



VENCO®

HOISTS

VC416 / VC516

INSTALLATION & OWNER'S MANUAL

Sold and Serviced by:

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VC 416 / 516 MANUAL

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-PDECALS 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.

TITLE
TABLE OF CONTENTS

VC 416 / 516

DATE
5-22-06

SUPPERCEDES
-

SECTION
-

416780

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.
- ▲ 5. IF YOU ARE USING AN "ELECTRIC HYD POWER UNIT", IT MUST BE
PROPERLY GROUNDED TO THE TRUCK FRAME USING THE SUPPLIED
#4 GAGE BLACK BATTERY CABLE OR EQUIV. - FAILURE TO PROPERLY
GROUND POWER UNIT MAY RESULT IN VOIDING OF THE UNIT'S
WARRANTY.



MANUFACTURING, INC.

TITLE

CAUTION NOTE

VC416 / 516

DATE

12-01-04A

SUPERCEDES

10-30-01

SECTION

-

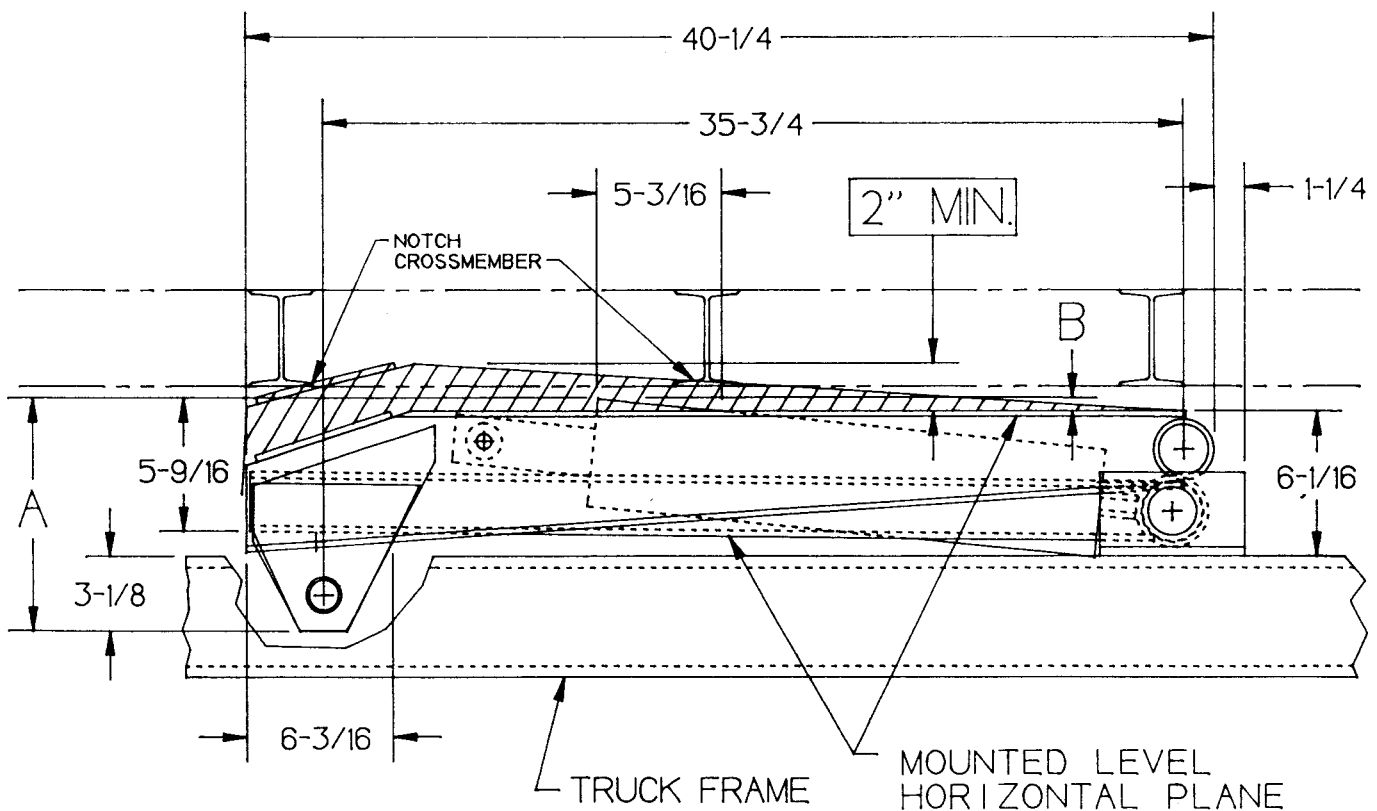
416723

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.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

7-14-98

SUPERCEDES

-

SECTION

H100

416288

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

CAUTION

1. Do not touch the hot surface of the burner or the burner assembly.
2. Do not touch the hot surface of the burner or the burner assembly.
3. Do not touch the hot surface of the burner or the burner assembly.
4. Do not touch the hot surface of the burner or the burner assembly.
5. Do not touch the hot surface of the burner or the burner assembly.
6. Do not touch the hot surface of the burner or the burner assembly.
7. Do not touch the hot surface of the burner or the burner assembly.
8. Do not touch the hot surface of the burner or the burner assembly.
9. Do not touch the hot surface of the burner or the burner assembly.
10. Do not touch the hot surface of the burner or the burner assembly.

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

▲ DANGER
STAND CLEAR
WHILE OPERATING
VINCO 1824

VENCO #416084
1 REQ'D FOR
EACH SAFETY PROP

[illegible]

PD MODEL ONLY
Venco #416085
1 REQ'D

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

AFFIX TO TRUCK DASHBOARD



VENCO MANUFACTURING, INC.

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

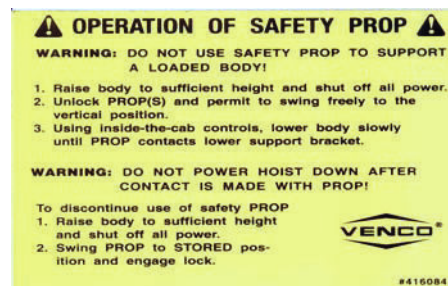
APPLICATION: VC620-VC6628 MODELS ONLY

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.: 416626

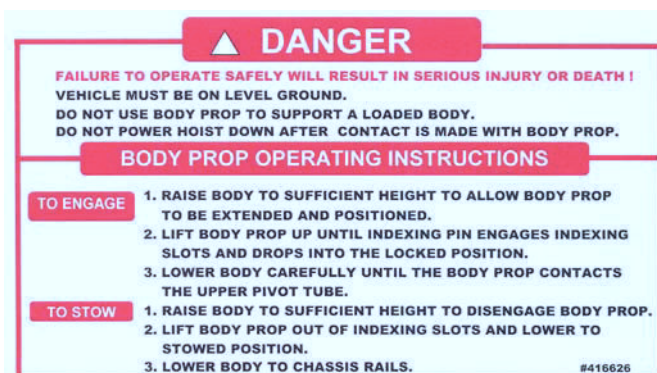
APPLICATION: VC416,516 & 520 MODELS ONLY

DECAL: SAFETY PROP OPERATION 'INDEXING' PROP ONLY

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).



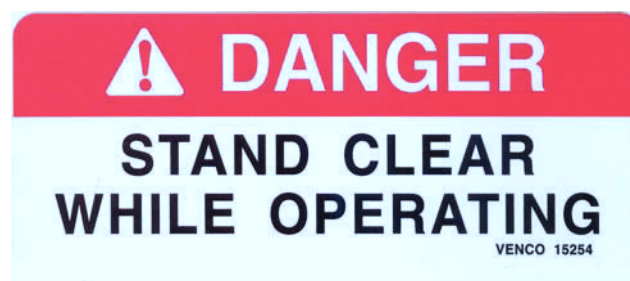
PART NO.: 15254

DECAL: CAUTION STAND CLEAR

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

QUANTITY: 2

PLACEMENT: One on each side of truck frame.



PART NO.: 416085

DECAL: WARNING WHEN LOWERING

FUNCTION: To inform the operator to keep P.T.O. and clutch engaged when lowering the hoist.

QUANTITY: 1

PLACEMENT: Affixed to truck dashboard.



MANUFACTURING, INC.

TITLE
DECAL LIST

VC416-6628, TRL416-6628

DATE
8-1-08-C

SUPERSEDES
9-26-07B

SECTION
-

628820

GENERAL INFORMATION:

MODEL: VC 416*(SF)

DUMP CLASS: 10

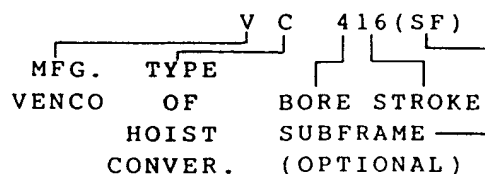
CONVERSION CLASS: B

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
ACTINGED-ELECTRIC DOUBLE
ACTINGPD-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

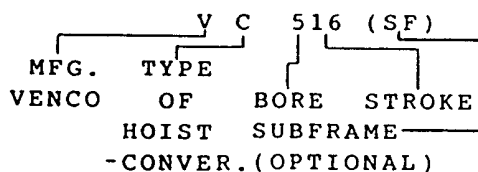
CONVERSION CLASS: C

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

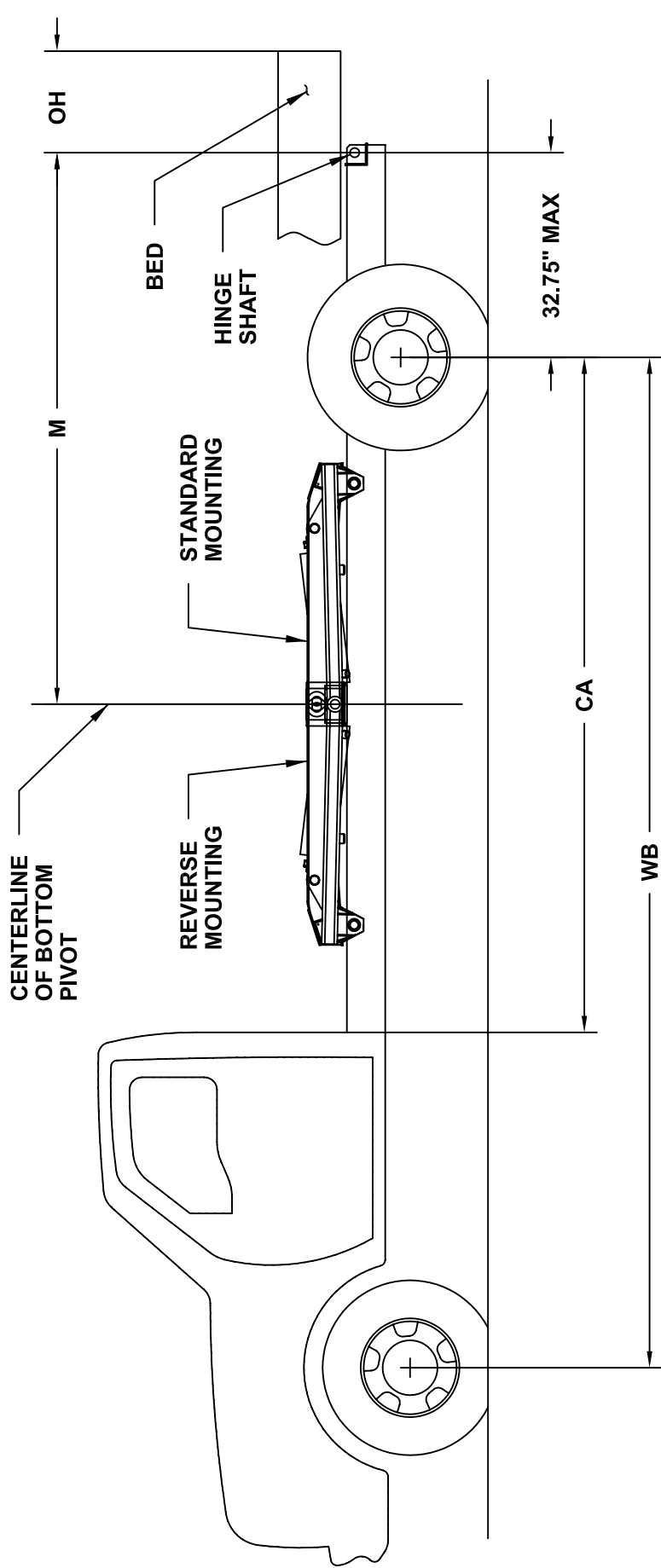
7-14-98

SUPERCEDES
2-28-90

SECTION

H100

516203



VC 416/516 HOISTS

STANDARD MOUNTING

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

REVERSE MOUNTING

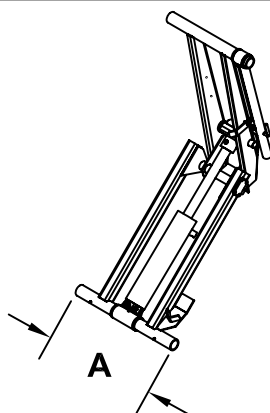
DUMP ANGLE	M
40°	88-1/2
45°	79
50°	71-3/4

