



VENCO®

HOISTS

TRL 520

INSTALLATION & OWNER'S MANUAL

Sold and Serviced by:

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TRL520 TRAILER HOIST 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.
6066	PLASTIC BAG	1 PC.



MANUFACTURING, INC.

TITLE
TABLE OF CONTENTS

TRL520

DATE
6-23-05

SUPERCEDES
-

SECTION
-

520110

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: 628821.
2. MUST HAVE 2" SPACE
SEE PAGE: 628821.
3. SUFFICIENT OVERHANG
SEE PAGE: ▲ 313801 - TRL313
416771 - TRL416
416772 - TRL516
520111 - TRL520
620021 - TRL620
628818 - TRL628
552021 - TRL5520
552022 - TRL6620
300811 - TRL6628



MANUFACTURING, INC.

TITLE

CAUTION NOTE

TRL313-6628

DATE

9-22-05A

SUPERCEDES

5-2-05

SECTION

-

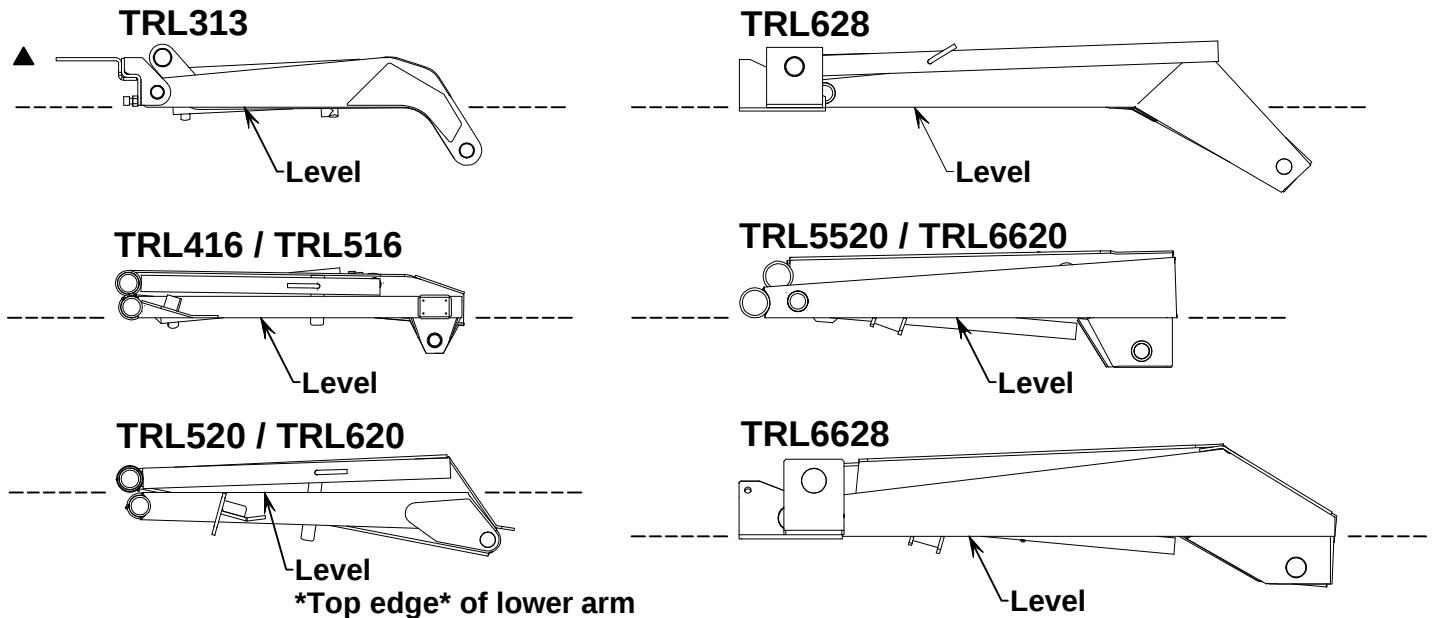
628819

IMPORTANT WARNING

*** All VENCO Trailer Hoists - TRL313 thru TRL6628 ***

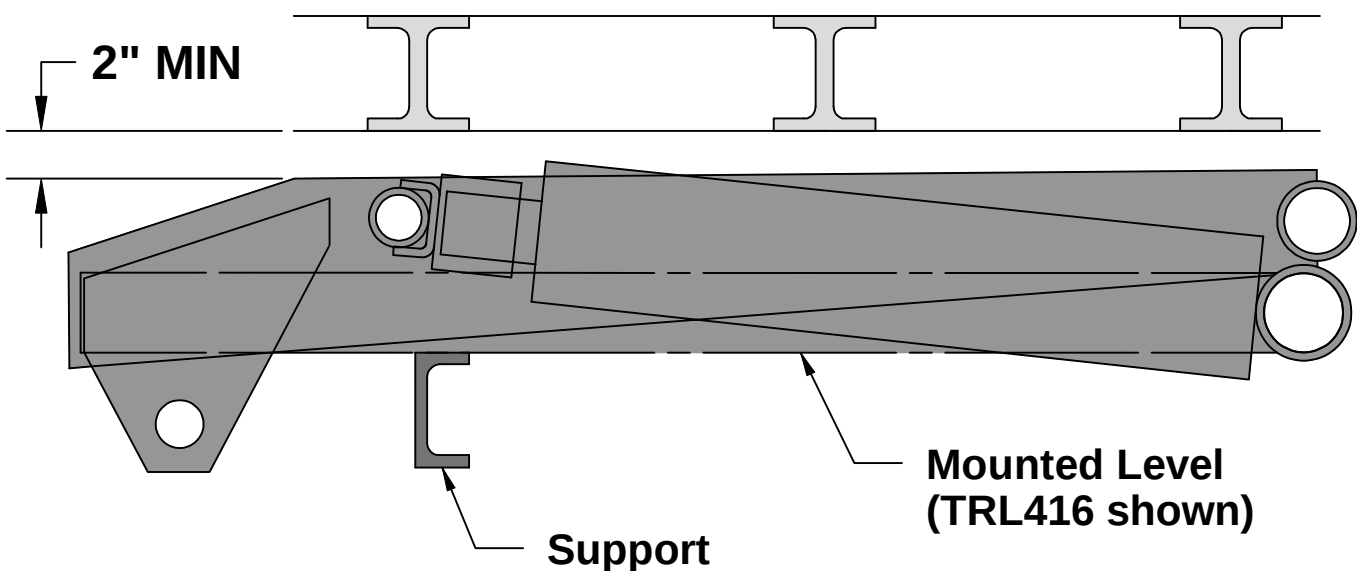
1

When installing the hoist, be sure to keep the hoist on a horizontal plane - LEVEL - with the trailer frame.



2

A minimum clearance of 2" is required between the hoist (upper arm) and the body cross members in order to prevent a mechanical lockout.



