER WIRE.



TITLE
PLUMBING & WIRING DIAGRAM

DATE
7-18-00

SECTION
H200

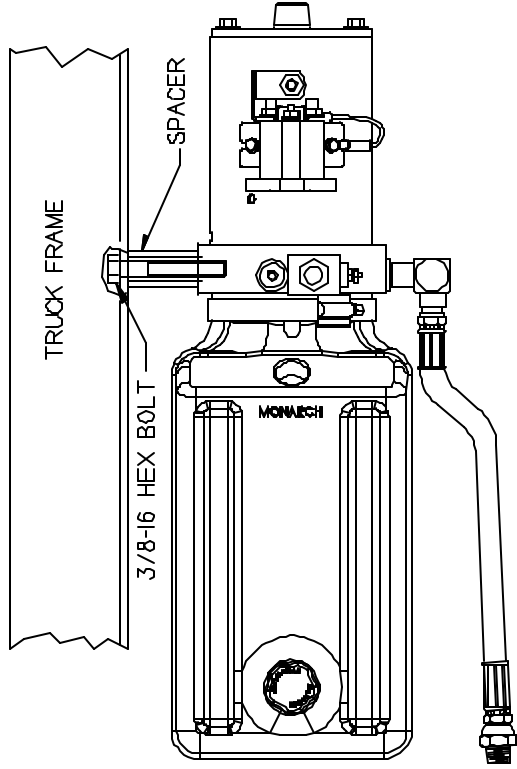
FENNER ES POWER UNIT 40058-2B

SUPERSEDES
7-6-98

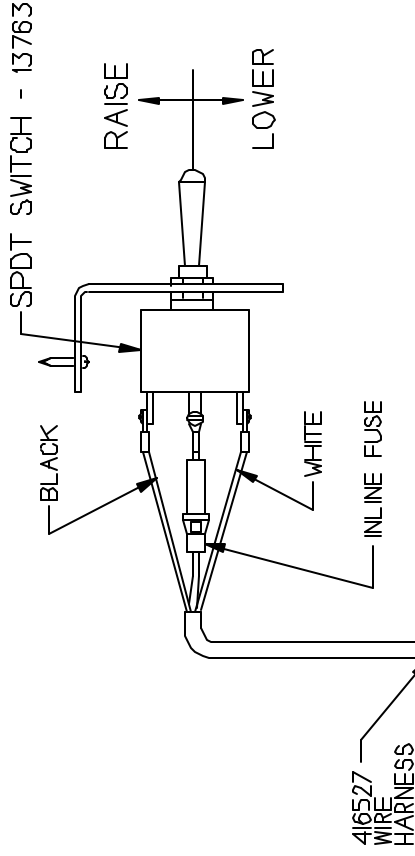
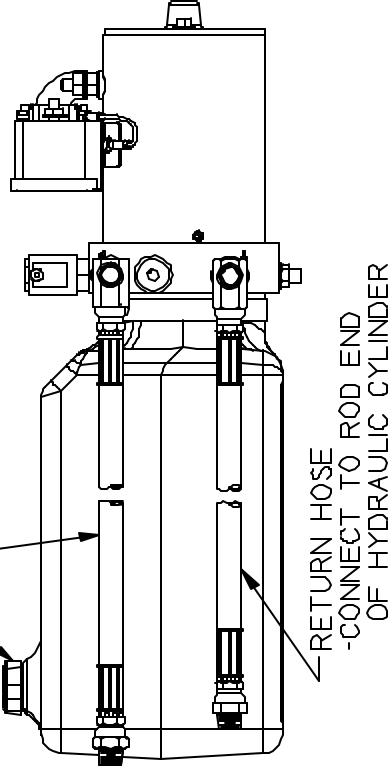
6133B

40058M

* IF SPACERS ARE NOT USED USE 1" LG. BOLTS



BREATHER/FILL-REF - CONNECT TO BASE END OF HYDRAULIC CYLINDER



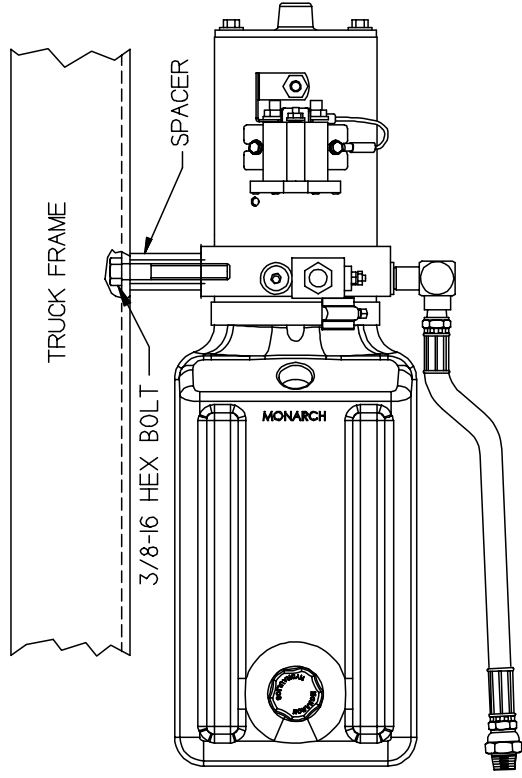
SINGLE ACTING POWER UNIT
-POWER UP/GRAVITY DOWN

NOTE: BE SURE POWER UNIT HAS
GROUND TO TRUCK FRAME.
SEE DRAWING 416308
FOR PARTS

 VENCO MANUFACTURING, INC.	TITLE 40058M / 40058MHD POWER UNIT		DATE 3-10-04	SECTION H200
	VC416/516/520/620/628		SUPERSEDES -	416315