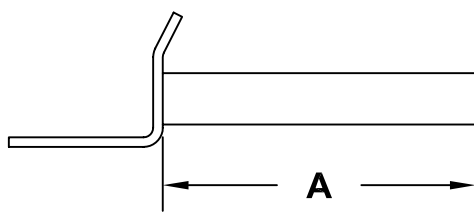
II A. STANDARD HOIST MOUNTING INSTRUCTIONS

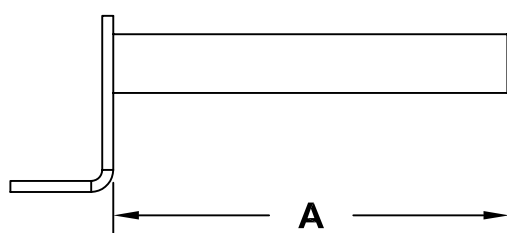
1. Moving the hoist along the truck frame forward or rearward will affect the hoist's performance. A forward movement will reduce the dump angle and increase capacity. A backward movement will increase dump angle and decrease capacity.
2. The VC-416/516 Hoist is designed for 34" to 29.5" frame widths. 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 pages 12 thru 16. ▲

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 Pivot Assy. 520563		
Frame Width	Dim A.	
34	12-1/4"*	
31.3	10-7/8"	
29.5	10"	

Upper Lift Shaft Assy. 520562		
Frame Width	Dim A.	
34	13-1/2"*	
31.3	12-1/2"	
29.5	11-5/8"	

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.

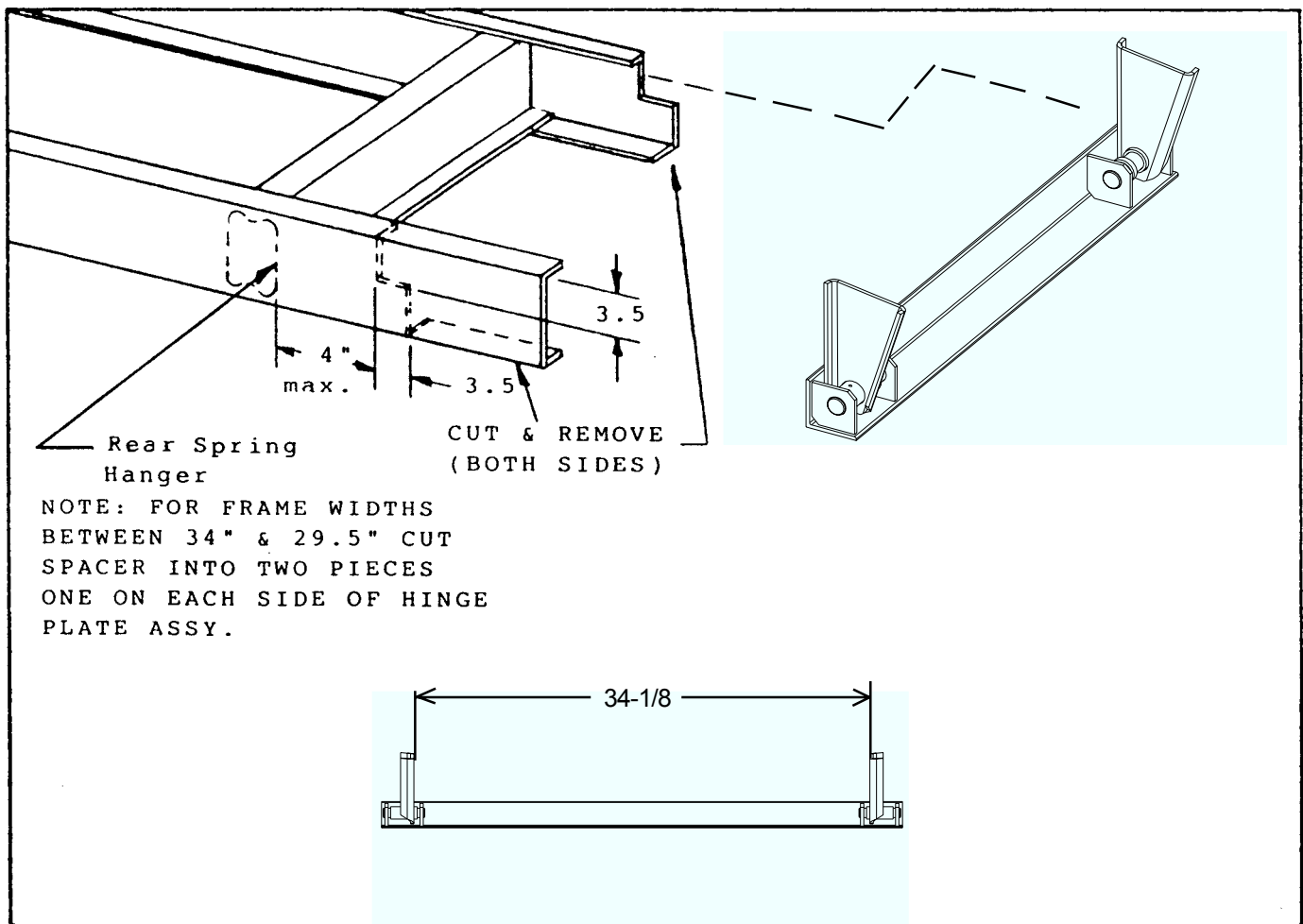


FIGURE 2 - FRAME MODIFICATION AND REAR HINGE ATTACHMENT



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

5-24-01A

SUPERCEDES

7-14-98

SECTION

H200

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. clamed to the mounting angles (3-1/2x3-1/2x5/16-10" 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.

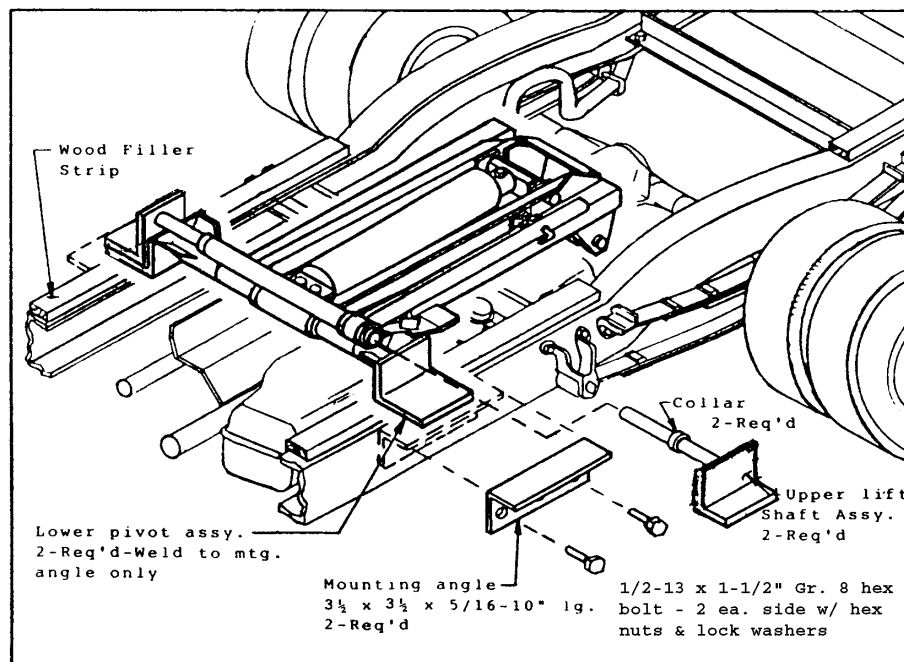


Figure 3 Mounting Angle/Lower Pivot Assembly

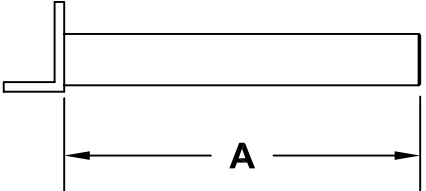
II B.

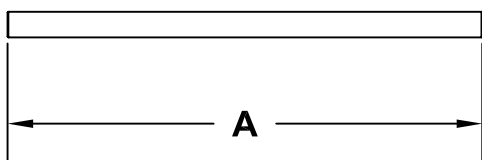
SUBFRAME HOIST MOUNTING INSTRUCTIONS

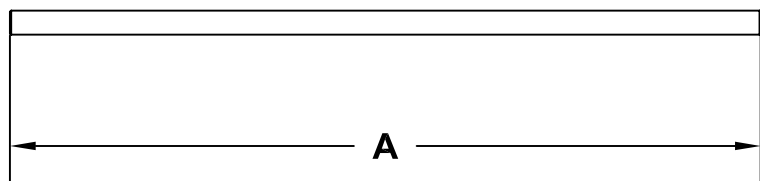
- Before mounting the VC-416/516 subframe hoist, the following parts will have to be shortened for truck frame widths smaller than 34". The minimum frame width is 29.5"

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"	37"* ▲	
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.

TITLE

INST INSTRUCTIONS

DATE

1-27-05B

SECTION

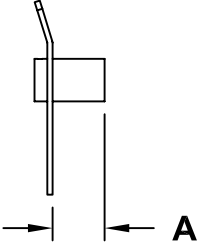
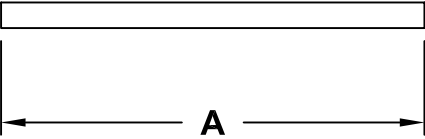
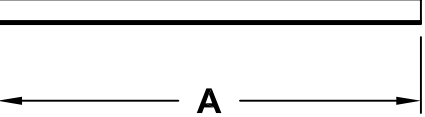
H200