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

IMPORTANT WARNING

VENCO HOISTS

DATE

01-14-13C

SUPERSEDES

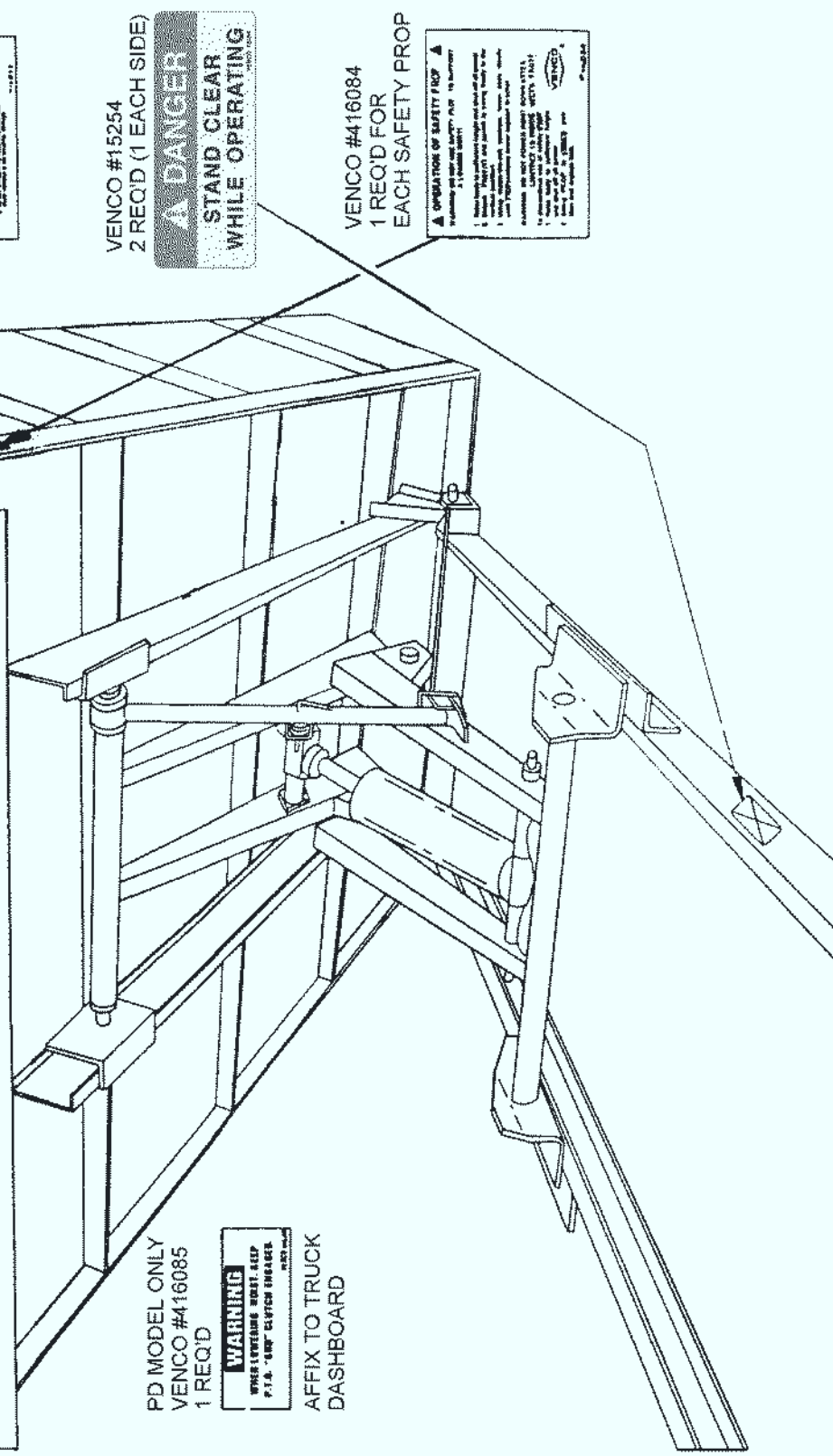
04-13-10B

SECTION

H150

628821

Included with your Venco Hoist are various warning, danger, and caution decals. These decals must be placed in prominent locations so they are easily seen and readily identifiable; this illustration provides the recommended decal locations.



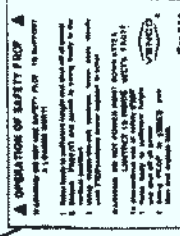
VENCO #416052
2 REQ'D (1 EACH SIDE)



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

	TITLE		DECAL LOCATIONS	SECTION
	VC416-6628, TRL416-6628		DATE 9-22-09D SUPERCEDES 6-16-05C	H100 416128

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

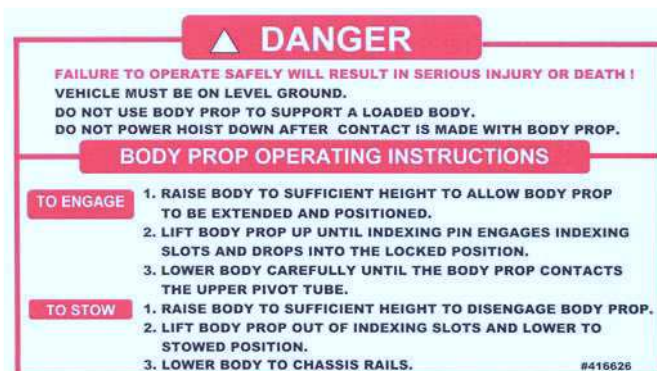
APPLICATION: VC416,516 & 520 MODELS ONLY

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

VENCO HOIST MODEL TRL520

**CAPACITIES ARE BASED ON WATER LEVELS AND UNDIMINISHING LOADS.
DUE TO VARIATIONS IN EQUIPMENT, THE DATA PROVIDED ON THIS
PAGE IS TO BE USED AS A GUIDELINE ONLY.**

DUMP CLASS: 40

CONVERSION CLASS: D

WEIGHT: 370 LBS.

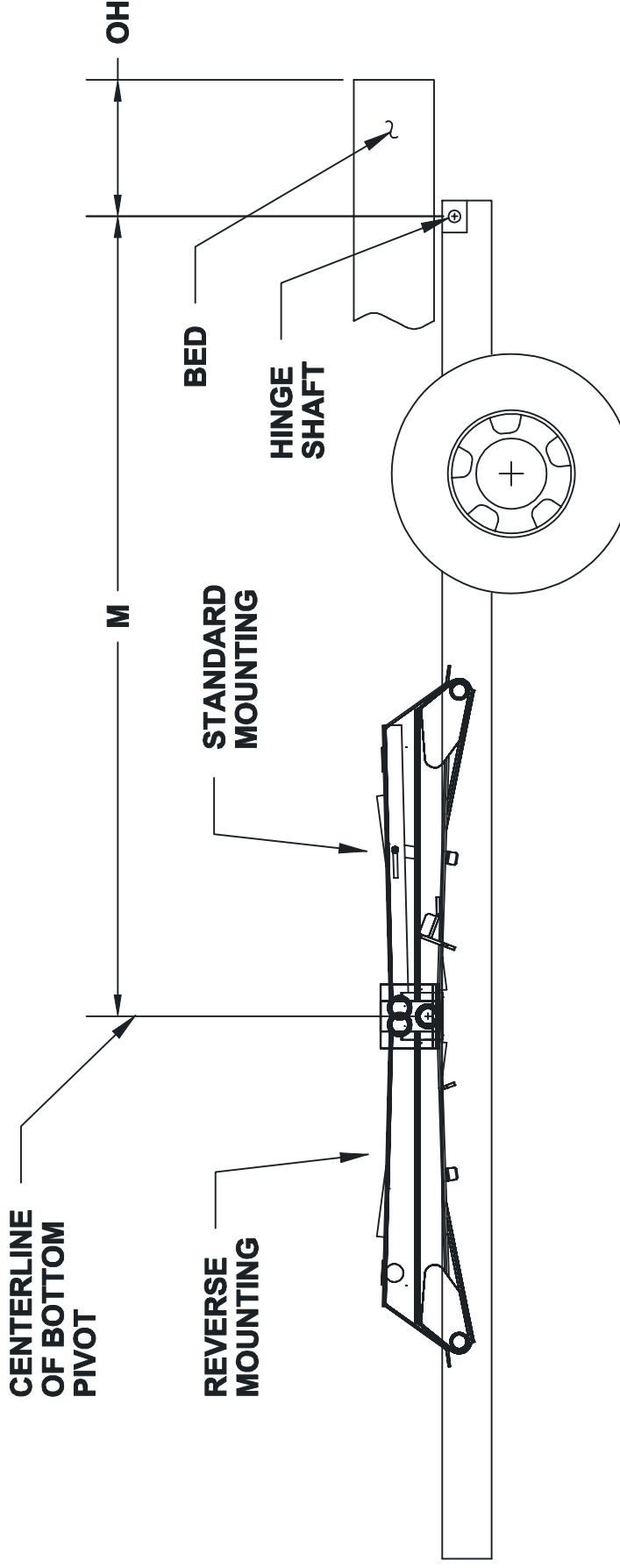
ADDITIONAL DATA:

SINGLE CYLINDER (5" BORE x 20" STROKE)

DUMP ANGLE: 45°

MOUNTING HEIGHT REQ'D: 7.50"

CONVERSION APPLICATIONS TRL520		
BODY	REAR O.H.	45° (TON)
10'	24"	15.3
10'	18"	13.1
10'	12"	11.5
10'	6"	10.2
12'	24"	11.5
12'	18"	10.2
12'	12"	9.2
12'	6"	8.4
14'	24"	9.2
14'	18"	8.4
14'	12"	7.7
14'	6"	7.1
16'	24"	7.7
16'	18"	7.1
16'	12"	6.6
16'	6"	6.1



TRL520 HOIST

STANDARD / REVERSE MOUNTING

DUMP ANGLE	M
40°	105"
45°	94"
50°	85"

HOIST MOUNTING INSTRUCTIONS

- A. Mark the location for the rear hinge. Ideally this location will be immediately behind a trailer cross member for added strength.
- B. Cut a 90° slot in each side of the frame as shown in Figure 2.
- C. Position the angle iron frame of the rear hinge assembly in the trailer frame cut outs. Make sure the rear hinge assembly is properly positioned on the trailer frame. Weld all around trailer frame rear hinge assembly joint (both sides). See installation drawing 628813 on the following page for information regarding the mounting of the rear hinge brackets to the body.

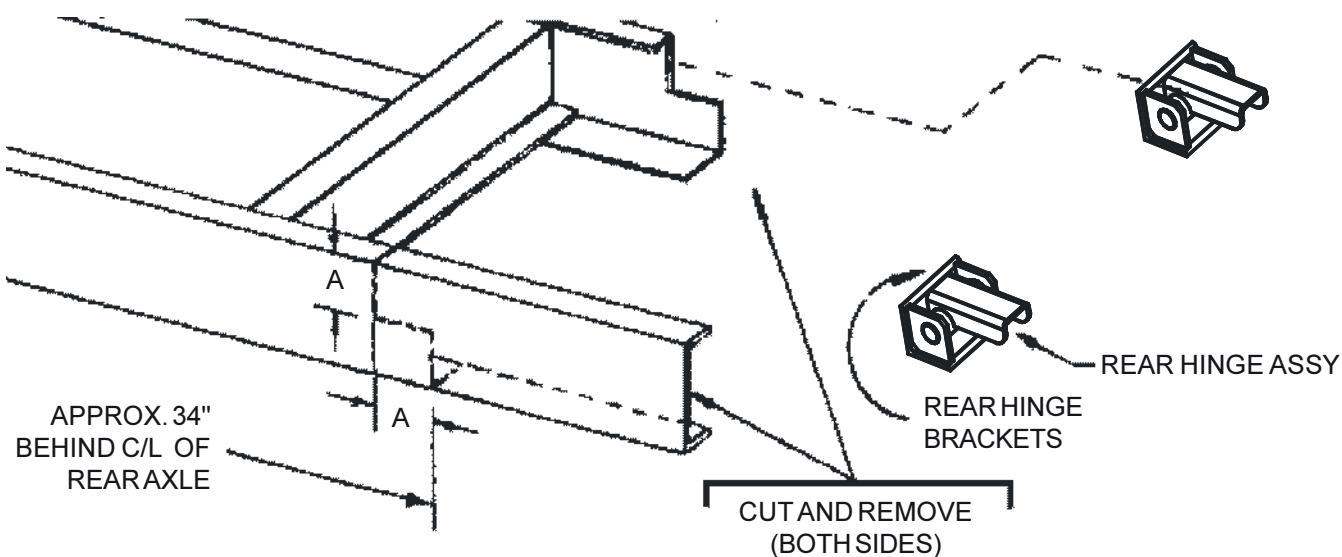


Figure 2 - Frame Modification and Rear Hinge Attachment

- D. Locate the hoist on the trailer frame, making sure to center and square the hoist to the trailer frame. The TRL Hoist is designed to rest on the trailer frame. A section of the hoist extends below the trailer frame level. Therefore, the hoist may have to be moved slightly forward or backward to avoid frame crossmembers. The distance between the rear hinge pivot center and the lower lifting angle pivot center is referred to as the "M" dimension. The table on the previous page provides the dump angles associated with various "M" dimensions.

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



MANUFACTURING, INC.

TITLE
MOUNTING INSTR.