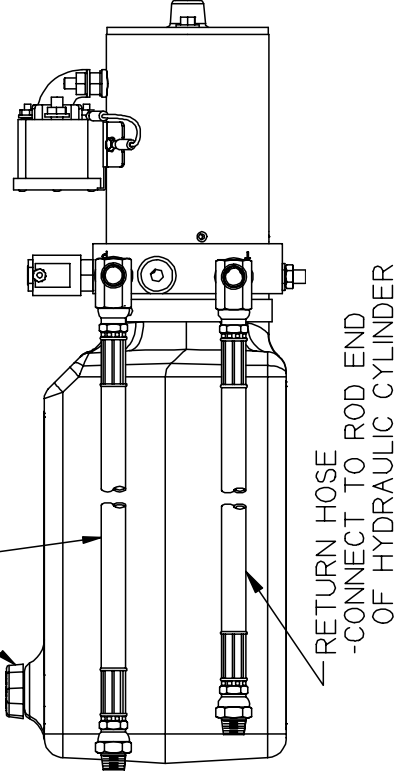
40058M WITH MONARCH PUSH BUTTON CONTROL

* IF SPACERS ARE NOT USED USE 1" LG. BOLTS

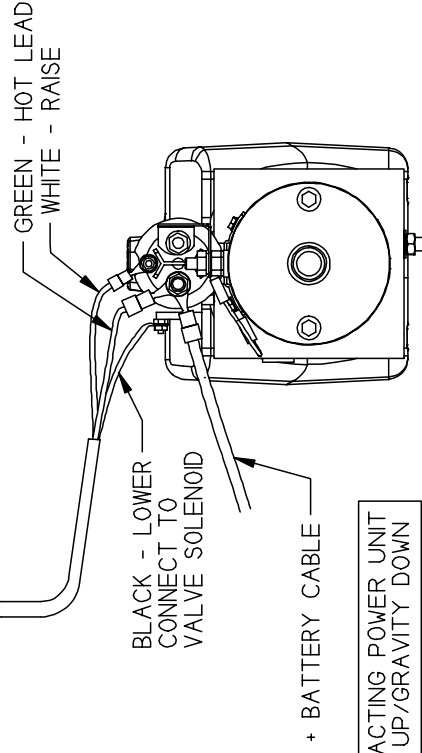
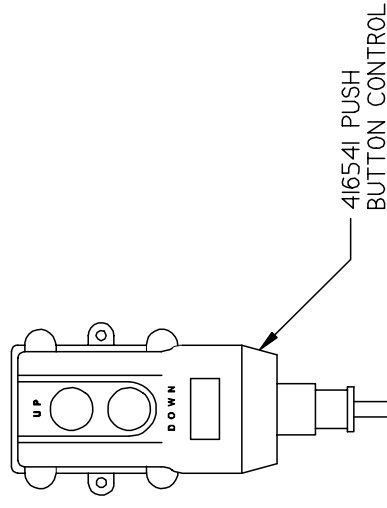


TOP VIEW

BREATHER/FILL-REF — PRESSURE HOSE - CONNECT TO BASE END OF HYDRAULIC CYLINDER



SIDE VIEW



SINGLE ACTING POWER UNIT
-POWER UP/GRAVITY DOWN

NOTE: BE SURE POWER UNIT HAS GROUND TO TRUCK FRAME.
SEE DRAWING 416308 FOR PARTS

INSTRUCTIONS FOR FILLING THE RESERVOIR OF ELECTRIC HYDRAULIC POWER UNITS

THE FOLLOWING HOIST MODELS ARE INCLUDED:
VP/VC-6(R), VC-416/516, VC-520 - ES & ED, VC-620 - ES & ED ▲

MODEL NO.	RESERVOIR CAPACITY	TOTAL FLUID REQ'D
VP/VC-6(R)ED	2 QTS.	3.5 QTS
VC-416 ES/ED	4 QTS.	5.5 QTS
VC-516 ES/ED	4 QTS.	7.5 QTS
VC-520 ES/ED	4 QTS.	9.0 QTS.
▲ VC-620 ES/ED	4 QTS.	12.0 QTS.

PROCEDURE

STEP 1 - On 416, 516, 520 ES, 620 ES models only, do not
attach rod end hose to the cylinder until after complet-
ing Steps 2 thru 6.

STEP 2 - Remove the reservoir breather. With the hoist in the
down position, fill the reservoir with ISO viscosity
grade 32 hydraulic oil (Tellus 32 or equivalent) - 3.5
qts. for 416, 516, 520, 620 and 2 qts. for VP-6(R).

STEP 3 - Raise the hoist halfway (22-25° dump angle,
approx. 8" of cylinder stroke).

STEP 4 - Fill the reservoir with an additional 2 qts. for VP-6(R),
416, 516 and 3 qts. for 520, 620. ▲

STEP 5 - Raise the hoist completely.

STEP 6 - Refill the reservoir with the remaining fluid required.

STEP 7 - Attach hose to rod end of cylinder on the 416, 516,
520 ES, 620ES models. ▲

Example: VC-416 ES/ED Hoist

Step 2 - Add 3.5 qts.

Step 4 - Add 2.0 qts.

Step 6 - Add 0.0 qts. (none req'd)

= 5.5 qts. total



MANUFACTURING, INC.

TITLE

FILLING HYD. RESERV.

DATE

6-18-03B

SECTION

H300

VP/VC6(R) VC 620 - V C520

SUPERCEDES

7-30-02A

416140

IV Attaching Rear Hinge and Upper Pivots to Body

A. Rear Hinge

1. Position the body longitudinals (channels) onto the truck frame or subframe.
2. Place rear hinge plates in the vertical position. Weld and / or bolt plates to longitudinals. If bolted, mark and drill each plate (4) places (17/32" dia.); secure plates to body channels using (8) 1/2"-13 x 1-1/2" grade 8 hex head cap screws, (8) 1/2" lockwashers and 1/2"-13 hex nuts.
3. For the subframe hoist, slide the hinge shaft collars over against the hing plate assembly pipe and weld to outside of hinge shaft. - See 416257.

B. Upper Pivots Subframe Hoist-

- 1a. Position lift shaft assemblies securely against the body channels with body against frame rails or filler strip.
Standard Hoist-
- 1b. Use Lift Shaft Assy. with angle. Weld angle to Body Channel - all around - each side. Weld BODY GUIDE to angle on LOWER PIVOT (2 PL.)-See 416255 SHT. 1 - Item 27. See next page (FIG.10) to weld Lift Angles to Body Channel.

CAUTION: Before operating the hoist, read the operations section of this manual.

2. Raise the body to a moderate position and prop the body in a secured position. Cover any gas tanks and filler necks with a non-flammable material before welding. Weld the upper lift shaft assys. to the body channels all around each side. Slide the shaft collars against the upper pivot tube. Weld the outside edge of the collar to the upper lift shaft (2" dia.), See Fig. 9.
3. With the hoist and body completely installed, operate hoist system per the instructions in this manual and P.T.O. manufactureres instructions.