VC 416/516

SUPERSEDES

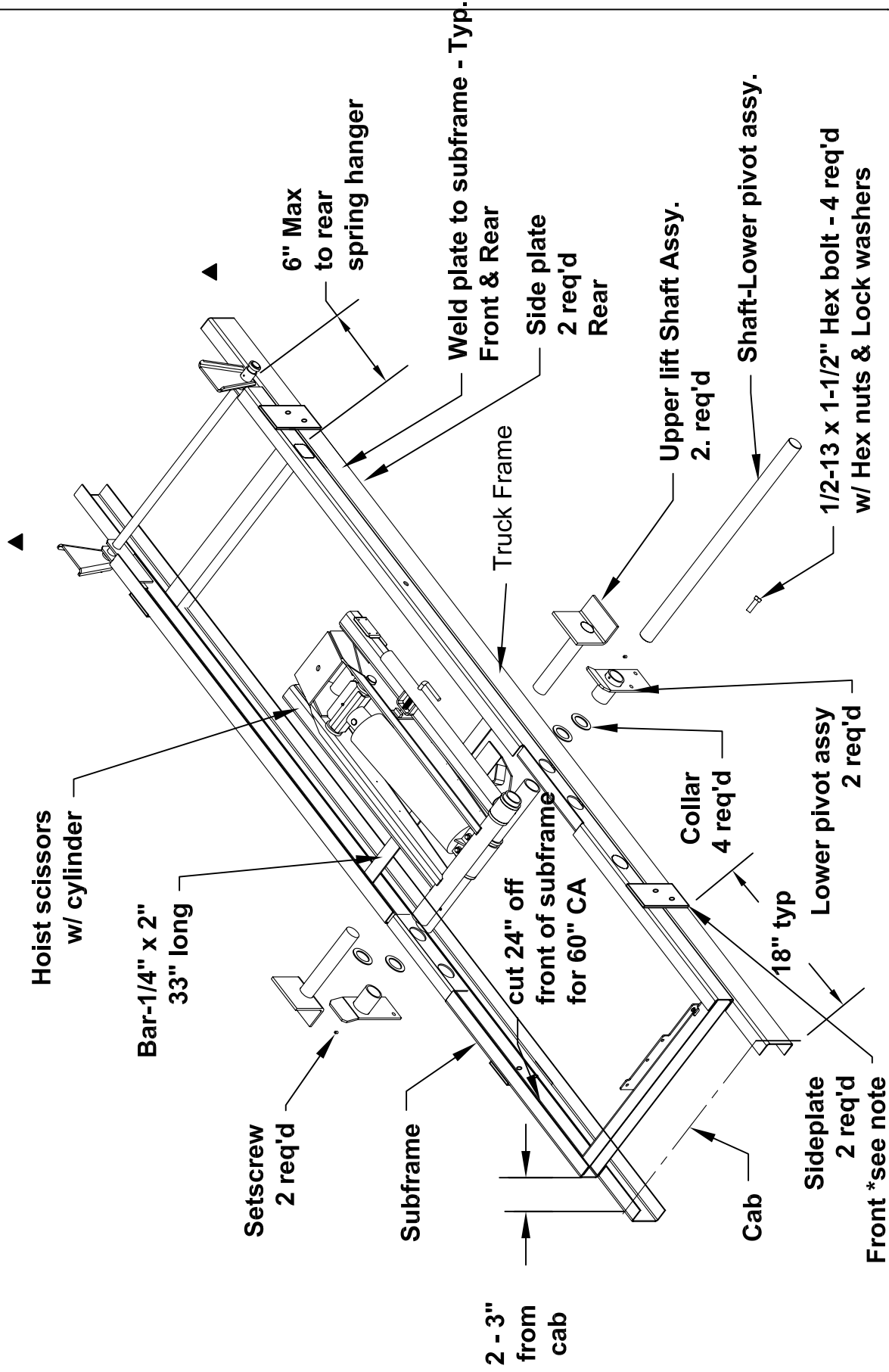
9-23-03A

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.
- c. See Dwg. 416086.
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. 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. The hoist will have to be shifted forward or rearward to avoid the gas filler tube.
3. a.

***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	

VC 416/516

- 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

DATE

9-23-03B

SUPERCEDES

10-24-02A

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H200

416294

- 8.c. Weld the front and rear side plates to the right and left subframe described in steps 8a. and 8b.
9. 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. 416746.



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

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SECTION

H200

416295

ATTACHING 620129 CABLE TO 620131 / 2 HANDLE

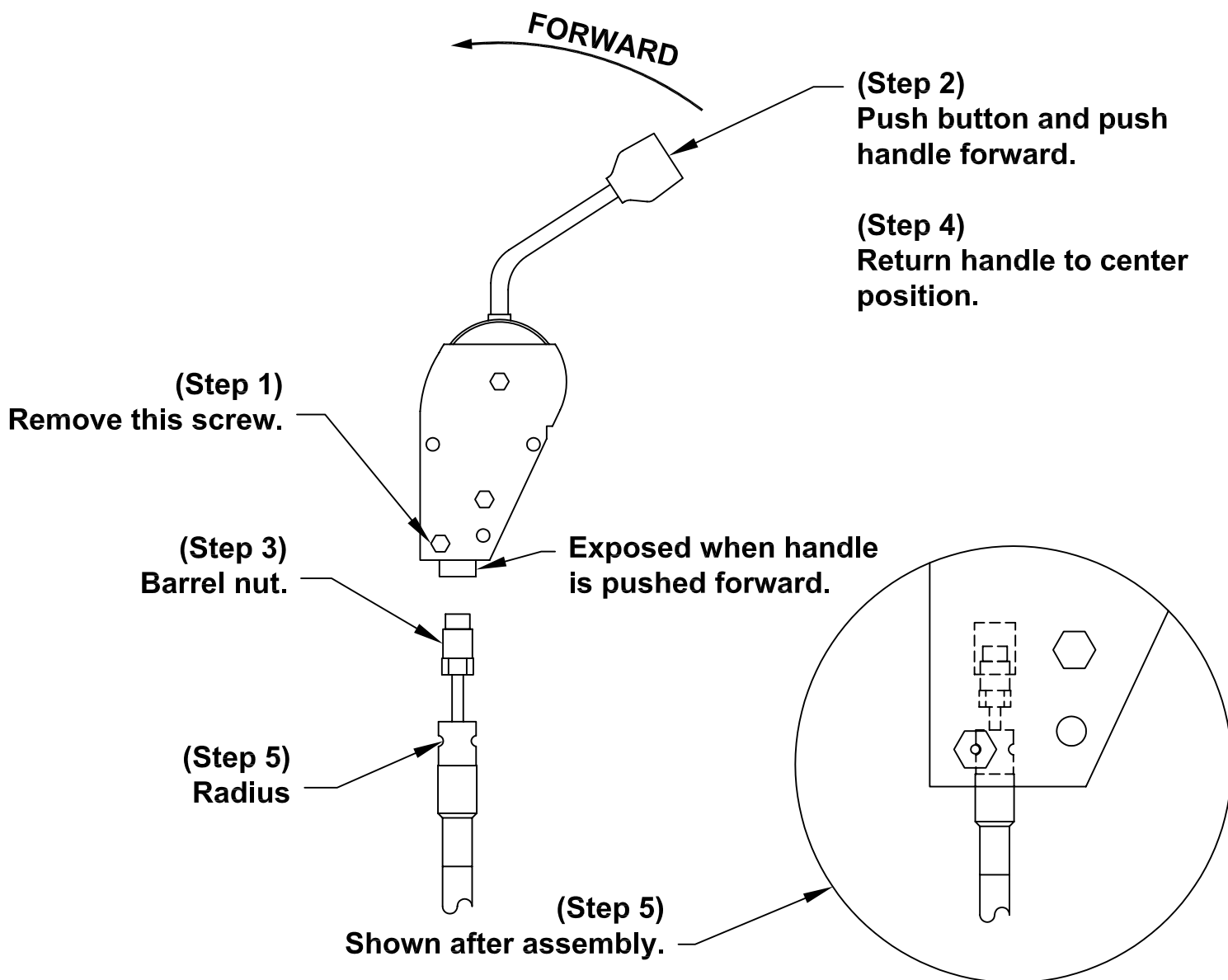
Step 1. Remove lowest screw & nut.

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 position.

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.



MANUFACTURING, INC.

TITLE

CABLE / HANDLE ASSEMBLY

PTO PUMP CABLE

DATE

9-17-04

SUPERSEDES

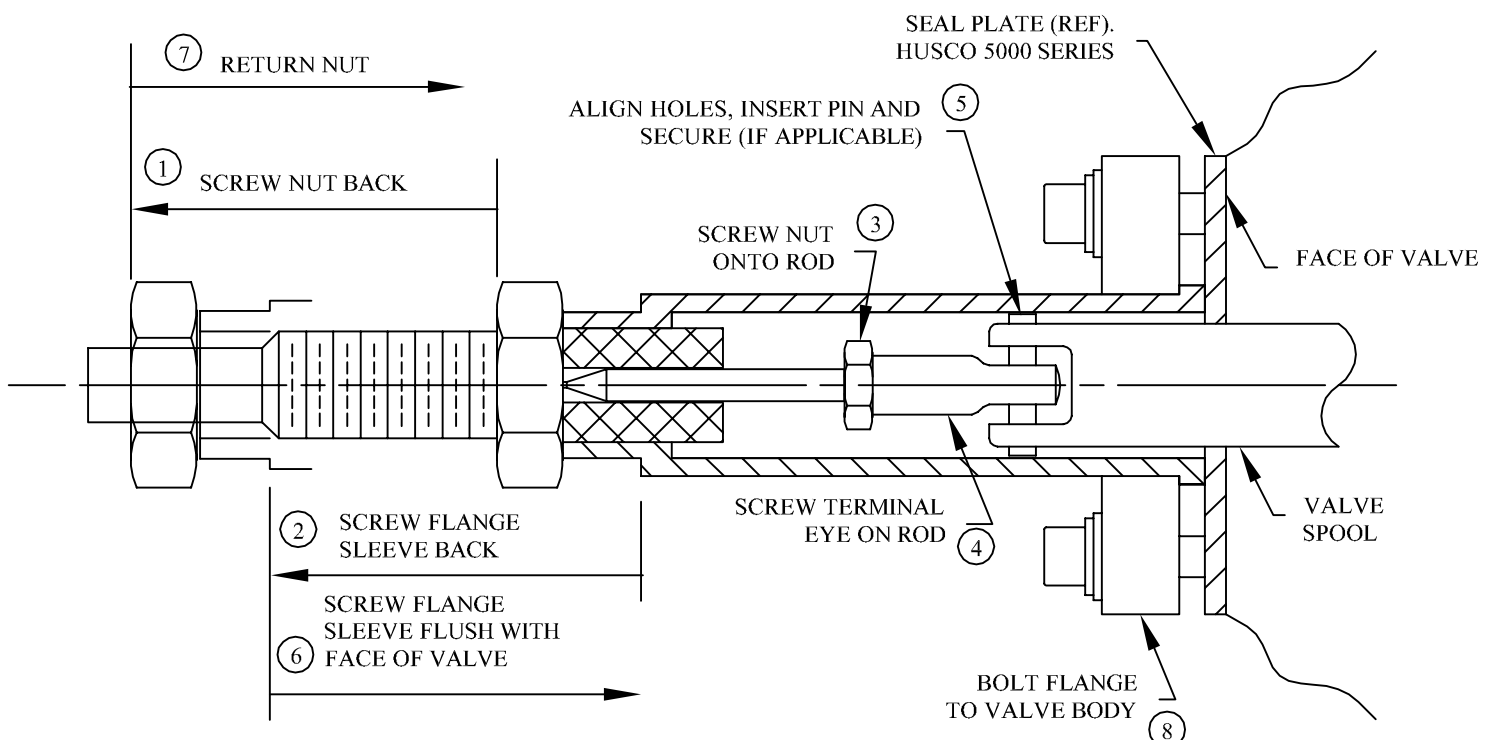
-

SECTION

-

620246

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



MANUFACTURING, INC.

