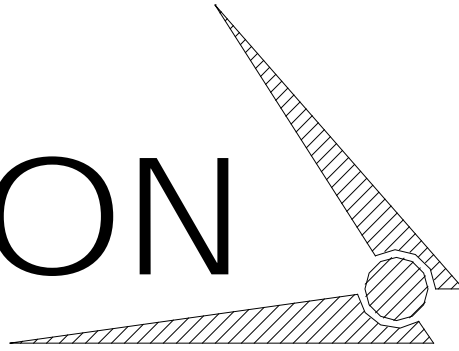


# CHAMPION

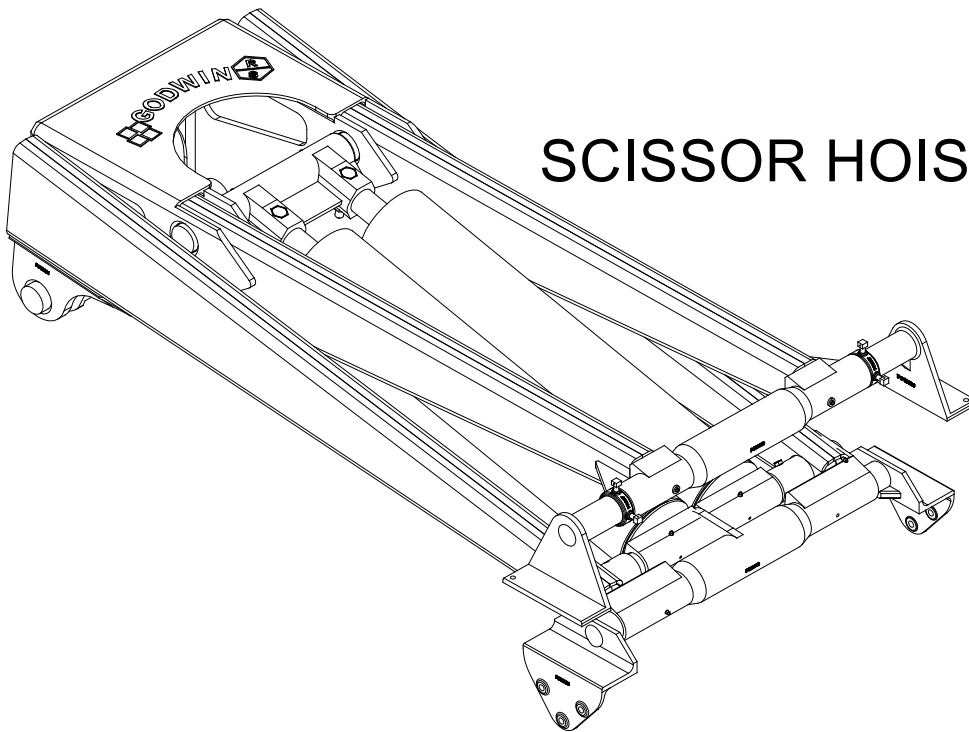
Hoist and Equipment



AN AFFILIATE OF

The **Godwin**  
Group

200 CHAMPION DRIVE  
DUNN, NC. 28334  
(910) 897-4995 FAX: (910) 897-7306



**SCISSOR HOIST**

Operation & Installation Manual

***CHAMPION HOIST & EQUIPMENT***

**200 Champion Drive**

**Dunn, NC 28334**

**800-649-4995**

**2/2008**

# **CHAMPION SCISSOR HOIST TABLE OF CONTENTS**

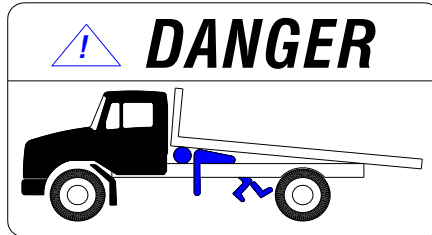
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## OPERATIONS AND SERVICE INFORMATION

Do not operate this equipment without fully reading and understanding this manual.

Do not allow unauthorized personnel to operate this equipment.

Do not go underneath a loaded raised bed under ANY circumstances.



Be sure to.....

- \* Follow all Federal, State, Local regulations pertaining to this equipment.
- \* Keep unit properly maintained and serviced.
- \* Understand and follow all safety decals and keep them in good condition.
- \* Check hydraulic oil level each time truck is serviced.
- \* Add correct hydraulic oil to reservoir as needed.

### ELECTRIC PUMP APPLICATIONS

#### ***CAUTION***

***USE DEXTRON ATF OIL ONLY!***

***(DEXTRON AUTOMATIC TRANSMISSION FLUID)***

***ELECTRIC PUMP APPLICATIONS ONLY!!!***

### PTO PUMP APPLICATIONS

#### ***CAUTION***

***USE HYDRAULIC OIL ONLY!***

***TEXACO RANDO HD 32***

***EXXON NUTO HD 32***

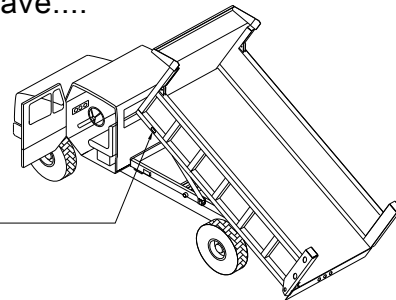
***SHELL TELLUS HD 32***

***OR COMPARABLE***

When calling for Parts/Service Be Sure To Have....