TRL313-6628 TRAILER HOIST

DATE
4-28-05

SUPERCEDES
-

SECTION
H200

628812

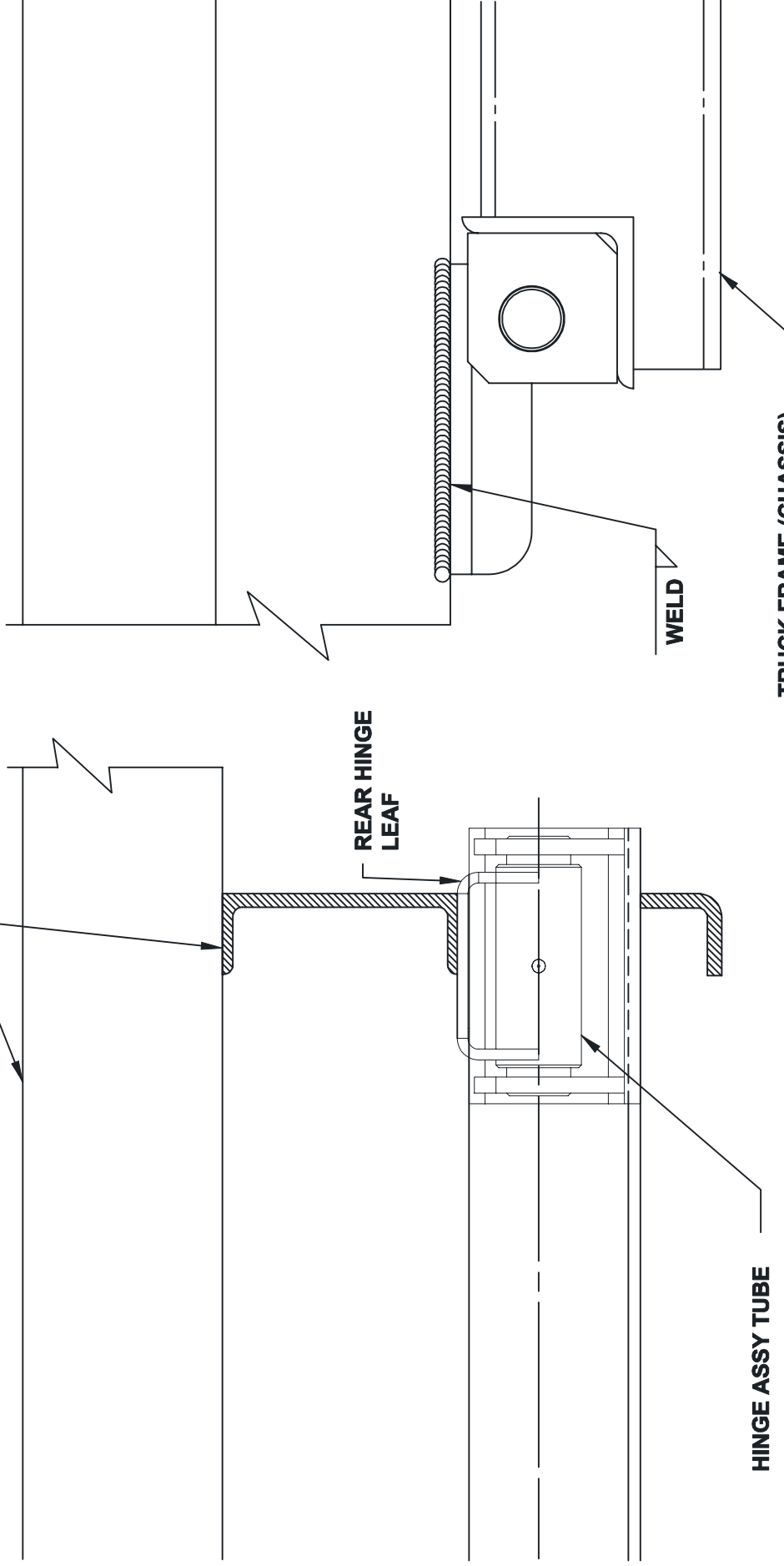
BODY

REAR HINGE
LEAF

HINGE ASSY TUBE

WELD

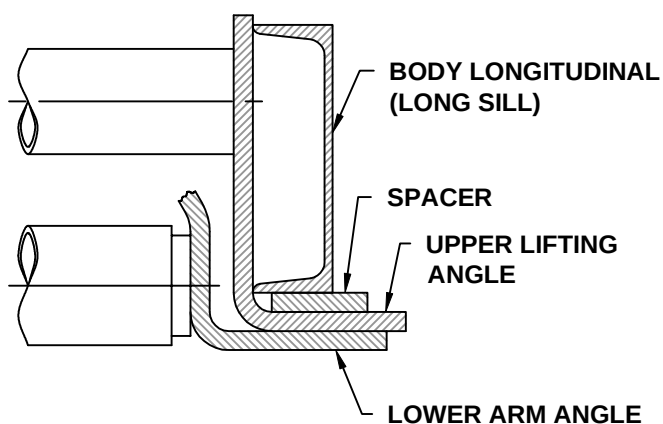
TRUCK FRAME (CHASSIS)



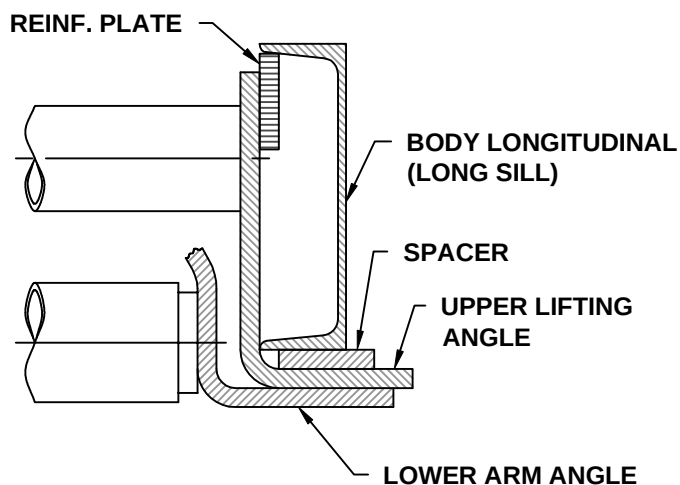
IMPORTANT!

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

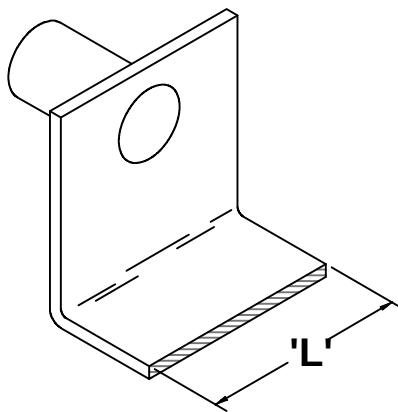
SITUATION A: LIFTING ANGLE FULLY ENVELOPS BODY LONG SILL.