TITLE

PTO PUMP CABLE INSTALL

VC416 - 6628

DATE

5-11-04

SUPERSEDES

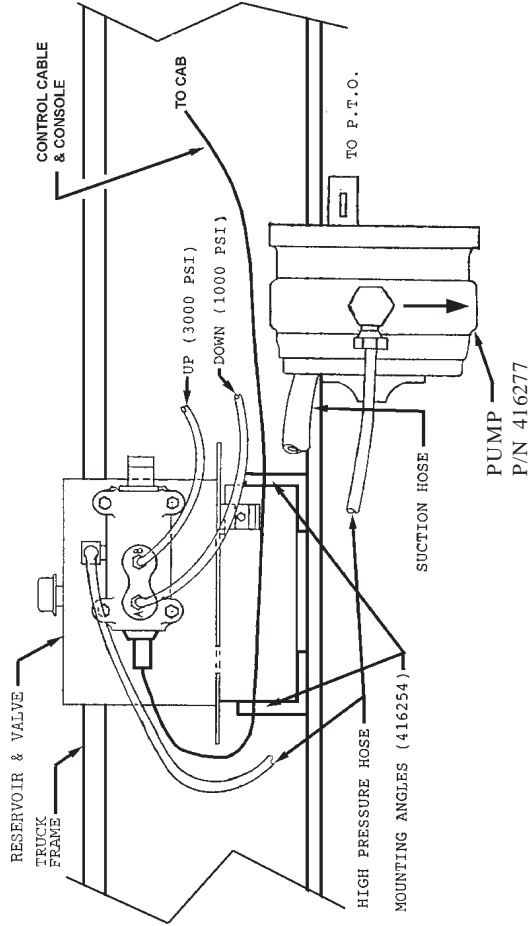
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SECTION

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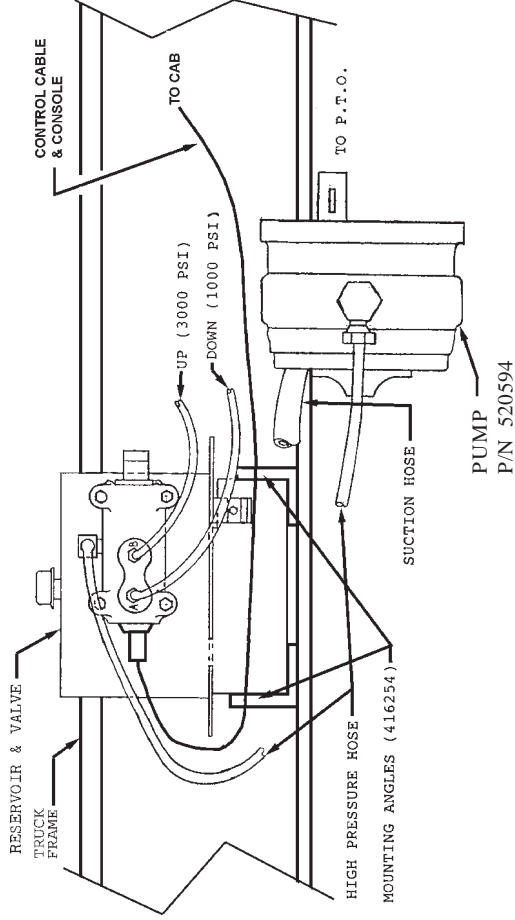
416755

DIRECTIONAL PUMP CONFIGURATION FOR VC416 - VC620



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

BI-ROTATIONAL PUMP CONFIGURATION FOR VC628 & UP



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

Model	VC416	VC516	VC520	VC620	VC628	VC5520	VC6620	VC6628
Control Cable & Console	620125 - Curved 620124 - Straight							
Up Hose	416151			520619			(2) 520619	
Down Hose		416152			628043	(2) 416152	(2) 628043	
High Pressure Hose				416152				
Suction Hose		416079				520088F		
Pump/Valve/Tank		620011 (9 QUART)				662077 (21 QUART)		
Pump (Only)		416277				520594		
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			

VENCO MANUFACTURING, INC.

TITLE
SPLIT PUMP

VC 416/516, VC 520 - 6628

SECTION

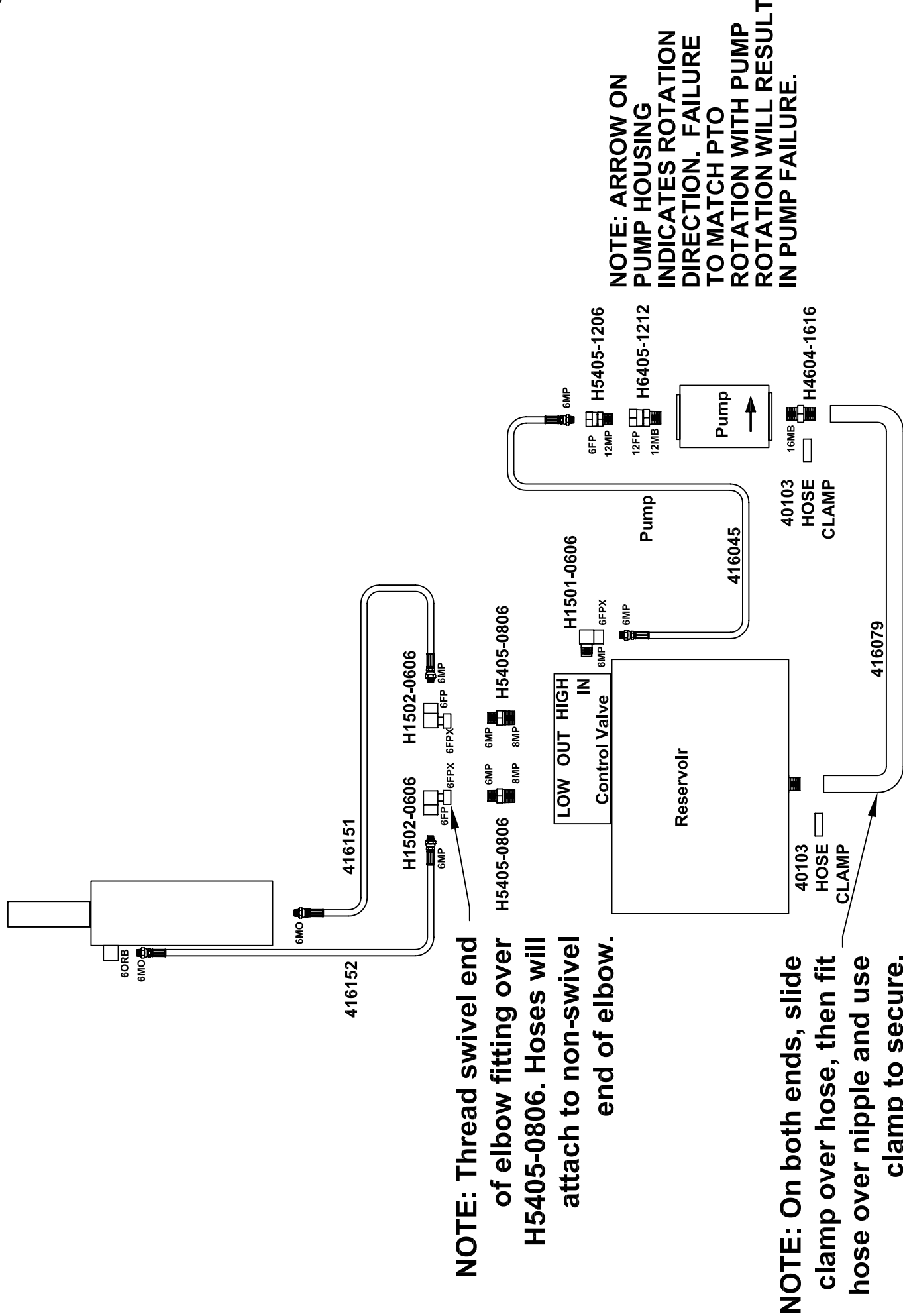
H200


DATE

5-22-06

SUPERCEDES

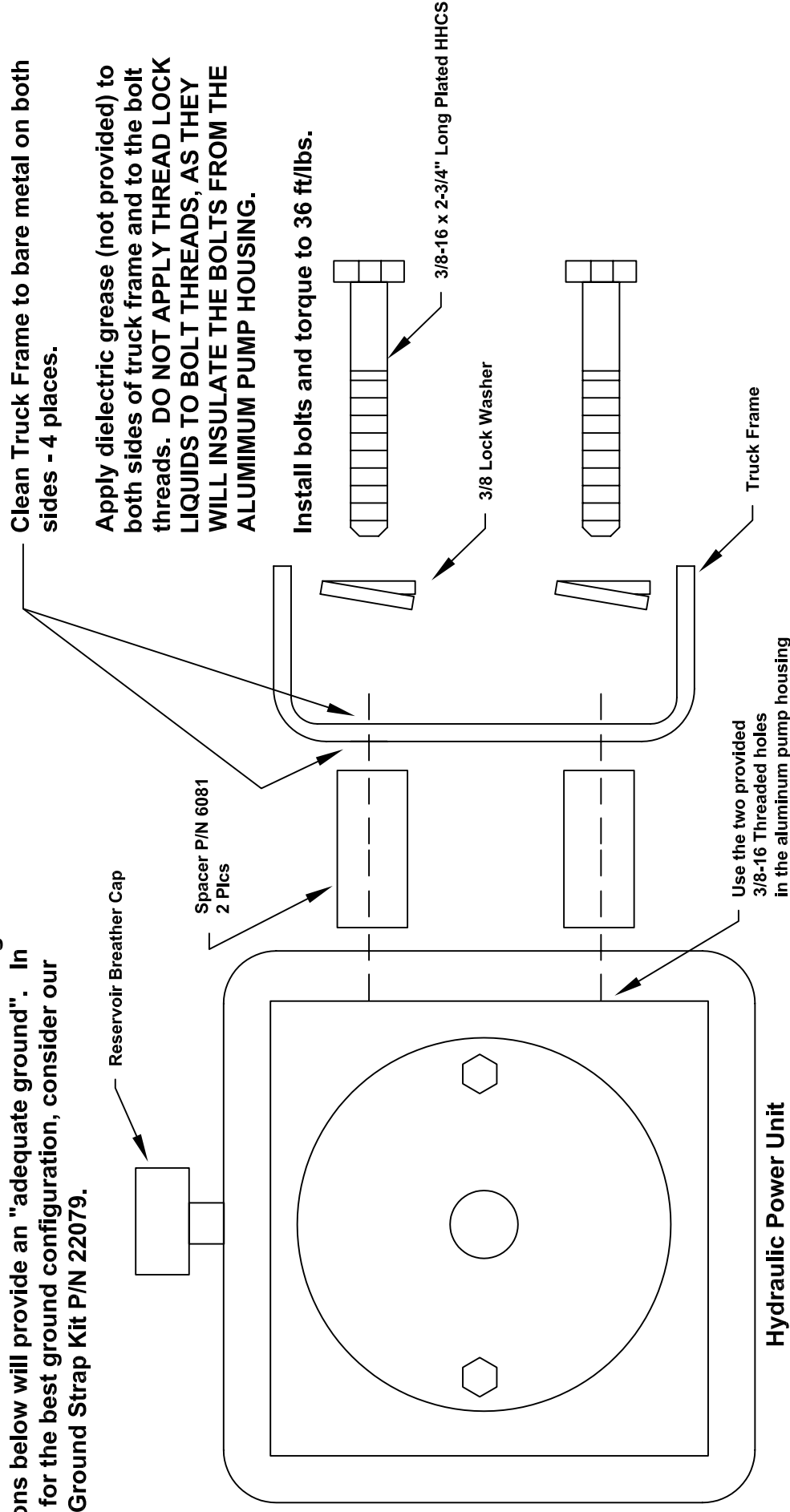
416763



 VENCO MANUFACTURING, INC.	TITLE SPDG HOSE CONNECTION DIAGRAM	DATE 5-22-06	SECTION -
	VC416, VC516	SUPERSEDES -	416764

Proper Grounding of Hydraulic Power Units - IMPORTANT!!!

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



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". Attach 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 battery 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.