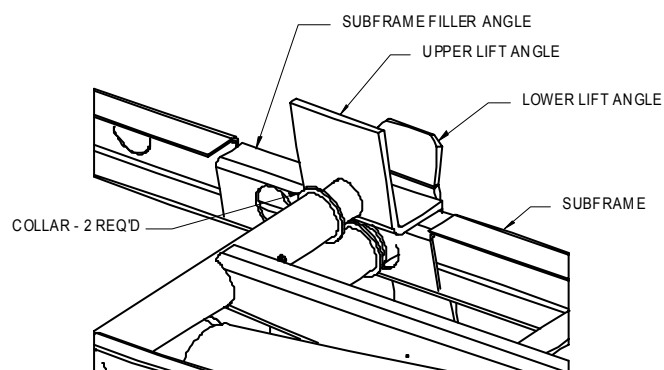


Figure 9



MFG., INC.
CINCINNATI, OHIO

TITLE
INST INSTRUCTIONS

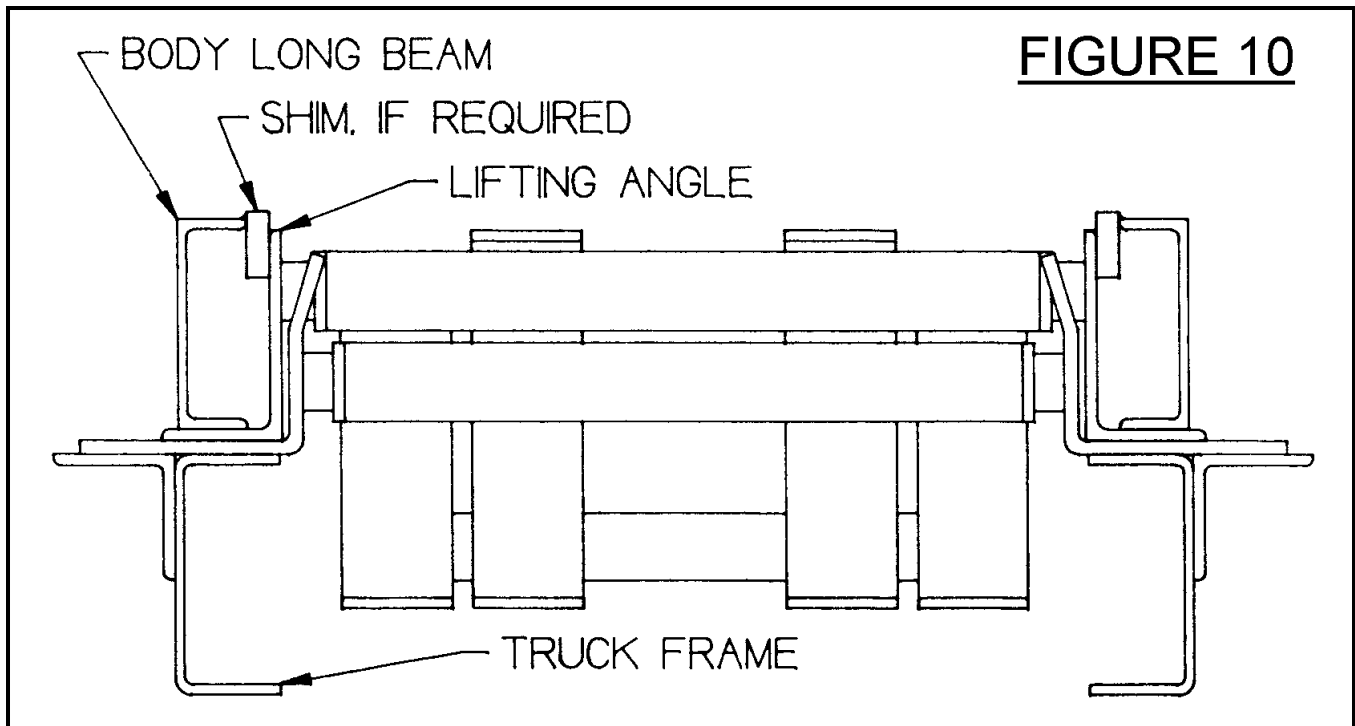
VC 416/516

DATE
7-14-03

SUPERCEDES
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SECTION
H200

416747



MANUFACTURING, INC.

TITLE
INST INSTRUCTIONS

VC 416/516

DATE
7-15-98A

SUPERCEDES
9-16-92

SECTION
H200

416273

V Power Source Operation

A. P.T.O. Pump Operation

Warning

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

Caution

For long service and safety from VC-416/516 hoists, it is important that the following procedure be followed each time the hoist is operated.

1. Engage the P.T.O. from the truck cab, adjust engine speed to obtain correct P.T.O. and lift speed desired.
2. Pull the knob marked "pump" out. This will cause the hoist to raise.

Caution

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

3. When the hoist has reached it's maximum capacity, the pump will bypass through the relief valve. To prevent the pump from bypassing, push the knob marked "pump" to the middle or "center" position. Whenever the pump knob is centered, the hoist will stop moving and hold it's position.

Note: The Venco Hoists, powered by P.T.O. drive pumps, must be powered down. Failure to "power down" will cause the reservoir to overflow.

4. To lower the hoist, push the pump knob in.
5. Fully raise and lower the hoist several times to purge the hydraulic system of air.
6. 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.

Warning

Do not drive truck without first disengaging P.T.O. drive shaft. Severe damage may occur.

7. Disengage P.T.O. from transmission as per manufacturers instructions.



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

7-15-98

SUPERCEDES

-

SECTION

H200

416301

V Power Source Operation

B. Double Acting Pump Operation

1. Push and hold the toggle switch located on the control box to the side marked up. This will start the pump and will raise the hoist.
2. When the hoist reaches it's limit, the pump will bypass. Care should be taken not to let the pump bypass for long periods, as it will put stress on the whole hydraulic system. To prevent the pump from bypassing, release the toggle switch and allow it to center. In this position the pump will stop and hold the hoist in position.
3. To lower the hoist, push and hold the toggle switch in the down position. This will start the pump and will lower the hoist. When the body contacts the frame the pump will bypass - release the switch.
4. Fully extend and retract cylinder several times to purge system of air to obtain proper hydraulic/lifting action. Check for hydraulic leaks at fittings and hoses. Tighten fittings or replace leaking hoses if necessary.

C. Single Acting Pump Operation

1. Push and hold the toggle switch located on the control box to the side marked up. This will start the pump and will raise the hoist.
2. When the hoist reaches it's limit, the pump will bypass. Care should be taken not to let the pump bypass for long periods, as it will put stress on the whole hydraulic system. To prevent the pump from bypassing, release the toggle switch and allow it to center. In this position the pump will stop and hold the hoist in position.
3. To lower the hoist, push and hold the toggle switch in the down position. This will start and open a valve and allow gravity to lower the hoist.
4. Cycle hoist system several times up and down to force out any air that may be in the hydraulic system.



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

7-15-98

SUPERCEDES

-

SECTION

H200

416302

- VI Body Prop(s): Federal regulation 1926.01, 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).

Warning

Do not place arms, hands or any part of the body between truck longitudinal (long beams) or moving parts to pull body prop release/locking pin.

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

Caution

Body prop(s) should be free swinging to a vertical position, after the locking pin is released.

Read operation of safety strut and caution decals before operating hoist.

- A.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 repairs 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 above 15 feet in length, two (2) body props should be used.
- a. Construction truck bodies - Two (2) body props are required.
- B.1. To disengage the body prop(s) from the hoist frame, use a suitable tool to pull out the spring loaded release pin. This will release the body prop so that it may swing downward to a vertical position.
2. Make sure that the body prop(s) are aligned with the body prop foot rest (body prop will be in vertical position), then allow the truck body to move downward until the body prop is seated in the foot rest.

Warning

Use extreme care when reseating body prop(s) in the locked position.

3. To disengage the body prop(s), raise the truck body until the body prop(s) swing freely away from the foot pad. Using a suitable tool, place tool in a leverage position on the body prop and propel sharply to the right and upward, so that the locking pin can be compressed and seated in the locking pin hole. Make certain the body prop is latched securely before hoist is operated.