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



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



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

INST. INSTRUCTIONS

DATE

01-14-13D

SECTION

H200

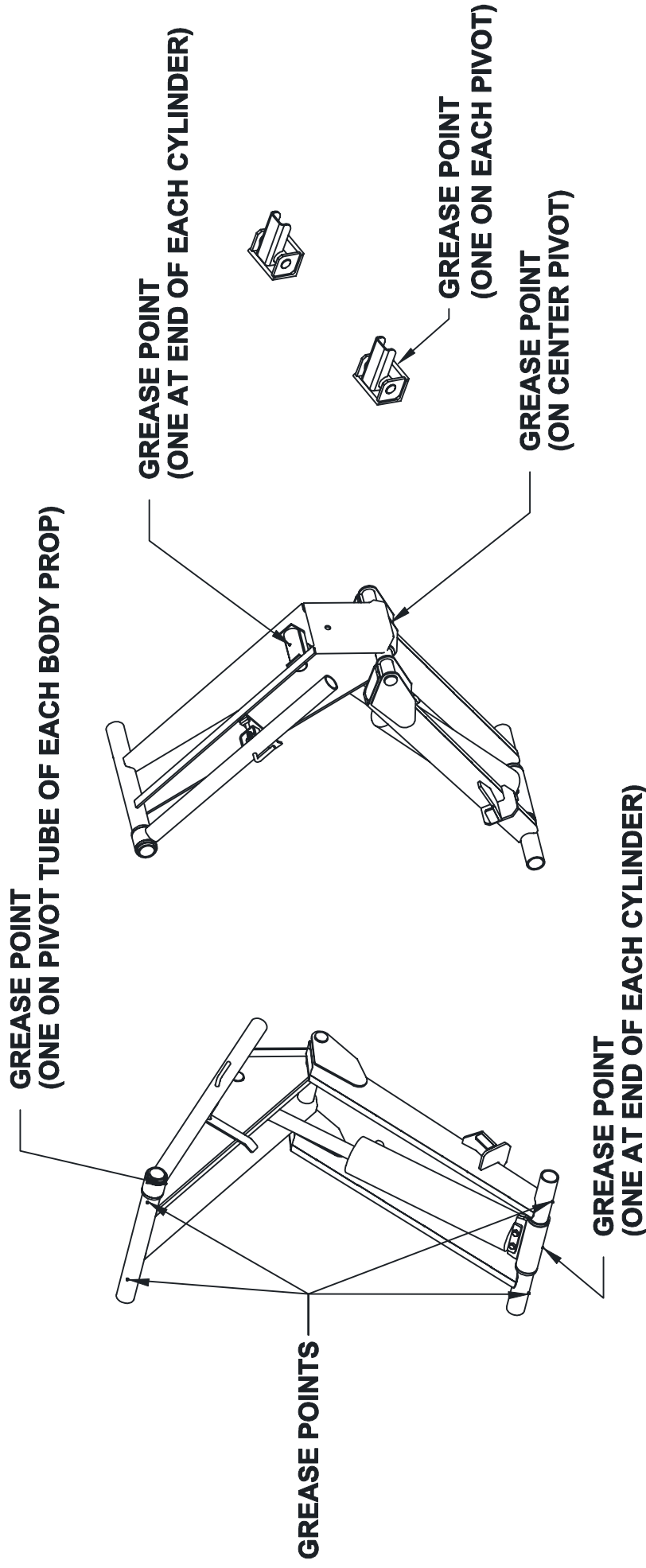
SUPERSEDES

02-25-10C

VC416-6628, TRL313-6628

520093

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 HINGES ARE SHOWN ABOVE. BE SURE TO SERVICE BOTH CYLINDERS OF TRL5520/6620/6628 SCISSORS AND BOTH BODY PROPS IF THE SCISSORS IS SO EQUIPPED.

BODY PROP USE AND WARNINGS

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

WARNING

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

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

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

Read operation of body prop and caution labels before operating the hoist.

1. The body prop is designed for use only when the body is empty. The purpose of the body prop is to provide a safety strut for use when maintenance or inspection are performed on an unloaded body in the raised position.
2. One (1) body prop shall be furnished for bodies up to and including 15 feet. For bodies longer than 15 feet in length, two (2) body props should be used.
3. On models equipped with a spring-loaded release pin, use a suitable tool to pull out the release pin to release the body prop from the hoist frame. This will release the body prop allowing it to swing downward to a vertical position.
4. Make sure that the body prop is aligned with the body prop foot rest (the body prop will be in a vertical position), then allow the body to move downward until the body prop is seated in the foot rest. Note: Do not power down after making contact with body prop foot rest.
5. To disengage the body prop, raise the body until the body prop swings freely away from the foot pad. Using a suitable tool, place the tool in a leverage position on the body prop and propel sharply to the stowed position so that the locking pin can be compressed and seated in the locking pin hole. Make certain the body prop is latched securely before the hoist is operated.

WARNING

Use care when reseating the body prop(s) in the locked position, making sure it is securely stowed.



TITLE
BODY PROP INSTR.

DATE
4-28-05

SECTION
H200

TRL416-6628

SUPERCEDES
-

628815

HOIST MODEL(S)

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

	VP/VC6	TRL313	VC416, TRL416	VC516, TRL516	VC520, TRL520	VC620, TRL620	VC628, TRL628
Step 1 Attach base-end hose to cylinder. Do NOT attach the Rod-end hose at this time.	YES	YES	YES	YES	YES	YES	YES
Step 2 Fill the hydraulic reservoir as recommended below. Use only hydraulic fluid - Tellus 32 or equivalent is recommended.							
2a With the hoist in the <u>down position</u> , add the indicated amount (Quarts) of hydraulic fluid.	2	2	3.5	3.5	3.5	3.5	3.5
2b Raise hoist one-quarter of the way (approximately 12° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.	-	-	-	1	1.5	2	3
2c Raise hoist one-half of the way (approximately 22-25° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.	2	2	1.5	1	1.5	2	3
2d Raise hoist three-quarters of the way (approximately 36° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid.	-	-	-	1	1.5	2	3
2e Raise hoist <u>completely</u> (45-50° dumping angle) and add the indicated amount (Quarts) of hydraulic fluid. DO NOT "TOP OFF" or you will likely have overflow when the hoist is lowered.	0	0	1	1.5	1	2.5	2.5
Step 3 Attach the remaining hose to the Rod-end of they cylinder (not req'd on VP/VC6 & TRL313 hoists w/ ES hyd pwr unit)	ED ONLY	ED ONLY	YES	YES	YES	YES	YES

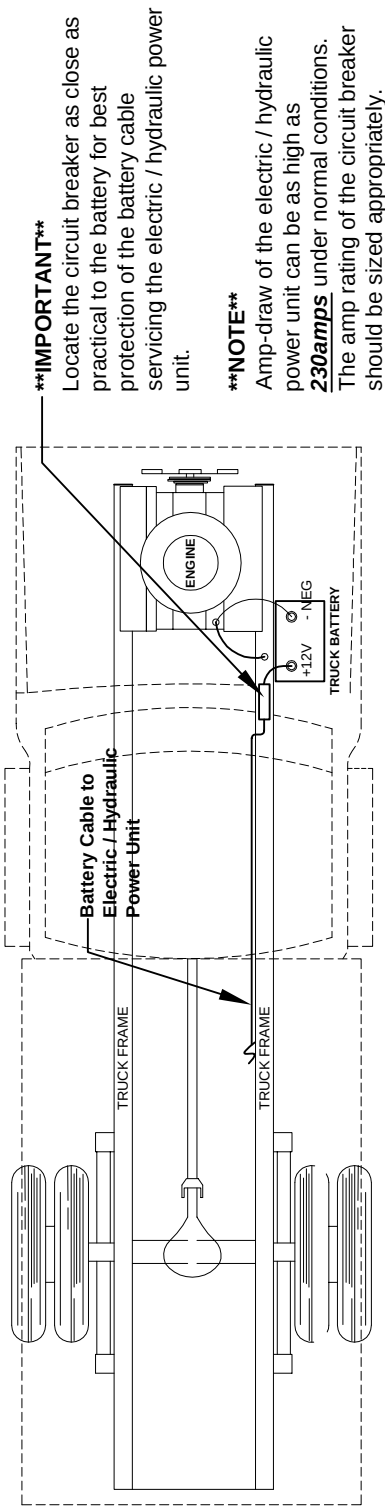


MANUFACTURING, INC.

TITLE	DATE	SECTION
FILLING HYDRAULIC RESERVOIR	6-16-05C	-
VP/VC6-628, TRL313-628	SUPERSEDES 6-18-03B	416140

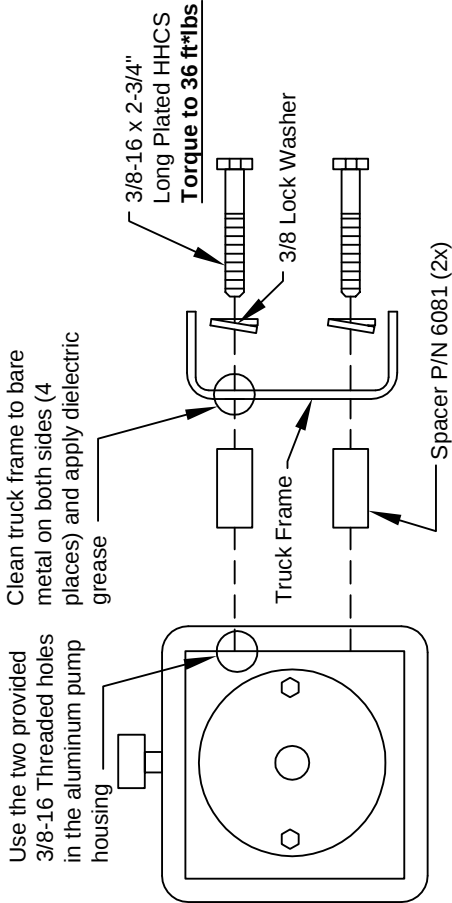
ELECTRICAL CONNECTIONS - HYDRAULIC POWER UNITS

+12 Volt Power Connection:



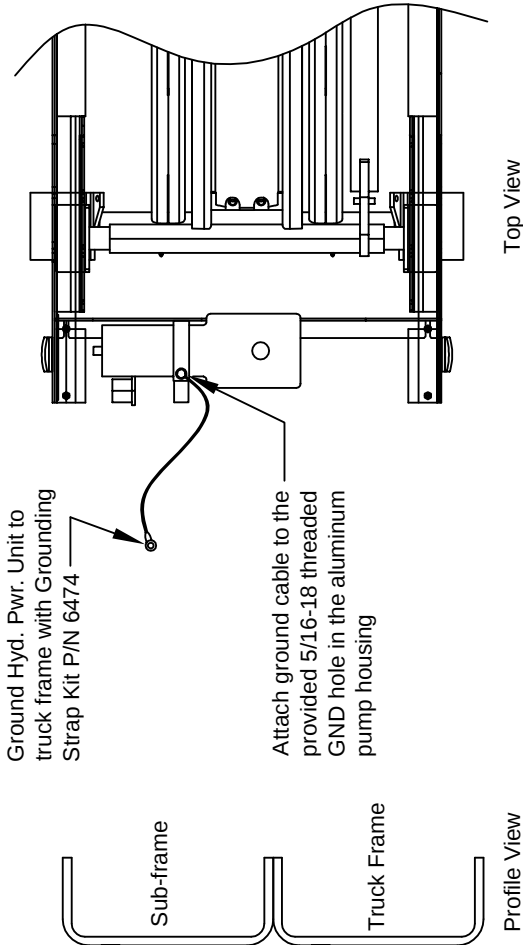
Grounding: Hydraulic power units WILL run with a poor ground connection, BUT the service life of the motor and control valve coils WILL be greatly reduced unless a proper ground connection is made - see illustrations below.

Non Sub-frame Grounding



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

Sub-frame Grounding

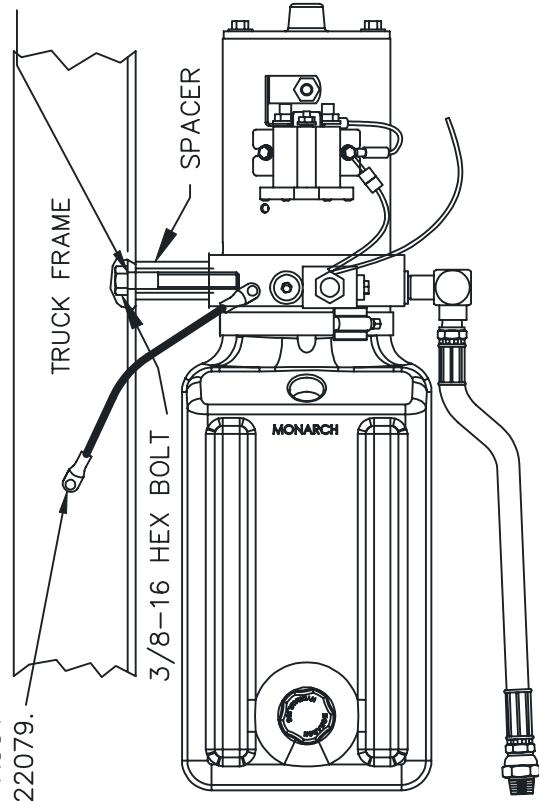


 VENCO VENTURO INDUSTRIES LLC CINCINNATI, OHIO	TITLE	DATE	SECTION
	ELECTRICAL CONNECTIONS - HYD PWR UNITS	09-23-20D	-
	ALL ELECTRIC HOIST APPLICATIONS	SUPERSEDES 06-16-20C	6368

40058M WITH MONARCH PUSH BUTTON CONTROL

▲ OPTIONAL
GROUNDING
STRAP ASSY
P/N 22079.

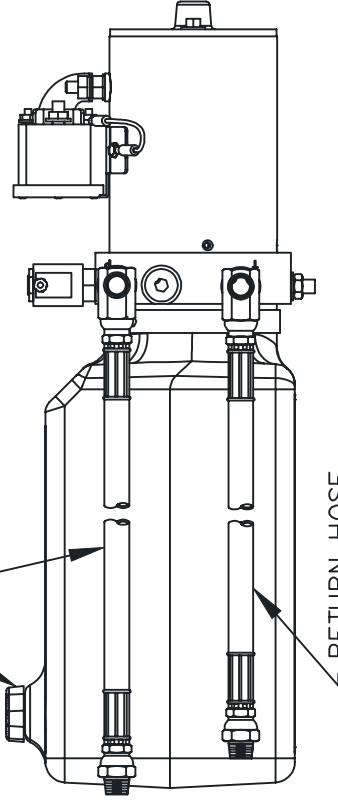
▲ NOTE: BE SURE TO FOLLOW
THE "PROPER GROUNDING
OF HYDRAULIC POWER
UNITS", DRAWING # 6368,
IN THIS MANUAL.



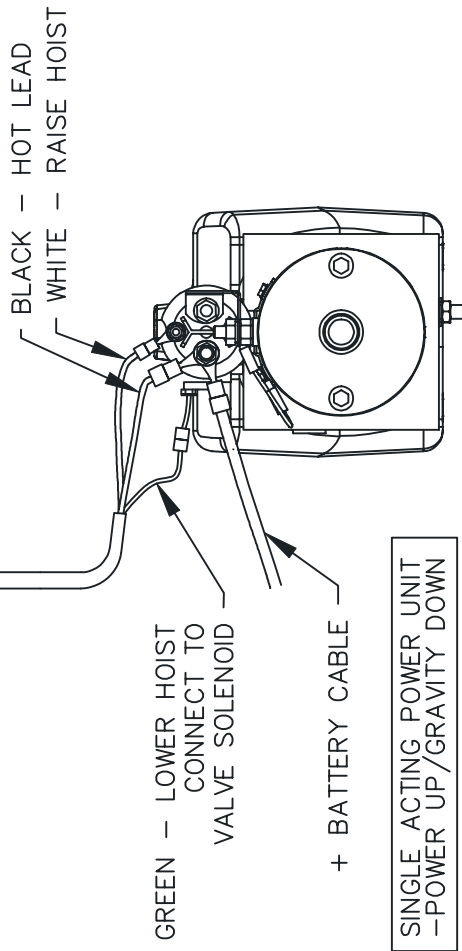
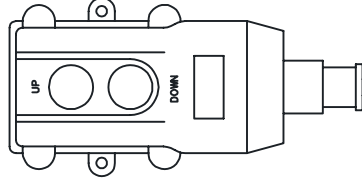
TOP VIEW