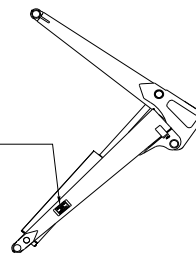
Body: model number  
serial number

Serial Plate Location



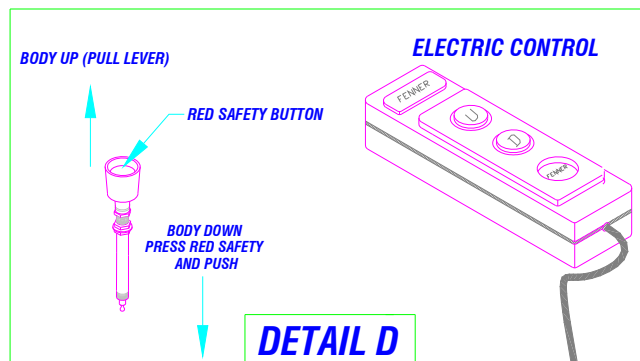
Hoist: model number  
serial number

Serial Plate Location



## To Operate the Hoist:

- (1) With engine running at idle speed, transmission in neutral, and the park brake set.
- (2) Depress clutch pedal.
- (3) Pull PTO control out until the red PTO light illuminates. Note: if light does not illuminate, and PTO does not engage, Slowly release the clutch pedal while pulling on the PTO control.
- (4) Once the PTO is engaged, release the clutch pedal to supply power to the pump.
- (5) The pump/hoist control should be in the neutral or "hold" position.
- (6) Depress the safety button and pull the pump/hoist control to raise the bed. See Detail D below.



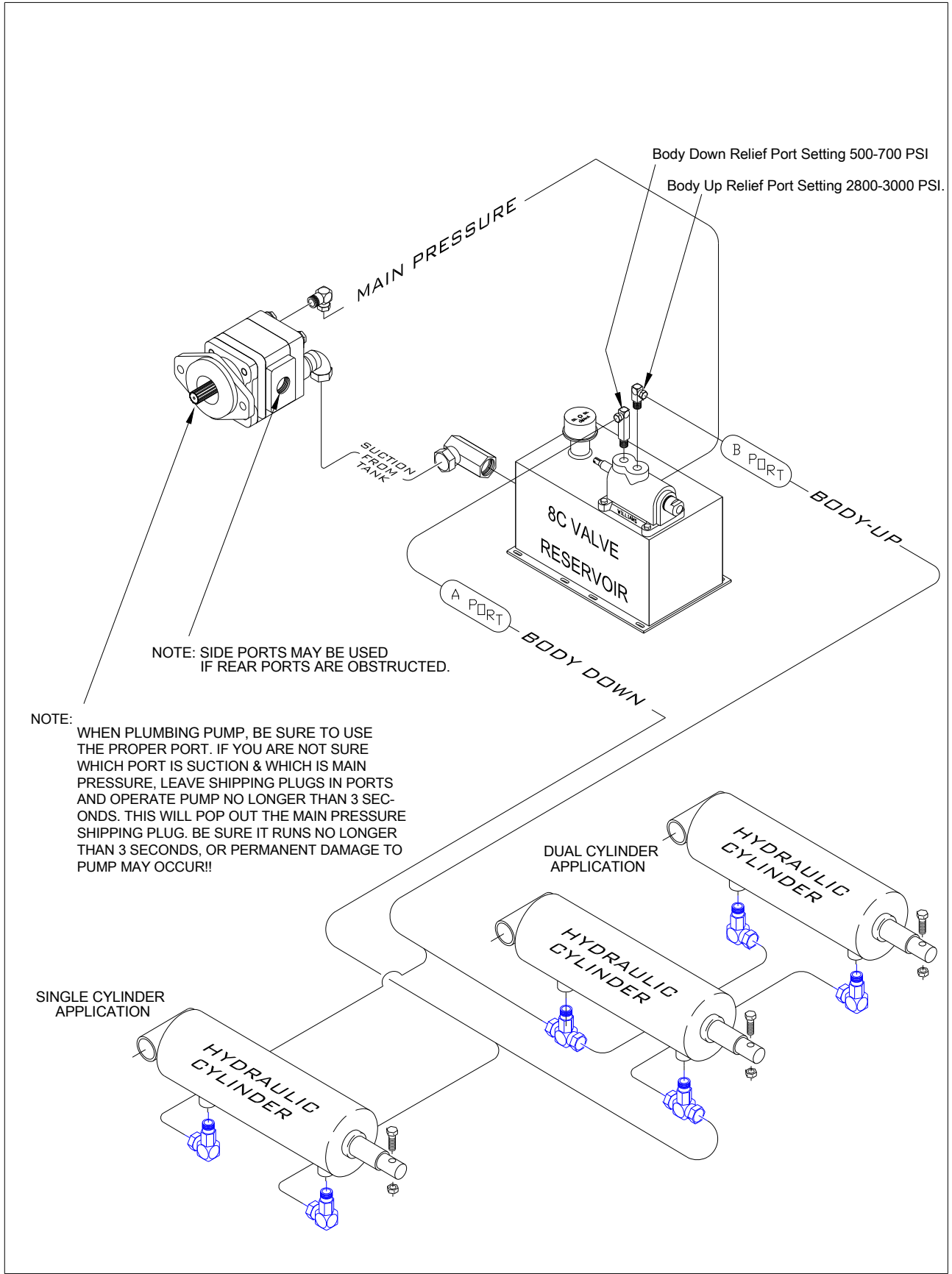
- (7) When bed raises to desired height push the pump/hoist controls to the center neutral or "hold" position this will stop bed movement up or down.
- (8) To lower bed depress the safety button and push pump/hoist control .
- (9) Depress clutch pedal, and push PTO control to disengage.