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

DATE

7-15-98

SECTION

H200

VC 416/516

SUPERCEDES

-

416303

VII Lubrication and Maintenance

A. Hoist Unit Lubrication - Lubricate hoist system as follows:

1. P.T.O. driven pump - tighten and grease the lube fittings in the P.T.O. drive shaft assembly.
2. Grease all lube fittings on the hoist unit.
3. Grease rear hinge assembly.
4. The hoist system should be serviced at the same time the truck is serviced. Service the hoist more frequently with heavy usage.

B. Hydraulic Systems Maintenance

1. The most frequent cause of failure is dirt in the hydraulic system.
 - a. Recheck hydraulic fluid level periodically to properly perform the dual function of lubrication and transmission of power. We recommend the use of MULTI-PURPOSE ATF DEXRON II for electric D/A and S/A units to obtain maximum unit and fluid life. Use DEXRON 220 oil for P.T.O. units.
 - b. Make frequent inspection of hydraulic fluid and change if contaminated.
 - c. Drain and replace hydraulic oil in electric pump each time truck is serviced. Service the pump unit more frequently with heavy usage.
 - d. Use a clean funnel fitted with a fine wire mesh screen to fill the reservoir with oil. Do not use a cloth strainer. Most pump failures, valve malfunctions and short life can be caused by dirt or other material (water, chips, lint) getting into the hydraulic system.
 - e. Periodically inspect inlet screen filter. To gain access to filter; drain the reservoir of oil and remove the screws which attach the reservoir to the motor adapter. The filter is screwed on to the pipe nipple which leads to the pump.
 - f. Note the position of the filter before removing it from the pump housing. Use a suitable solvent to clean the filter. Reassemble the filter to the pump housing as positioned originally.

2. Electric D/A only

All double solenoid manifold mounted valves are equipped with manual "over-ride" and can be actuated by inserting a small blunt object into the end of the valve to manually shift the valve. The body should not be in the raised position when manually over-riding the system. This can be done to break dirt away or to check and see if spool is shifting.



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

7-15-98

SUPERCEDES

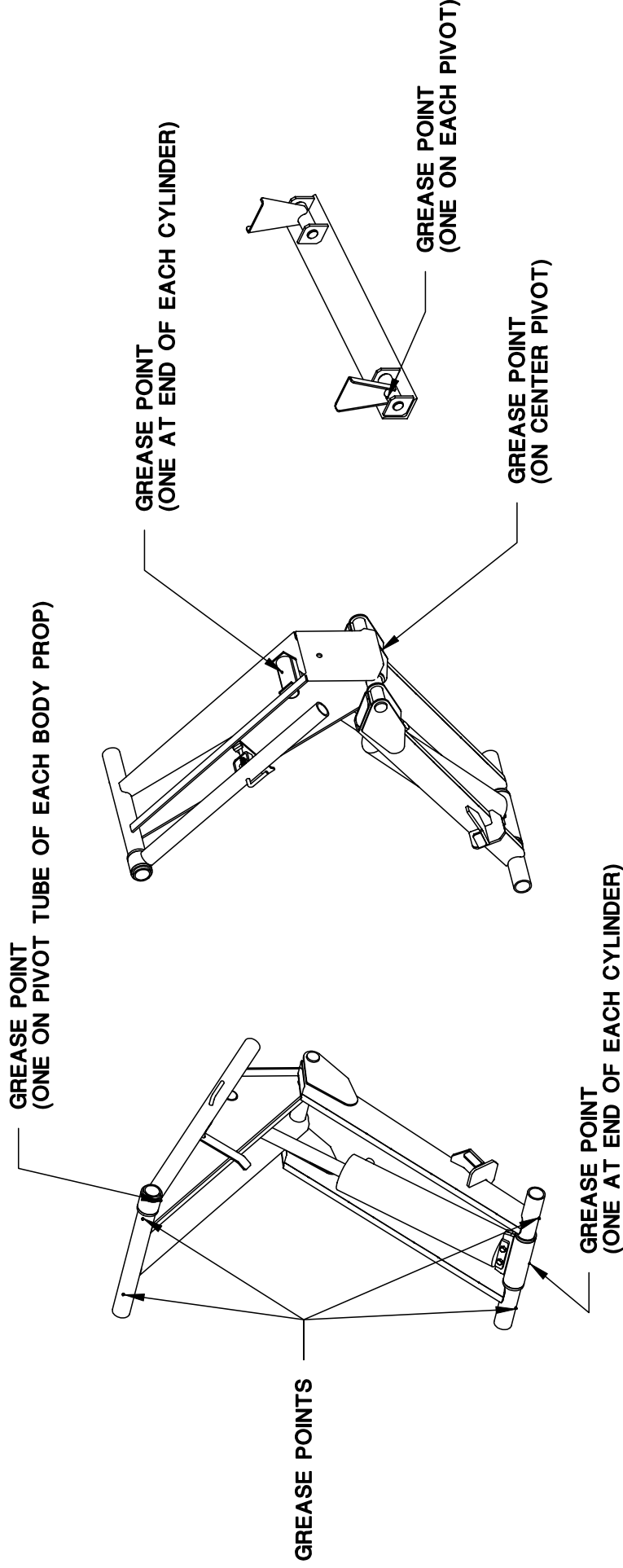
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SECTION

H200

416304

HOIST GREASE POINTS



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.

THE GREASE POINTS FOR THE HOIST SCISSORS AND REAR HINGE ARE SHOWN ABOVE.

ADDITIONAL FITTINGS FOR TWIN CYLINDER HOISTS AND ADDITIONAL BODY PROPS ARE ALSO NOTED.



MANUFACTURING, INC.