BREATHER/FILL - REF

PRESSURE HOSE - CONNECT TO BASE END
OF HYDRAULIC CYLINDER



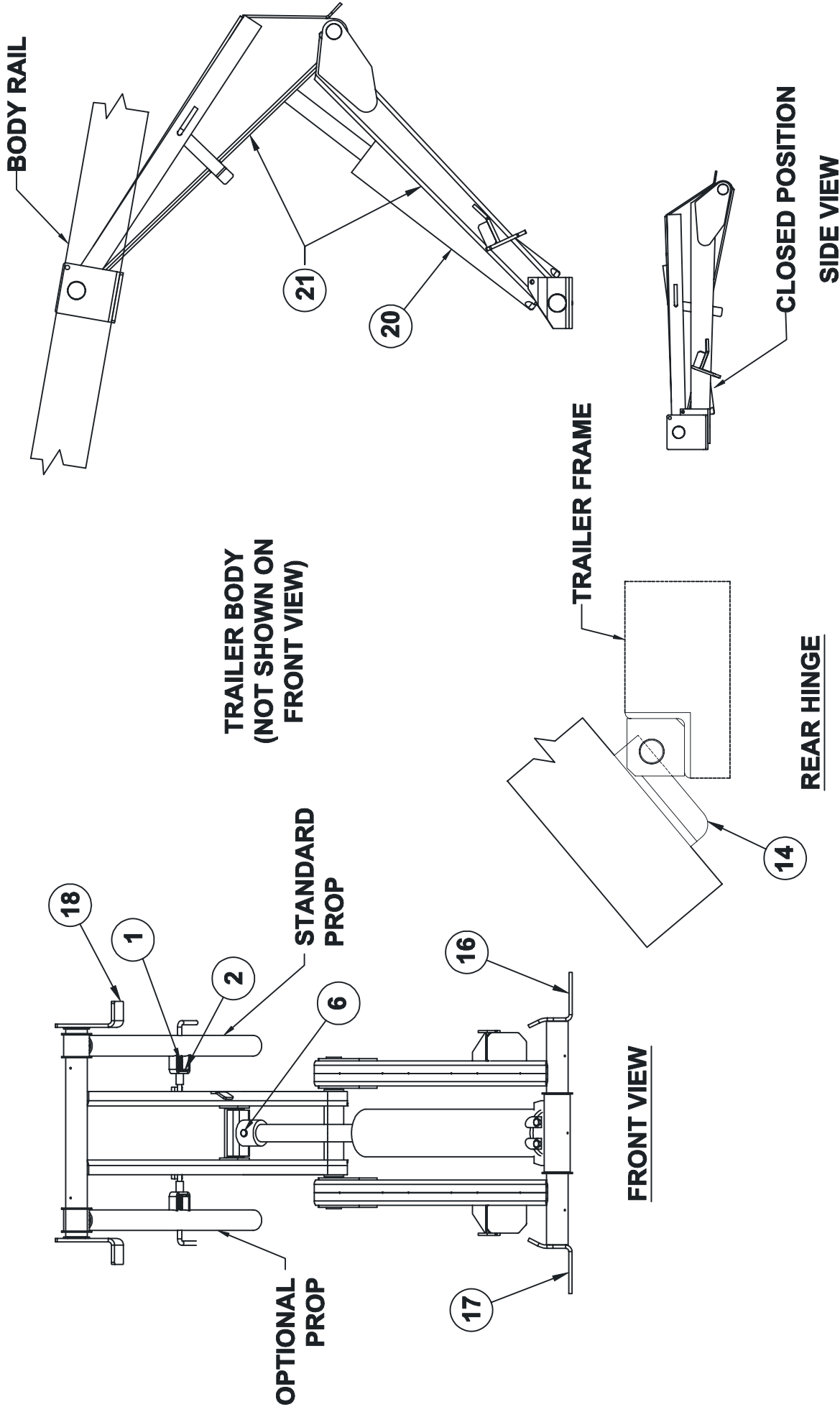
SIDE VIEW



SINGLE ACTING POWER UNIT
-POWER UP/GRAVITY DOWN

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

REPLACEMENT PARTS LIST REF 520114



 MANUFACTURING, INC.	TITLE		SECTION
	REPLACEMENT PARTS		H400
	DATE		6-24-05
	SUPERSEDES		-
TRL520		520113	

TRL520 REPLACEMENT PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00170	SPRING - 11/16" O.D. x 1-3/4" LONG
*2	2	15254	CAUTION - STAND CLEAR DECAL
3	-	-	-
4	1	IRPIN016150	ROLL PIN - 5/32" DIA x 1-1/2" LONG
5	-	-	-
6	1	416545	5/8 X 3-1/2 CLEVIS PIN ASSEMBLY
7	-	-	-
*8	2	416052	CAUTION - INSTRUCTIONS DECAL
9	1	520558	LOCKING PIN - PROP
*10	2	416084	SAFETY PROP DECAL
11	1	520540	LOWER PIVOT TUBE
12	-	-	-
13	-	-	-
14	1	520147	HINGE ASSEMBLY
15	-	-	-
16	1	520563-1	LOWER PIVOT ASSEMBLY
17	1	520563-2	LOWER PIVOT ASSEMBLY
18	2	520562	UPPER PIVOT ASSEMBLY
19	▲ -	▲ -	-
20	1	520504	HYDRAULIC CYLINDER - TRL520
21	1	520503	SCISSORS ASSEMBLY - TRL520
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
26		-	-
27		-	-
28		-	-
29		-	-
30		-	-
31		-	-
32		-	-
33		-	-
34		-	-
35		-	-

*ITEM NOT SHOWN ON DRAWING

REPLACEMENT PARTS DWG REF 520113



MANUFACTURING, INC.