TITLE

INST INSTRUCTIONS

VC416/516

DATE

3-1-12C

SUPERCEDES

10-13-04B

SECTION

H200

416298

▲ TRUCK FRAME

GROUNDING STRAP
#4 GAGE BLACK

TO BATTERY
POST

C1 PORT

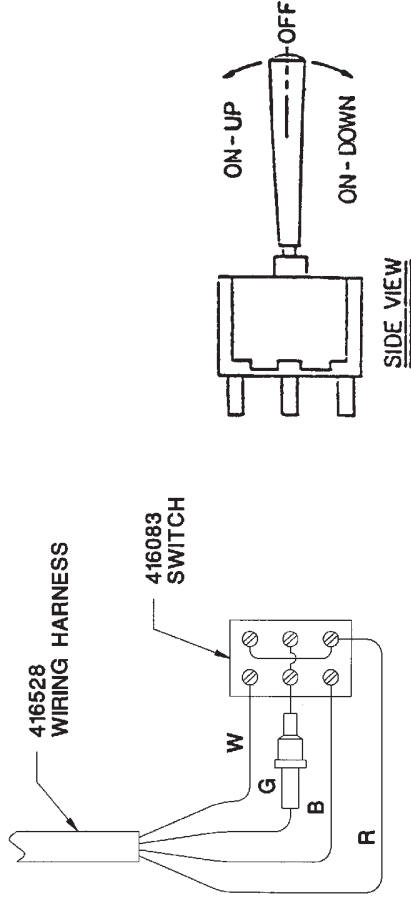
TO CAB

C2 PORT

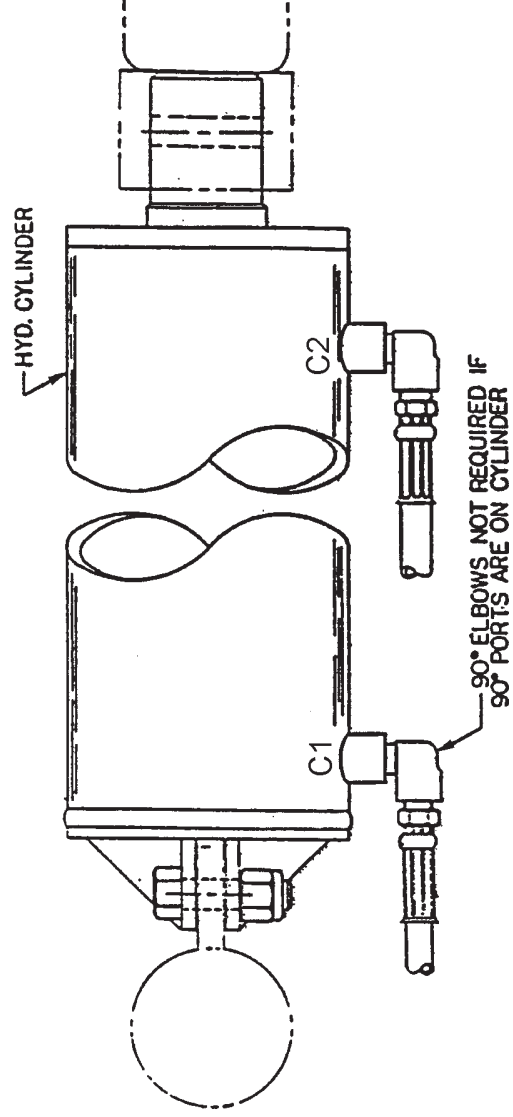
416081M

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

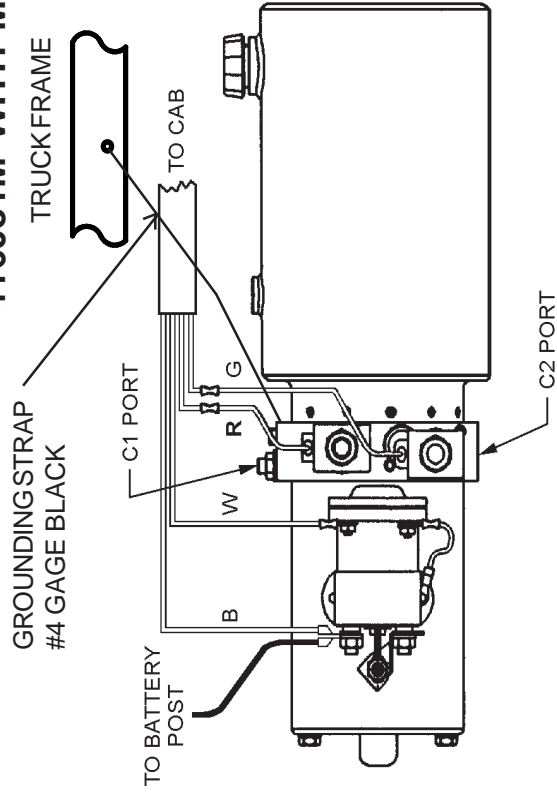
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12-1-04D

SECTION
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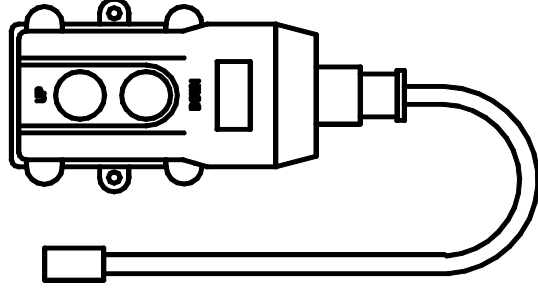
SUPERCEDES
2-15-99C

416306

416081M WITH MONARCH PUSH BUTTON CONTROL

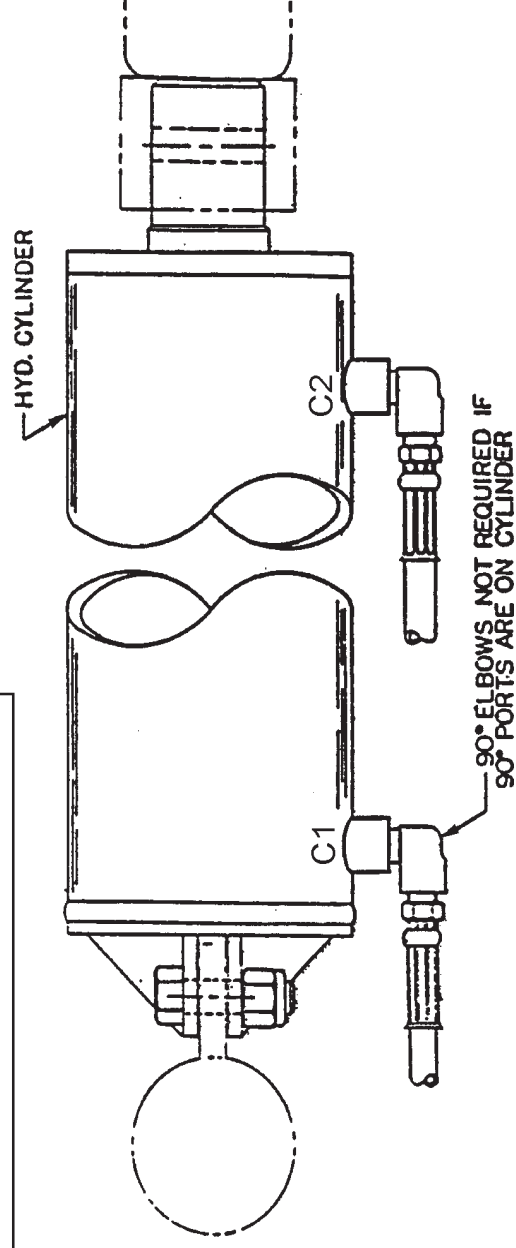


ELECTRICAL
W - WHITE WIRE
B - BLACK WIRE
G - GREEN WIRE
R - RED WIRE



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 4-20-05F

SECTION -

SUPERCEDES 12-1-04E

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

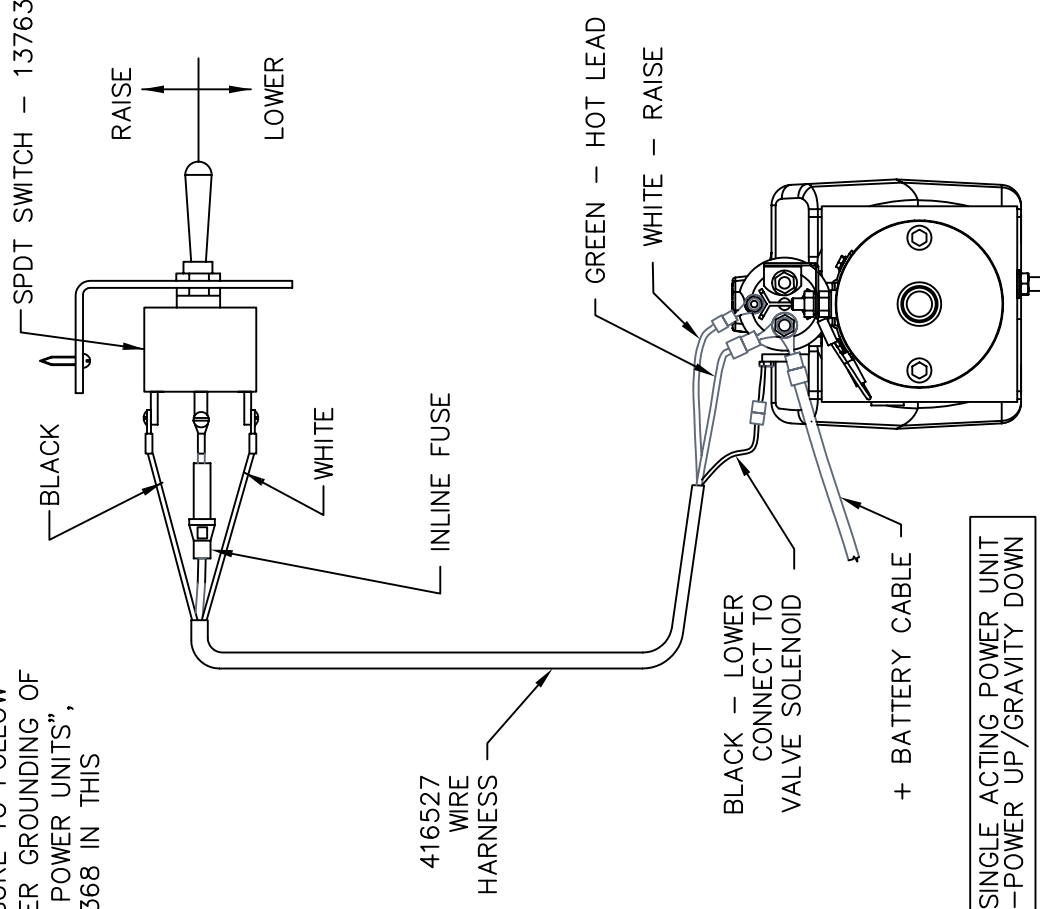
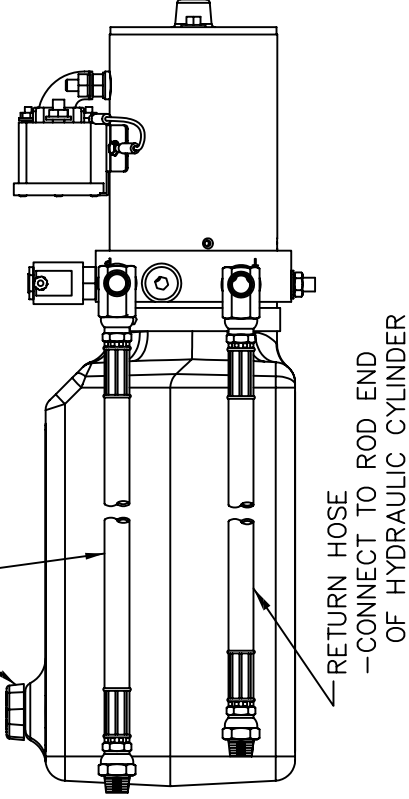
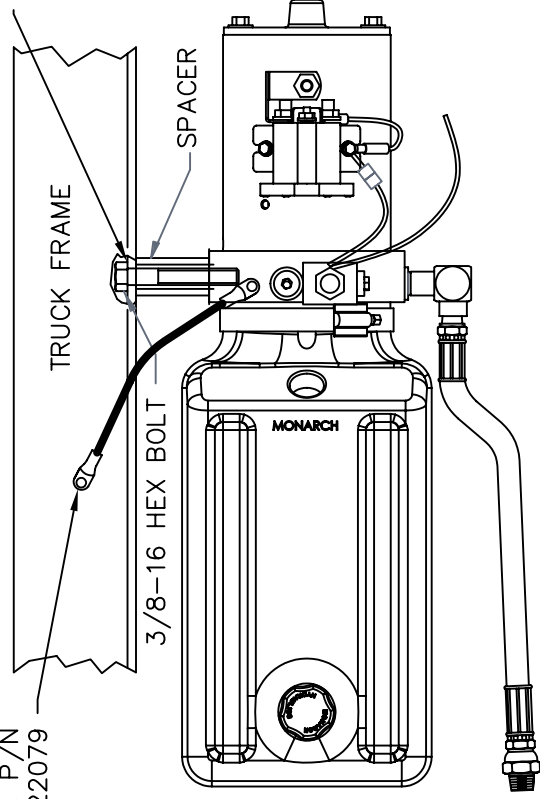
H200

416299

40058M

▲ OPTIONAL
GROUND STRAP
ASSY. P/N
22079

NOTE: BE SURE TO FOLLOW
THE "PROPER GROUNDING OF
HYDRAULIC POWER UNITS",
DRAWING 6368 IN THIS
MANUAL.