TITLE
GREASE POINTS FOR HOISTS

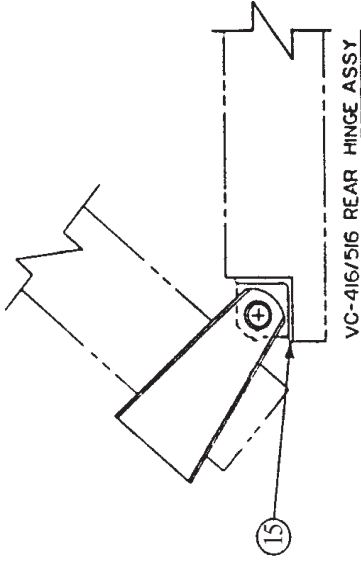
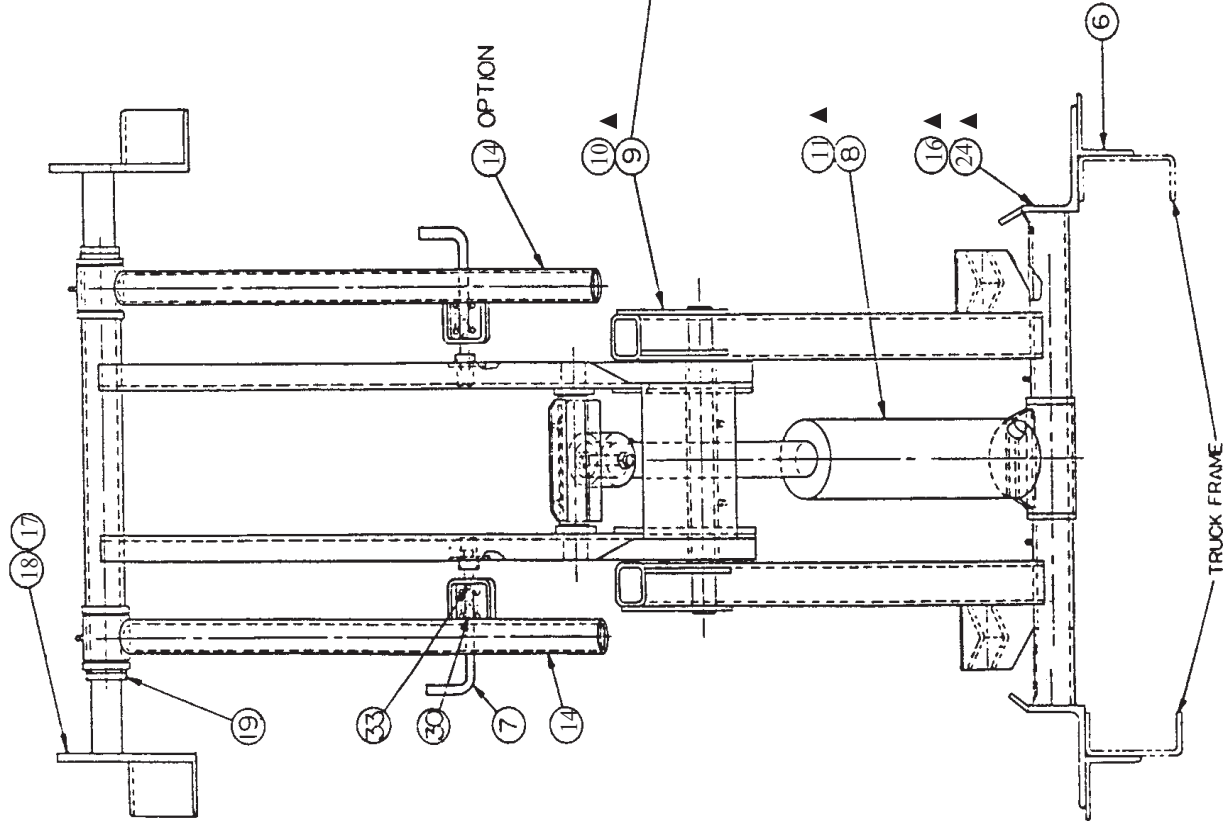
DATE
9-4-02

SECTION
-

VC416/516/520/620/628/5520/6620/6628

SUPERSEDES
-

520054



REPLACEMENT PARTS LIST REF 416731

VENCO MANUFACTURING, INC.

TITLE
REPLACEMENT PARTS

DATE
8-20-03A

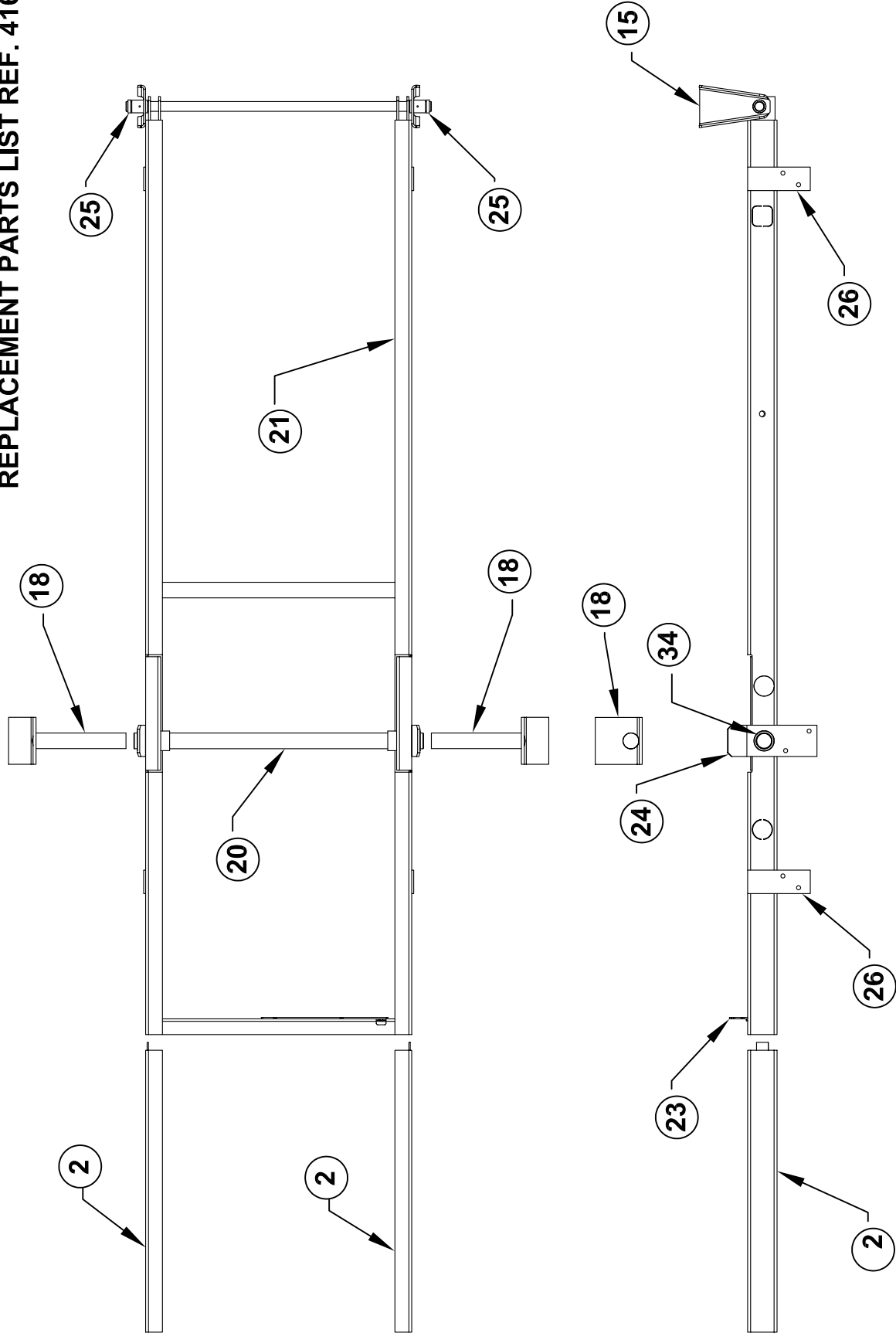
SECTION
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VC-416/516(SF)