TITLE
REPL. PARTS LIST

TRL520

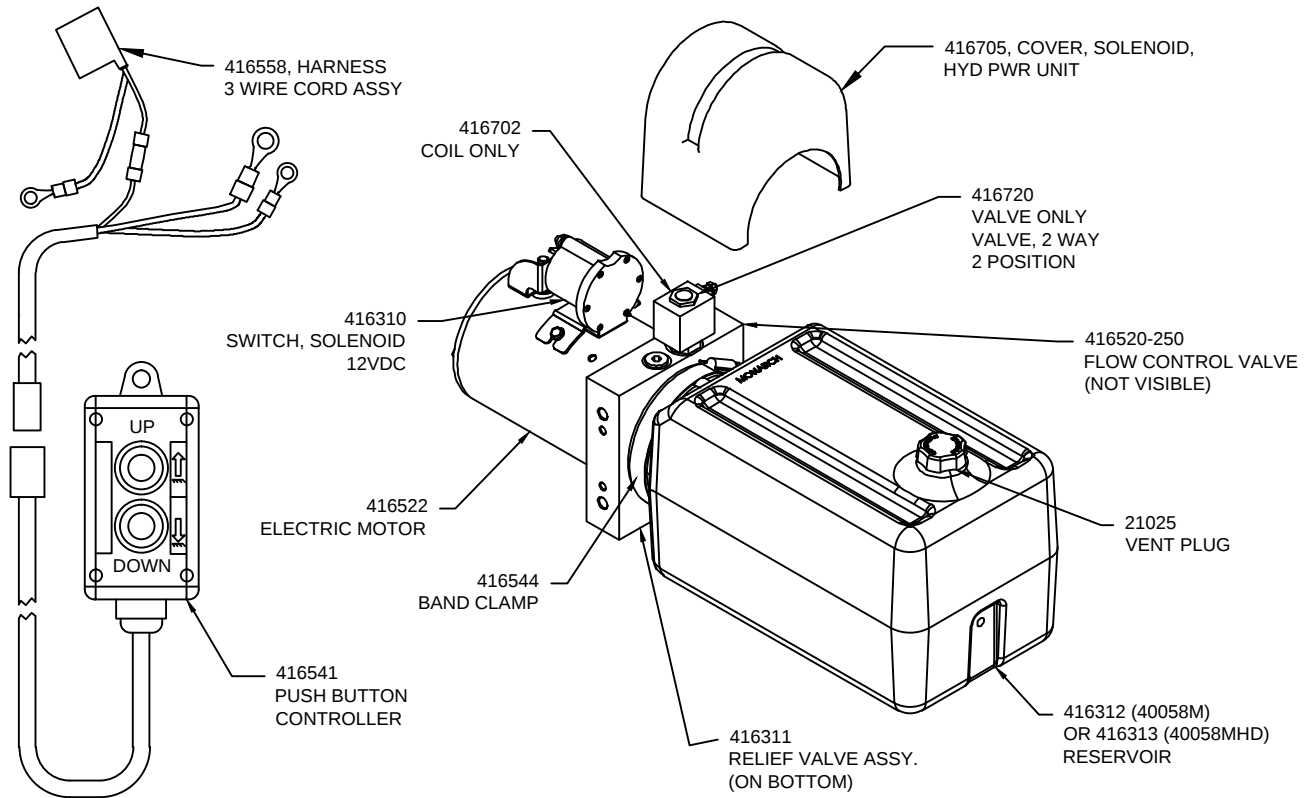
DATE
5-2-07A

SUPERCEDES
6-24-05

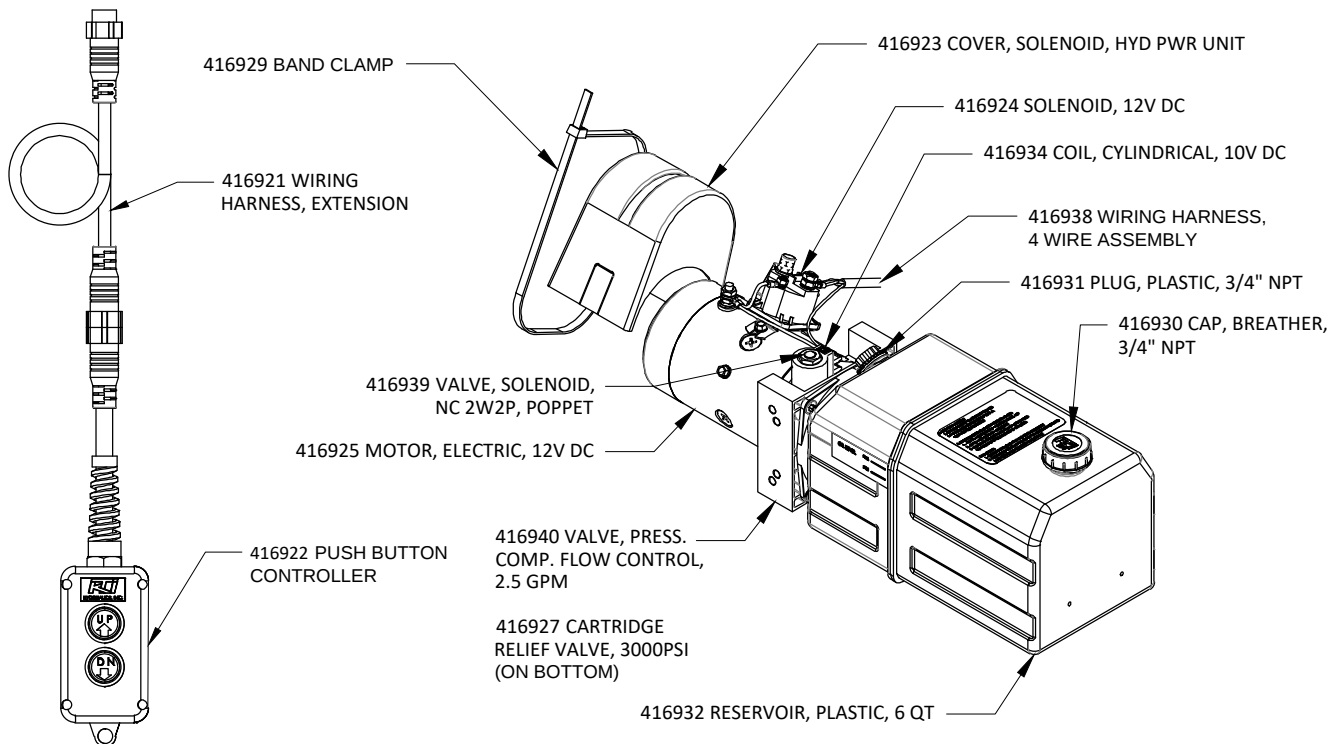
SECTION
H400

520114

REPLACEMENT PARTS; 40058M (BUCHER)



REPLACEMENT PARTS; 40058M (KTI)



NOT SHOWN: 416937, O-RING, INDUSTRIAL, 113MM ID, C/S 4MM



VENCO VENTURO INDUSTRIES LLC
CINCINNATI, OHIO

TITLE

REPLACEMENT PARTS

DATE

08-19-22J

SECTION

C999

40058M HYD. POWER UNIT

SUPERSEDES

04-09-21H

416308



VENCO HOISTS LIMITED WARRANTY POLICY

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

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

3-Year Limited Warranty Policy

This limited policy warrants new products of Venco to be free from defects in material and workmanship for a period of three (3) years from date of original installation. OEM products or accessories purchased by Venco as part of or offered with our product will carry the OEM manufacturer's respective warranty. Our warranty covers:

- ***Repair or replacement of product***
- ***Labor to repair or replace product***
- ***Freight to return and/or replace product***

We shall not be liable for any contingent liabilities arising out of the improper function of any products. Warranty shall become void if the product is improperly installed, modified, damaged, abused or used for application other than intended use. Venco hoists are designed for and intended to be used on stationary trucks dumping on firm and level ground. Spreading applications and/or shock unloading are strictly prohibited and will void this warranty. There is no warranty of merchantability, fitness for a particular purpose, warranty arising from course of dealing or usage of trade, or any other implied or expressed warranty, except as made specifically herein. This warranty supersedes all previous warranties, written or implied.

Warranty Claims

Venco Venturo Industries LLC will make a good faith effort for prompt correction or other adjustment with respect to any product, which proves to be defective after our inspection and within the warranty period. Before any repairs are attempted or before returning any product, your Venco Distributor is required to obtain a warranty claim number. This number is necessary for any claim to be considered. To obtain a warranty claim number, Venco requires the model and serial number. Only authorized Venco Distributors can perform warranty. For the name and address of your local Venco Distributor call the **Warranty Claim Department - 513-772-8448**.

WARNING - It is the responsibility of the installer to ensure the installation is completed according to the manufacturer's recommendations, ensure the ultimate user understands how to operate product in a safe manner, and understands the need for regular service and maintenance by an authorized Venco Distributor. No modifications or alterations may be made to any Venco product without the expressed written consent of Venco Venturo Industries LLC. Installation of any Venco product must be done by an authorized Venco Distributor, to the standards of the industry; including maintenance, service and affixing of all instruction, safety and warning decals. Users should be instructed as to the safe operation at time of delivery. Maintenance, service, operation and safety warning decals are available on request from Venco Venturo Industries LLC.

VENCO VENTURO INDUSTRIES LLC
12110 BEST PLACE | CINCINNATI, OHIO 45241
P: 800-226-2238 | F: 513-326-5427
www.venturo.com