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



TITLE
40058M / 40058MHD POWER UNIT

DATE
6-6-05A

SECTION
H200

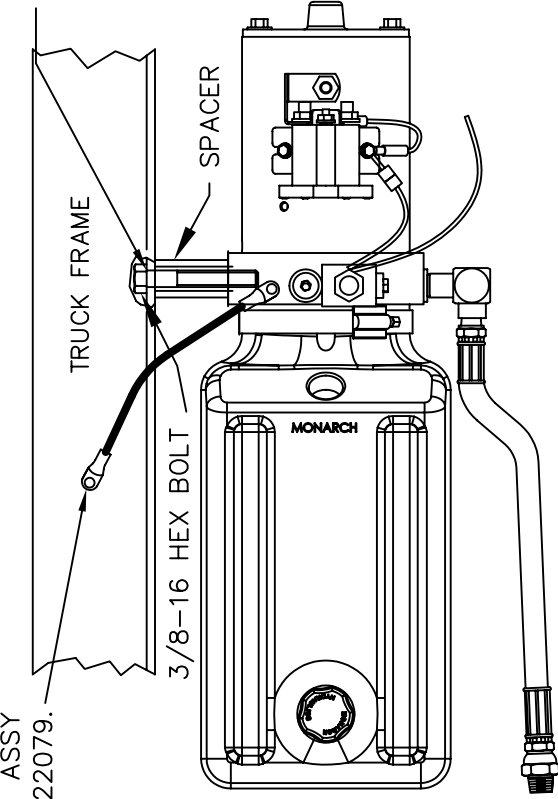
VC416/516/520/620/628

SUPERSEDES
12-2-04

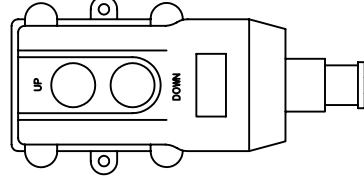
416810

40058M WITH MONARCH PUSH BUTTON CONTROL

▲ OPTIONAL
GROUNDING
STRAP ASSY
P/N 22079.



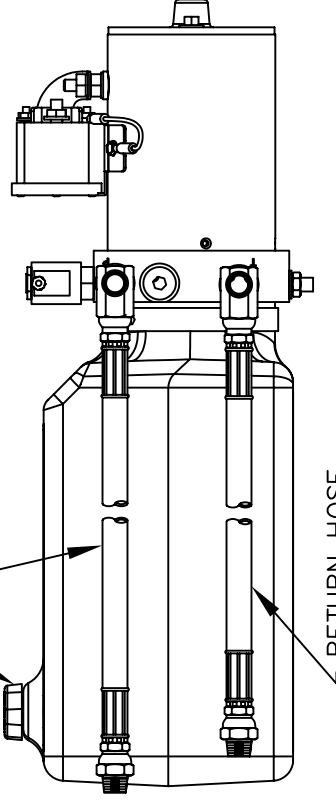
▲ NOTE: BE SURE TO FOLLOW
THE "PROPER GROUNDING
OF HYDRAULIC POWER
UNITS", DRAWING # 6368,
IN THIS MANUAL.



TOP VIEW

BREATHER/FILL - REF

PRESSURE HOSE - CONNECT TO BASE END
OF HYDRAULIC CYLINDER

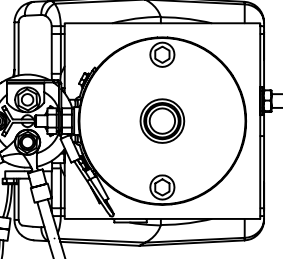


SIDE VIEW

BLACK - HOT LEAD
WHITE - RAISE HOIST

GREEN - LOWER HOIST
CONNECT TO
VALVE SOLENOID

+ BATTERY CABLE



SINGLE ACTING POWER UNIT
-POWER UP/GRAVITY DOWN

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

HOIST MODEL(S)

ES/ED Hyd Pwr Unit Part Number	VP/VC6	TRL313	VC416, TRL416	VC516, TRL516	VC520, TRL520	VC620, TRL620	VC628, TRL628
Reservoir Capacity (Quarts)	6426 / 6425 3.4 / 3.4	40058M / 416081M 4.6 / 3.4	40058M / 416081M 4.6 / 3.4	40058M / 416081M 4.6 / 3.4	40058M / 416081M 4.6 / 3.4	40058MHD / 416081M 5.4 / 3.4	40058MHD / 416081M 5.4 / 3.4
Total Hydraulic Fluid Required (Quarts)	4	4	6	8	9	12	15

Step 1 Attach base-end hose to cylinder. Do NOT attach the Rod-end hose at this time.

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 amount (Quarts) of hydraulic fluid.

2b Raise hoist one-quarter of the way (approximately 12° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.

2c Raise hoist one-half of the way (approximately 22-25° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.

2d Raise hoist three-quarters of the way (approximately 36° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.

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.

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)

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 hinge 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. manufacturer's instructions.

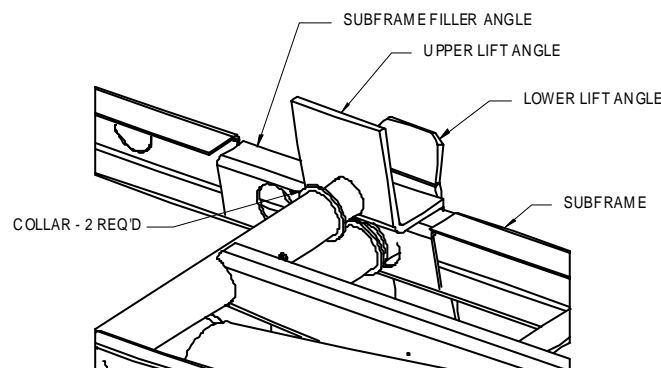


Figure 9



MANUFACTURING, INC.

TITLE
INST INSTRUCTIONS

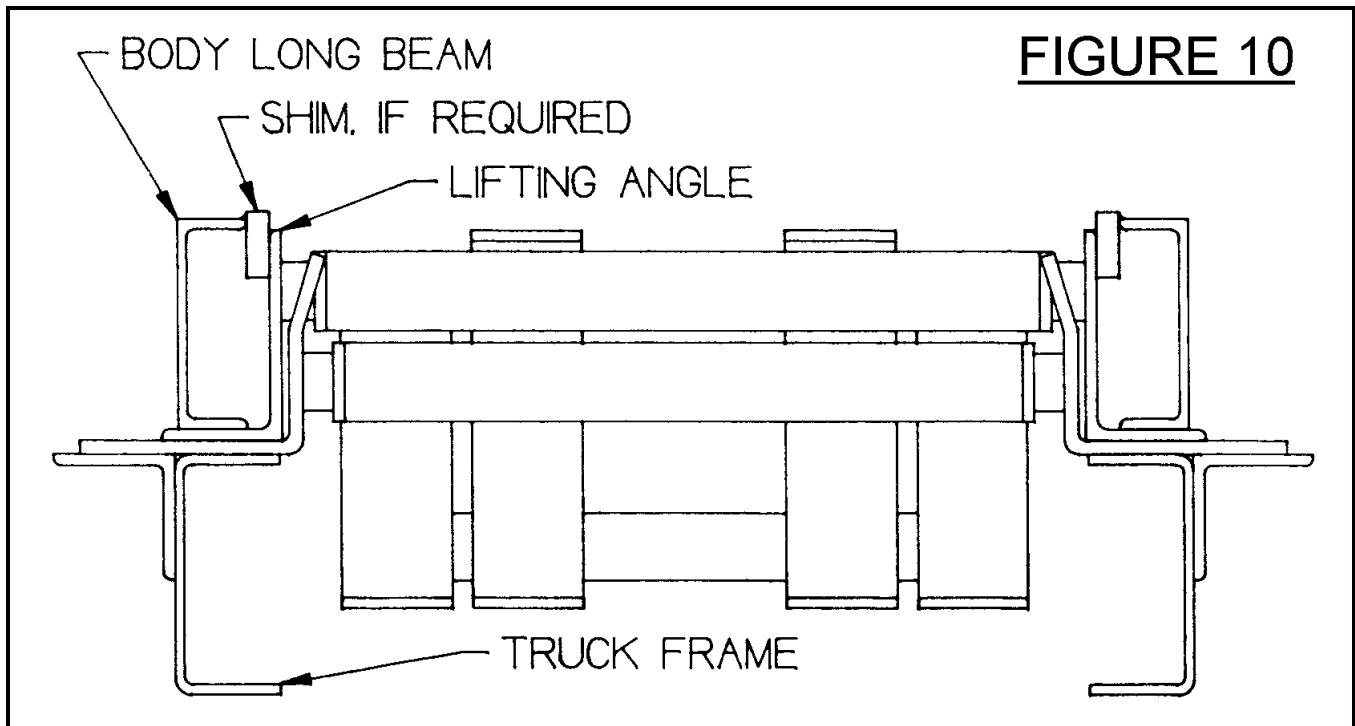
VC 416/516

DATE
2-24-05A

SUPERCEDES
7-14-03

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

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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 unit will have included as a standard item, a body prop (safety strut).

CAUTION

Read operation of Body Prop (safety strut) and caution decals before operating hoist.

1. The body prop(s) 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 a '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.
3. Construction truck bodies - two (2) body props are required.

WARNING

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

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

DANGER

BODY PROP OPERATING INSTRUCTIONS

FAILURE TO OPERATE SAFELY WILL RESULT IN SERIOUS INJURY OR DEATH!

VEHICLE MUST BE ON LEVEL GROUND.

DO NOT USE BODY PROP TO SUPPORT A 'LOADED' BODY.

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

TO ENGAGE: 1. RAISE BODY TO SUFFICIENT HEIGHT TO ALLOW BODY PROP TO BE EXTENDED AND POSITIONED.

2. TURN BODY PROP HANDLE UNTIL HANDLE MAKES CONTACT WITH MECHANICAL STOP.

3. LOWER BODY CAREFULLY UNTIL THE BODY PROP CONTACTS THE UPPER PIVOT TUBE.

TO STOW: 1. RAISE BODY TO SUFFICIENT HEIGHT TO DISENGAGE BODY PROP.

2. TURN BODY PROP HANDLE TO LOWER AND STOW BODY PROP.

3. LOWER BODY TO CHASSIS RAILS.



MANUFACTURING, INC.