SUPERCEDES
6-7-01

416455A

REPLACEMENT PARTS LIST REF. 416731



SUBFRAME ASSEMBLY
SCISSORS ASSEMBLY IS THE SAME
AS STANDARD HOIST SEE 416455A

	TITLE	REPLACEMENT PARTS	DATE	SECTION
	VC416/516(SF)	7-15-03	-	416748

416255A, 416532 REPLACEMENT PARTS LIST

ITEM	PART NO.	QTY S.F.	QTY NON	DESCRIPTION
1	416545	1	1	5/8 - 3-1/2 CLEVIS W/ H.P. COTTER
2	▲ 416744	1	-	SUBFRAME EXTENSION KIT
3	416259	1	-	SUBFRAME PIVOT KIT ASSEMBLY
4	@416044	1	1	HOSE ASSEMBLY - 5 FT.
5	@416045	1	1	HOSE ASSEMBLY - 7 FT.
6	520063	2	-	MOUNTING ANGLE
7	416068-1	1	1	LOCKING PIN
8	416127	1	1	416 CYLINDER
9	▲ 416402-2	1	1	416 SCISSORS ASSEMBLY WITH OUT CYLINDER
10	▲ 516402-2	1	1	516 SCISSORS ASSEMBLY WITH OUT CYLINDER
11	▲ 516127	1	1	516 CYLINDER
12	@416210	2	2	HEX HEAD CAP SCREW - 1/2"-13 x 1-3/4"
13	@416211	2	2	NYLON LOCK NUT - 1/2"-13
14	416212	1	1	BODY PROP ASSEMBLY - INCLUDES ITEMS: 7, 30, 33
15	416207	-	1	REAR HINGE ASSEMBLY
16	416405	2	2	LOWER PIVOT ASSEMBLY
17	416258	-	2	UPPER LIFT SHAFT ASSEMBLY (NON SUBFRAME ONLY) ▲
18	* 416739	2	-	UPPER LIFT SHAFT ASSEMBLY (SUBFRAME ONLY) ▲
19	416220	2	2	COLLAR UPPER PIVOT (REGULAR HOIST AND SUBFRAME)
20	* 416221	1	-	SHAFT - LOWER PIVOT ASSEMBLY
21	▲* 416738	1	-	SUBFRAME WELDED ASSEMBLY
22	▲ -	-	-	-
23	* 520512	1	-	PUMP MOUNTING BRACKET
24	* 416420	2	-	LOWER PIVOT ASSEMBLY
25	* 416246	2	-	COLLAR - REAR HINGE
26	* 416247	4	-	SIDE PLATE
27	-	-	-	-
28	▲ -	-	-	-
29	▲ -	-	-	-
30	00170	1	1	SPRING
31	416221	1	-	SHAFT, SUBFRAME, LOWER PIVOT
32	-	-	-	-
33	20-00022	1	1	ROLL PIN - 5/32" x 1"
34	416219	2	2	SET SCREW - 5/16"-18
35	-	1	1	POWER UNIT (SEE OPTIONS BELOW) A. 40058 - ELECTRIC S/A HYD B. 416081 - ELECTRIC D/A HYD C. 416046 - PTO D/A HYD D. 416075 - PTO D/A WITH SPLIT PUMP
36	▲ -	-	-	-

* ITEMS USED ON VC-416/516 SUBFRAME ONLY
@ ITEMS NOT SHOWN ON DRAWING

REPLACEMENT PARTS DWG REF 416255A, 416748 ▲
NOTE: CLEVIS PIN FOR MULTI-PIECE HINGE IS 416215



TITLE
REPL. PARTS LIST

VC-416/516(SF)

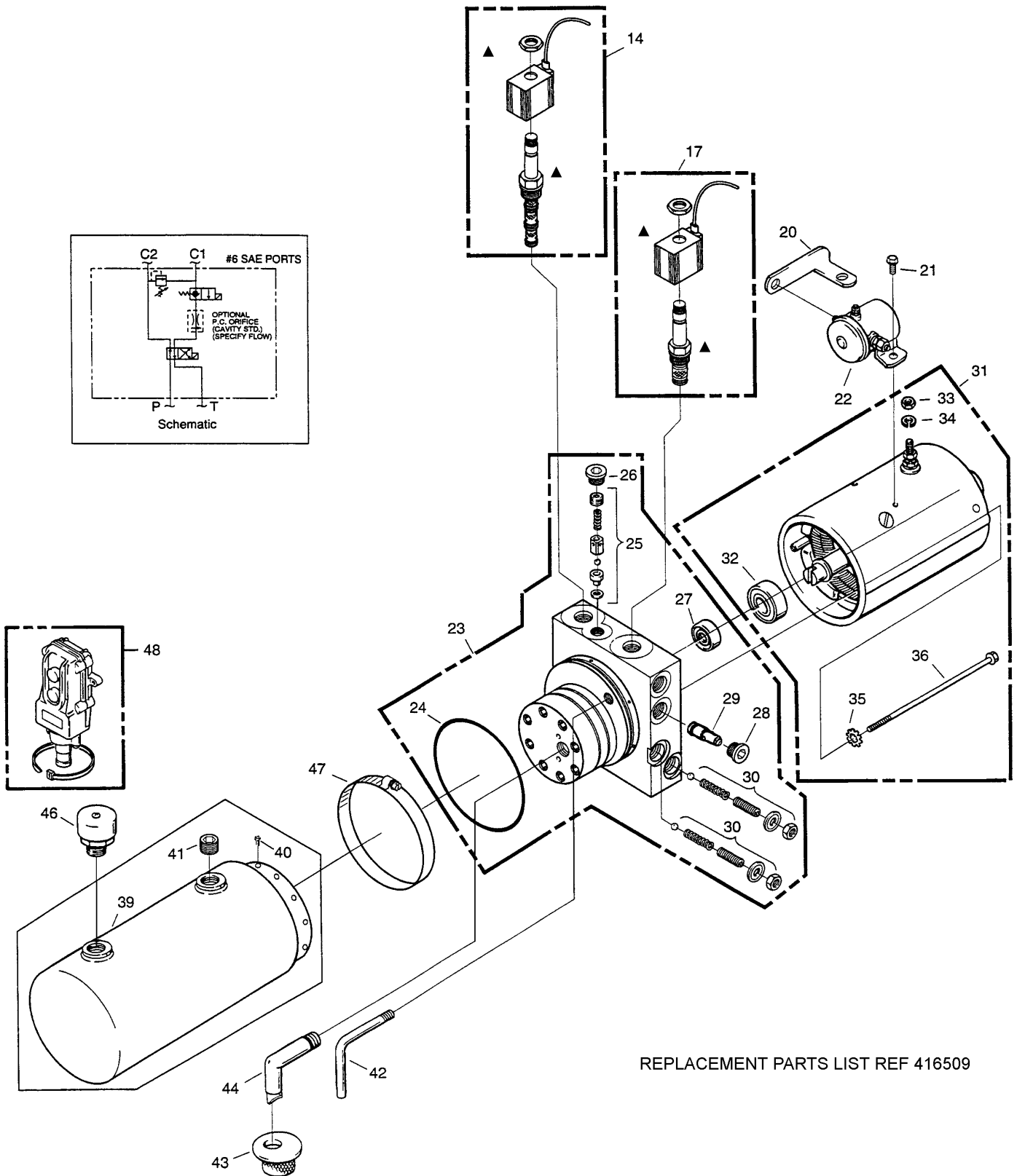
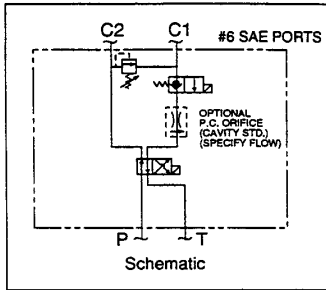
DATE
6-9-03A

SUPERCEDES
6-8-01

SECTION
-

416731

REPLACEMENT PARTS 416081M



REPLACEMENT PARTS LIST REF 416509



MANUFACTURING, INC.