TITLE

INST INSTRUCTIONS

VC 416/516

DATE

11-13-08A

SUPERCEDES

7-15-98

SECTION

H200

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

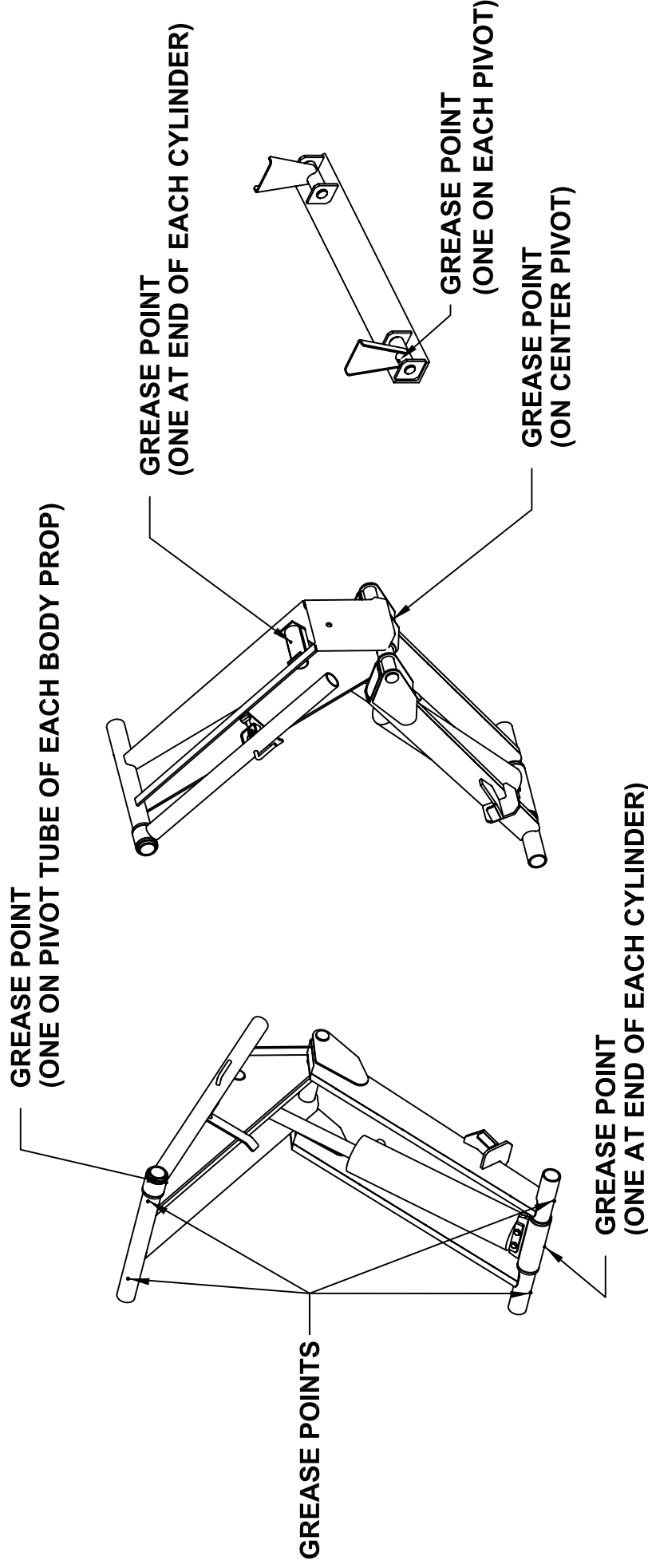
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SECTION


H200

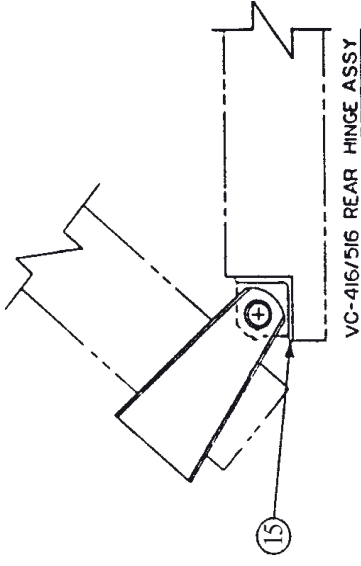
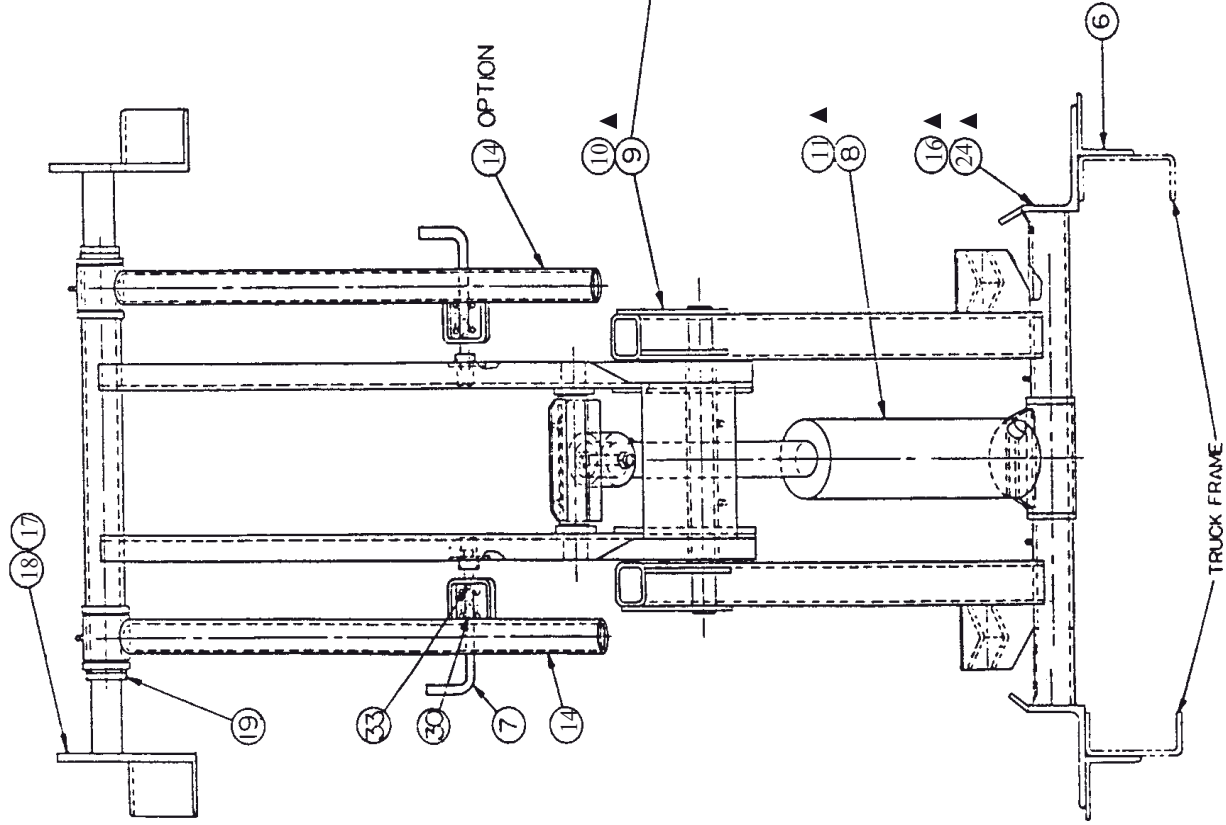
416304

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.

 Venco [®] MANUFACTURING, INC.	TITLE GREASE POINTS FOR HOISTS	DATE 3-11-05A	SECTION -
	VC416/516/520/620/628/5520/6620/6628	SUPPERSEDES 9-4-02	520054



REPLACEMENT PARTS LIST REF 416731

VENCO MANUFACTURING, INC.

TITLE
REPLACEMENT PARTS

DATE
8-20-03A

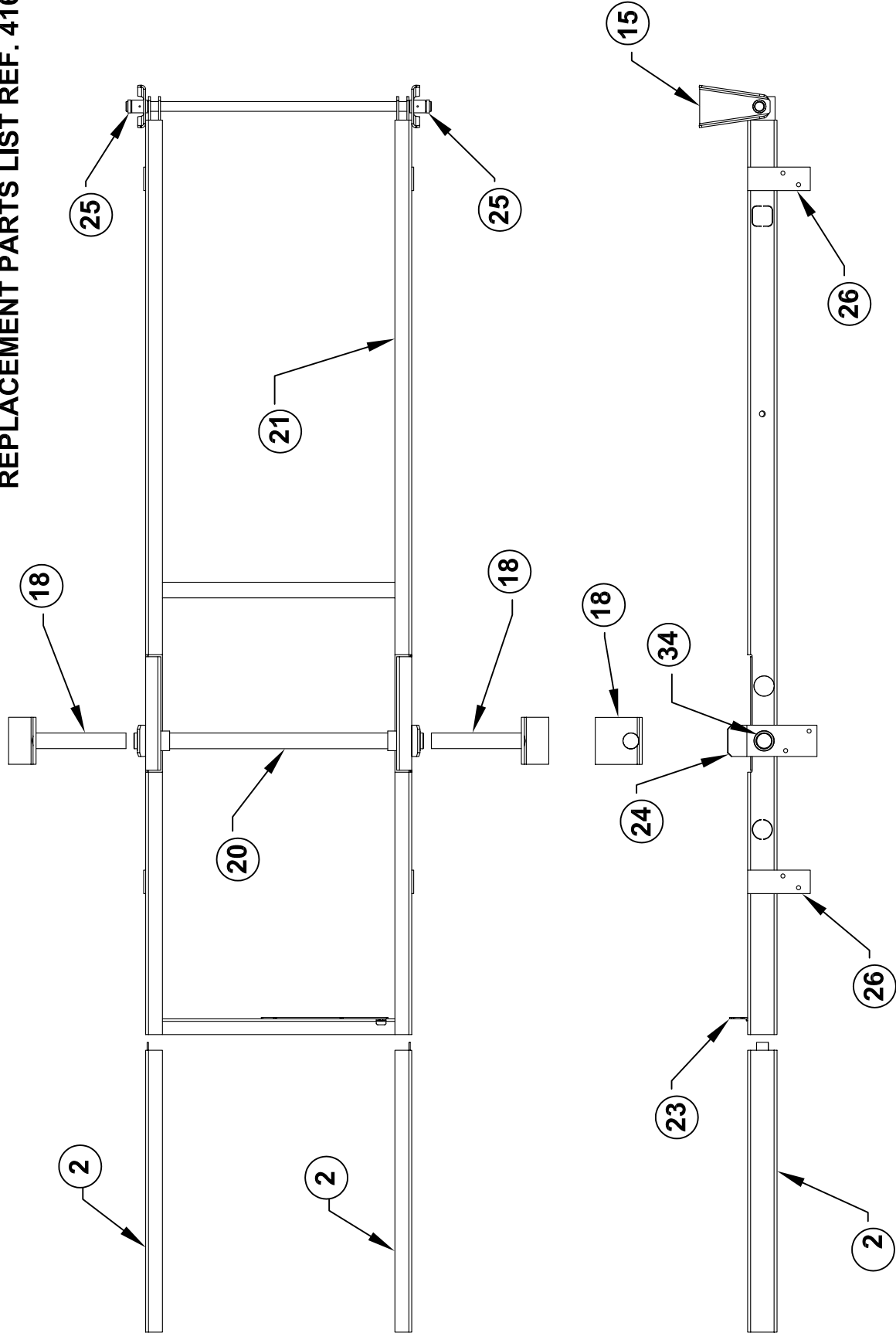
SECTION
-

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	- ▲	-	-	
5	- ▲	-	-	
6	520063	2	-	MOUNTING ANGLE
7	416068-1	1	1	LOCKING PIN
8	416900 ▲	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	516900 ▲	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	520563	-	2	LOWER PIVOT ASSEMBLY
17	520562	-	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



MANUFACTURING, INC.