TITLE
REPL. PARTS DWG


416081M POWER UNIT

DATE
4-11-00B

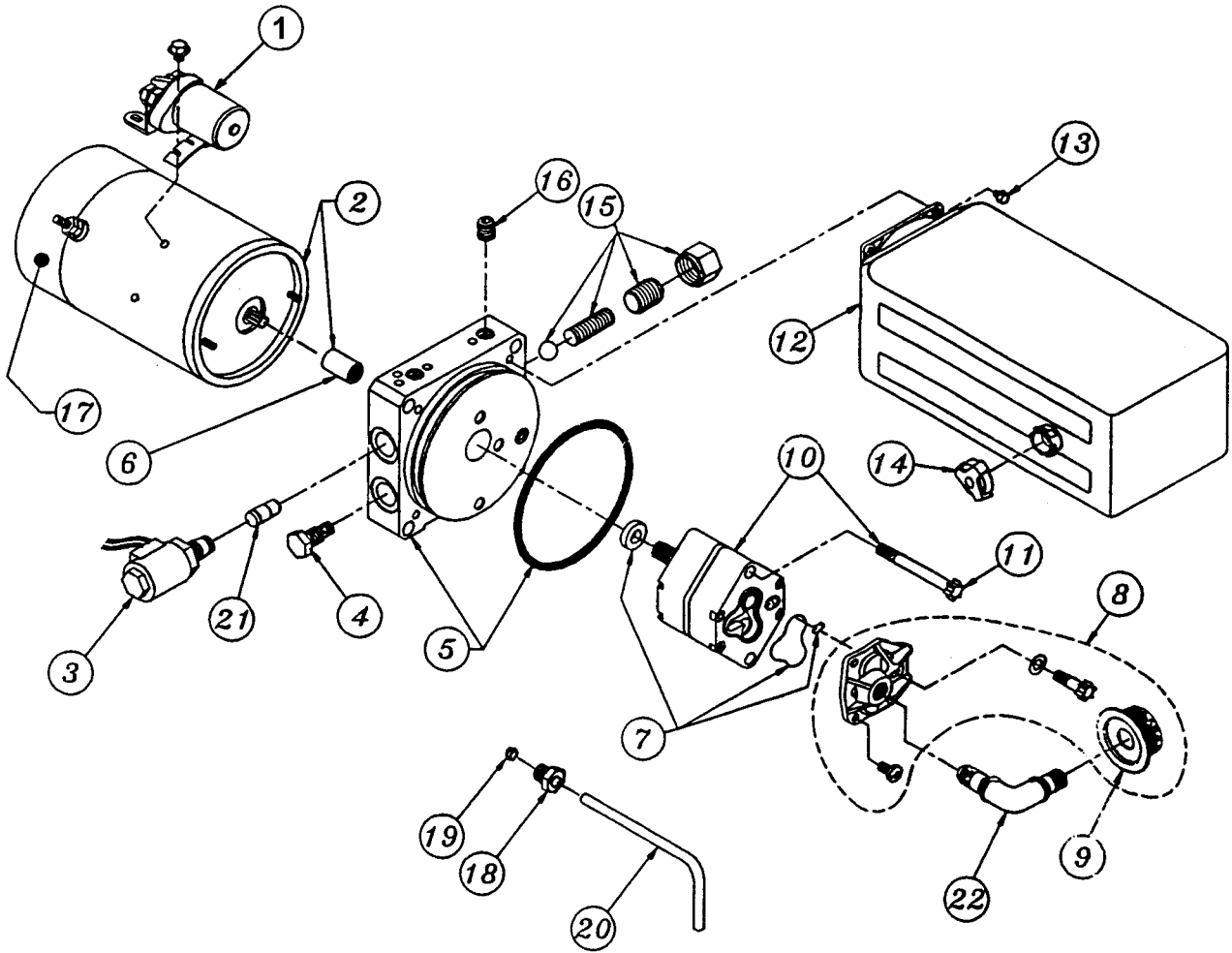
SUPERCEDES
11-17-99A

SECTION

416508

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	-	-	41	-	PLUG - 3/8" NPTF
2	-	-	42	-	RETURN TUBE - 1/8"
3	-	-	43	-	FILTER SCREEN (SUCTION)
4	-	-	44	-	FILTER SUCTION TUBE - 3/8" NPTF 90 DEG.
5	-	-	45	-	-
6	-	-	46	416524	PLUG, VENT 3/8" NPT
7	-	-	47	416544	BAND CLAMP
8	-	-	48	416525	BOX ASSEMBLY, PUSH BUTTON (WEATHER
9	-	-	PROOF)	-	-
10	-	-	49	-	-
11	-	-	50	-	-
12	-	-	51	-	-
13	-	-	52	-	-
14	416510	VALVE, 4 WAY - 2 POSITION (12V)	53	-	-
15	-	-	54	-	-
16	-	-	55	-	-
17	416513	VALVE, 2 WAY - 2 POSITION, 12 VDC, GROUNDED	56	-	-
18	-	-	57	-	-
19	-	-	58	-	-
20	-	-	59	-	-
21	-	STRAP, MOTOR-SOLENOID CONNECTING	-	-	-
22	416310	SCREW, ROUND HEAD MACHINE 10-32 x 1/4"	60	-	-
23	416517	SWITCH, SOLENOID, 12VDC, 3-POST GROUNDED	61	-	-
24	416518	PUMP ASSY, GEAR CODE 03 (#6 SAE PORTS)	62	-	-
25	416519	O-RING, INDUSTRIAL (3-5/8 x 3-7/8 x 1/8)	63	-	-
26	-	PARTS KIT, VALVE ASSY, POPPET/BALL CHECK	64	-	-
27	-	PLUG	65	-	-
28	-	SEAL	66	-	-
29	416520	PLUG, #8 SAE	67	-	-
30	416521	VALVE, PRESS COMP. ORIFICE (2.5 GPM)	68	-	-
31	416522	PARTS KIT, RELIEF VALVE	69	-	-
32	-	MOTOR, ELECTRIC, 12 VDC	70	-	-
33	-	BEARING, BASE, MOTOR	71	-	-
34	-	HEX NUT - 5/16-24	72	-	-
35	-	LOCK WASHER - 5/16"	73	-	-
36	-	STAR WASHER - 1/4"	74	-	-
37	-	HEX HEAD CAP SCREW - 1/4-20 x 6-1/2"	75	-	-
38	-	-	76	-	-
39	416523	-	77	-	-
40	-	PLASTIC RESERVOIR - 6.5" X 5.5" X 10"	78	-	-
		THREAD FORMING SCREW - 10-24 x 3/8"	79	-	-
			80	-	-
					REPLACEMENT PARTS DWG REF 416508
			REPLACEMENT PARTS LIST		-
			416081M POWER UNIT		416509

40058-2 SINGLE-ACTING HYDRAULIC POWER UNIT SERVICE PARTS LIST



ITEM NO.	DESCRIPTION	FENNER P/N	QTY.
1	SOLENOID 12 VDC	4795-AA ▲	1
2	MOTOR 12 VDC	1787-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 O-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	3856-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	S7-4000-09	1



MANUFACTURING, INC.