TITLE
REPL. PARTS LIST

VC-416/516(SF)

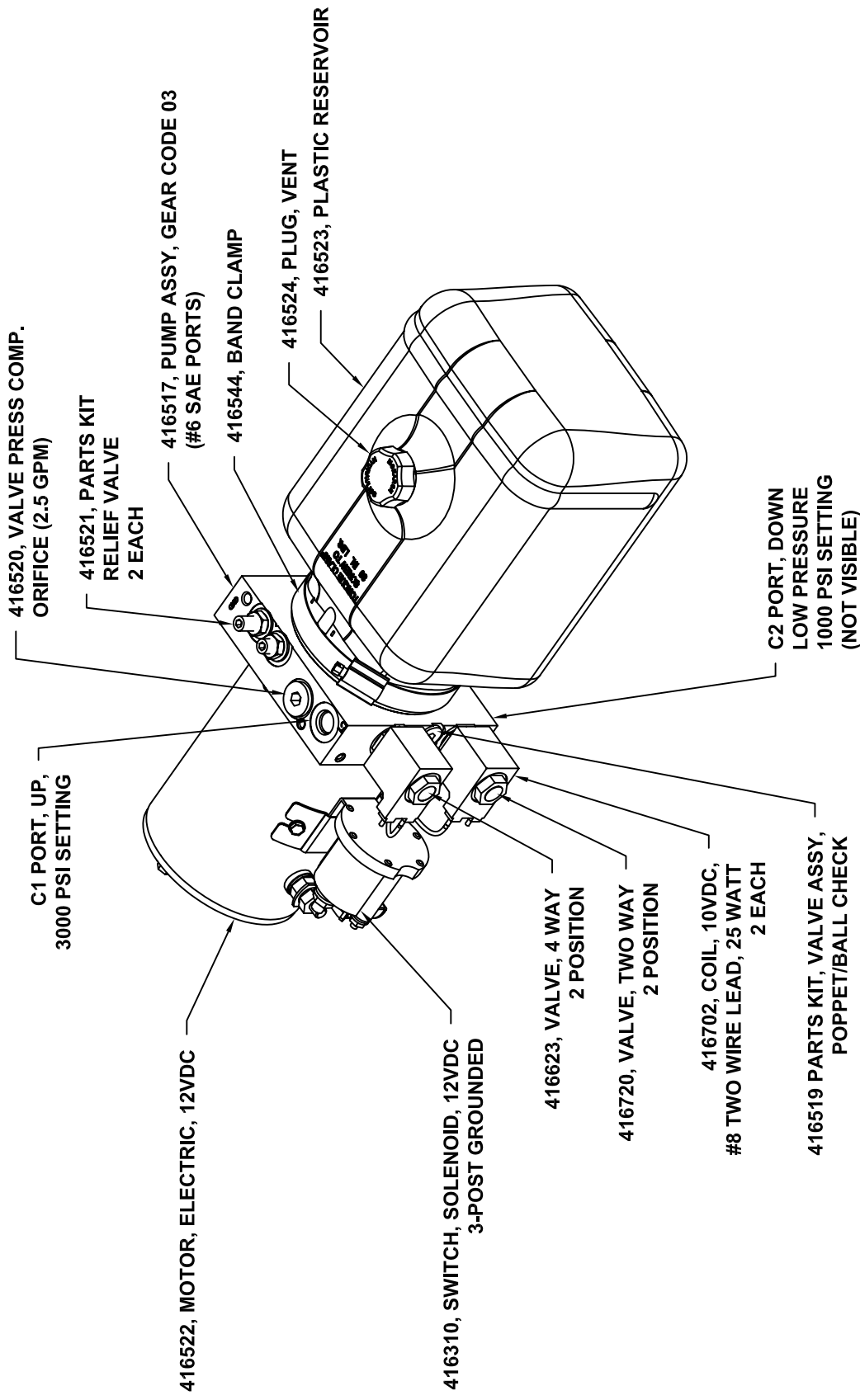
DATE
5-22-06D

SUPERCEDES
10-22-04C

SECTION

416731

REPLACEMENT PARTS 416081M



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



MANUFACTURING, INC.

TITLE

REPLACEMENT PARTS DRAWING

DATE

7-27-05D

SECTION

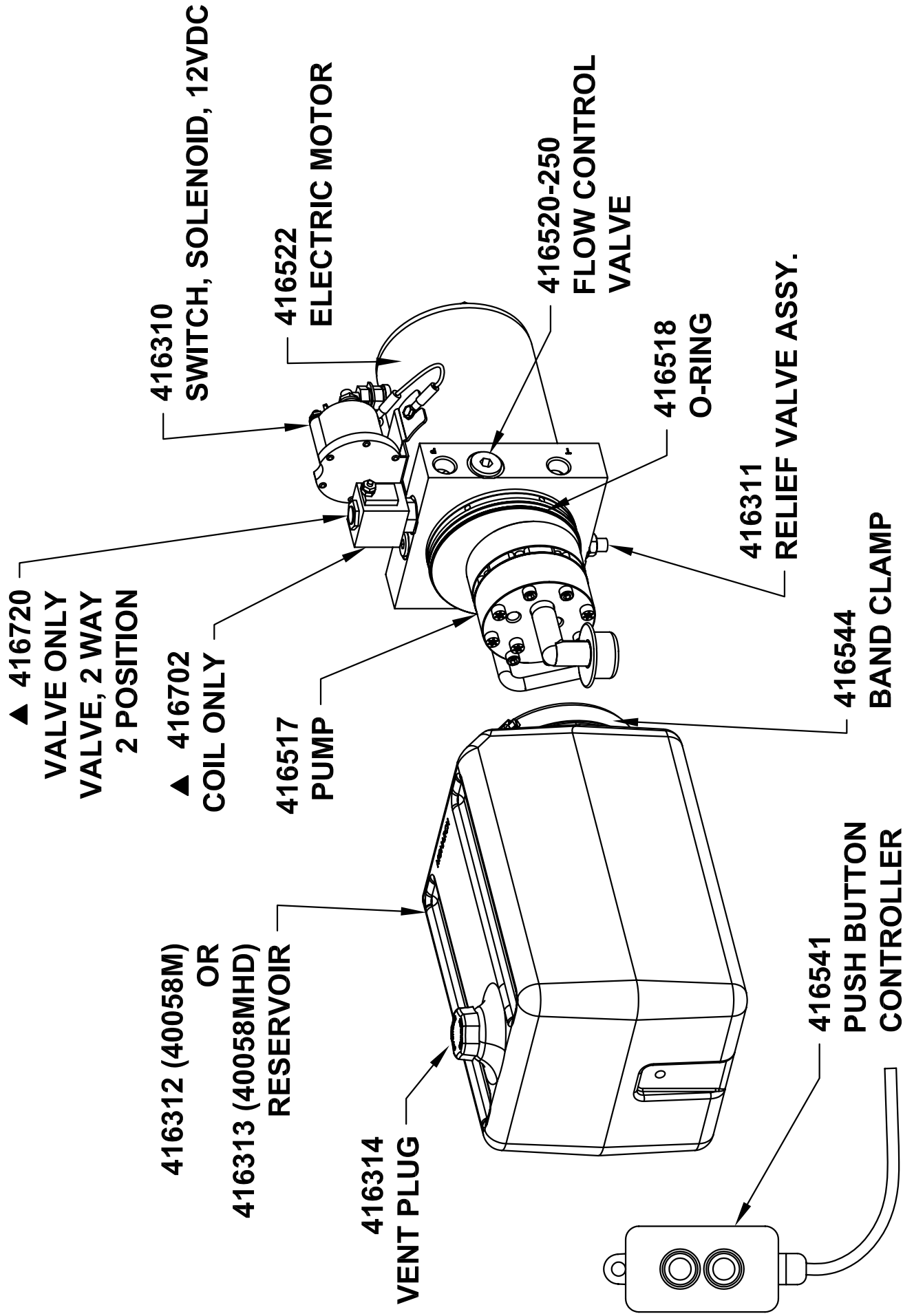
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SUPERSEDES

6-14-05C

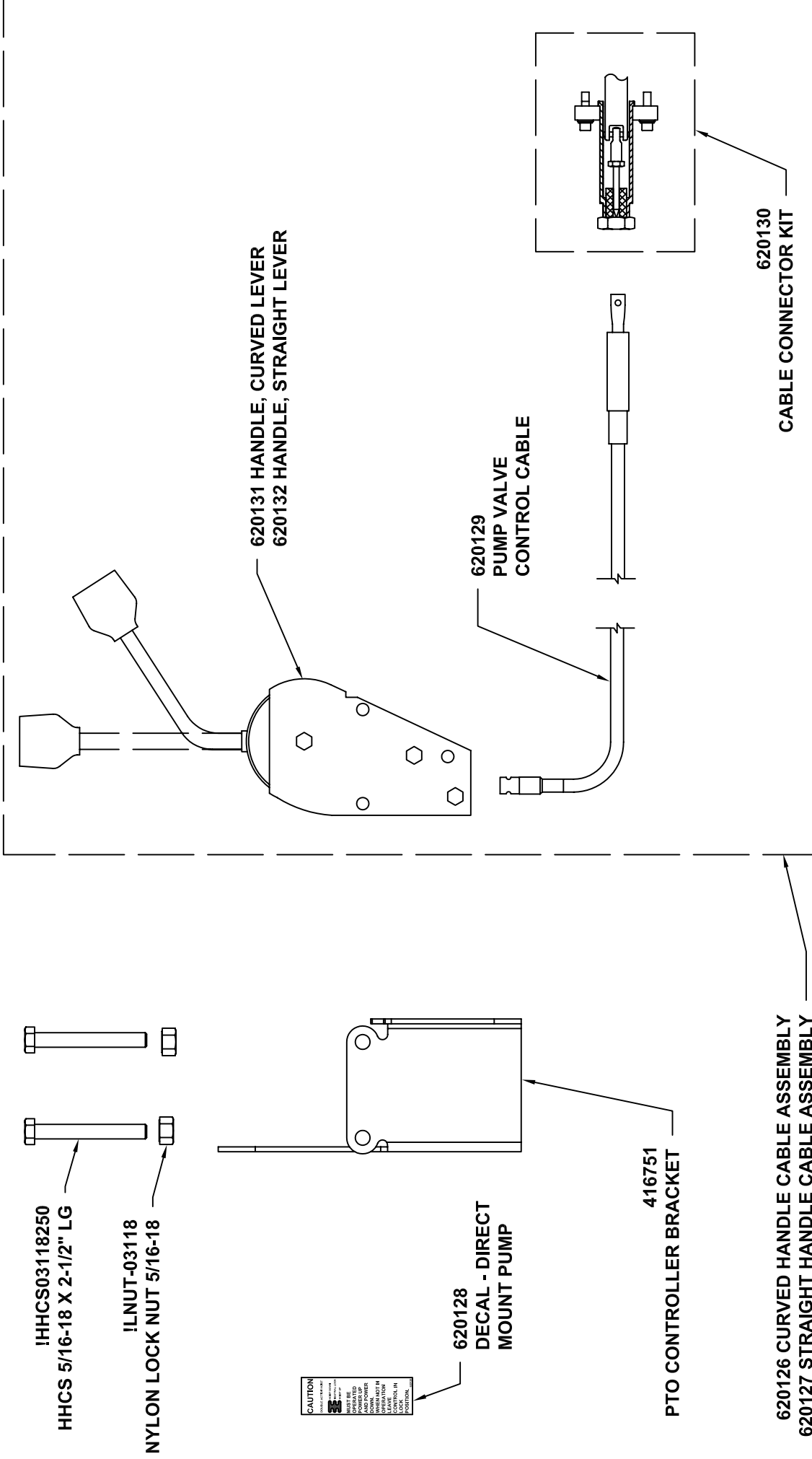
416081M POWER UNIT


416508



 VENCO MANUFACTURING, INC.	TITLE		PARTS LIST & DRAWING	
	DATE	SECTION	-	
	SUPERSEDES			
40058M & 40058MHD POWER UNITS		6-14-05B	4-20-05A	416308

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



 VENCO MANUFACTURING, INC.	TITLE	REPLACEMENT PARTS & DRAWING	
	SECTION	DATE	SUPERSEDES
	-	9-16-04	-
			620245



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. This 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.

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 products without the expressed written consent of the manufacturer. Reinstallation 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 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 Industries LLC.

VENCO VENTURO INDUSTRIES LLC

12110 BEST PLACE - CINCINNATI, OHIO 45241

513-772-8448

www.venturo.com