TITLE

SERVICE PARTS LIST

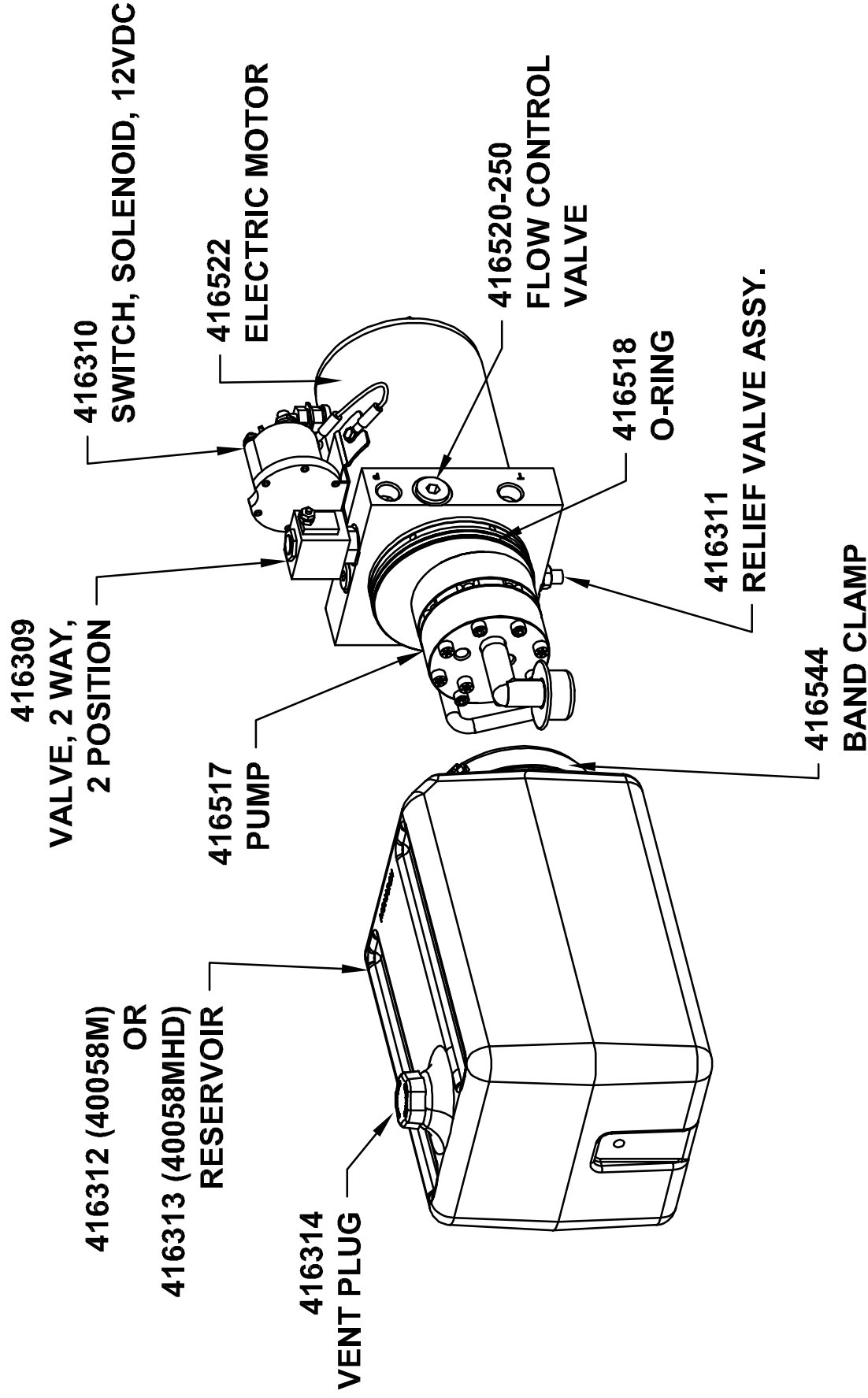
VP/VC 6, VC 416/516/520

DATE
3-28-02B

SUPERCEDES
12-3-98A

SECTION
H400

40058-2



MANUFACTURING, INC.

TITLE

PARTS LIST & DRAWING

40058M & 40058MHD POWER UNITS

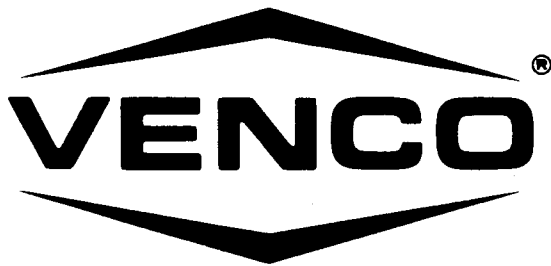
DATE

2-4-04

SECTION

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416308



LIFTGATES AND HOISTS

WARRANTY POLICY

For one year from date of original purchase, we will replace or repair free of charge all Venco/Venturo parts returned to our factory prepaid and found upon inspection by us to be faulty due to defects in materials or workmanship. We shall not be liable for any contingent liabilities arising out of the improper function of any parts. We make no warranty with respect to parts not of our manufacture, but we will carry out the terms of the warranties of their respective manufacturers. One year warranty on hydraulic cylinders including labor.

WARNING - It is the responsibility of the installer to not only insure that the installation is completed according to the manufacturer's recommendations, but to insure that the ultimate user understands how to operate in a safe manner and the need for regular service and maintenance by an authorized Venco/Venturo Distributor. No modifications or alterations may be made to any Venco/Venturo equipment without the expressed written consent of the manufacturer. Reinstallation of any Venco/Venturo product must be done by an authorized Venco/Venturo Distributor to the standards of the industry, including the maintenance and service and the affixing of all instructional, safety and warning labels. Users should again 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.

WARRANTY CLAIMS

Venco/Venturo 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 or part, your Venco/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, Venco/Venturo requires the model and serial number. Only authorized Venco/Venturo Distributors can perform warranty. For the name and address of your local Venco/Venturo Distributor call the **Warranty Claims Department - 513-772-8448**.

VENCO / VENTURO
12110 BEST PLACE - CINCINNATI, OHIO 45241
(513) 772-8448

12-00073