## FOR ELECTRIC PUMP APPLICATION

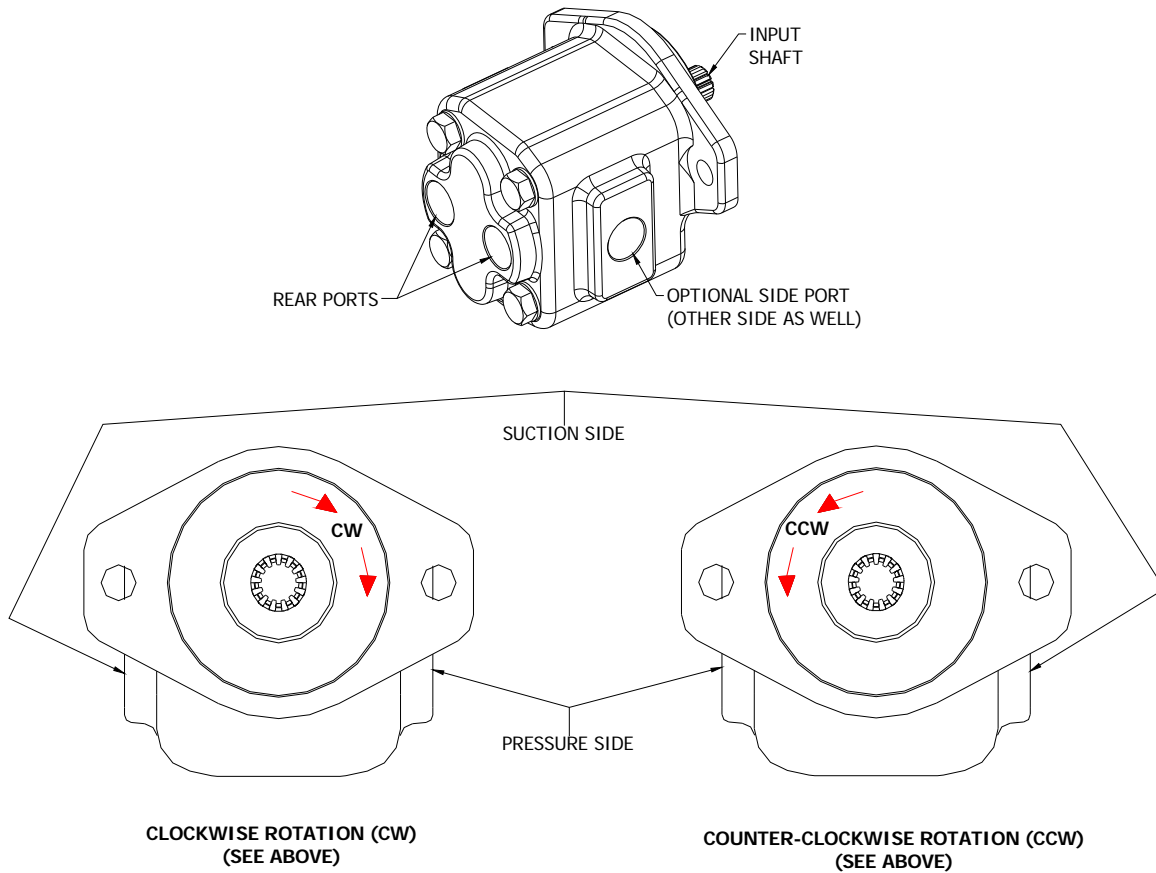
### To Operate the push button Hoist:

Press and hold appropriate button.

NOTE: Pump will stop when button is released.



# PUMP ROTATION AND PORTING

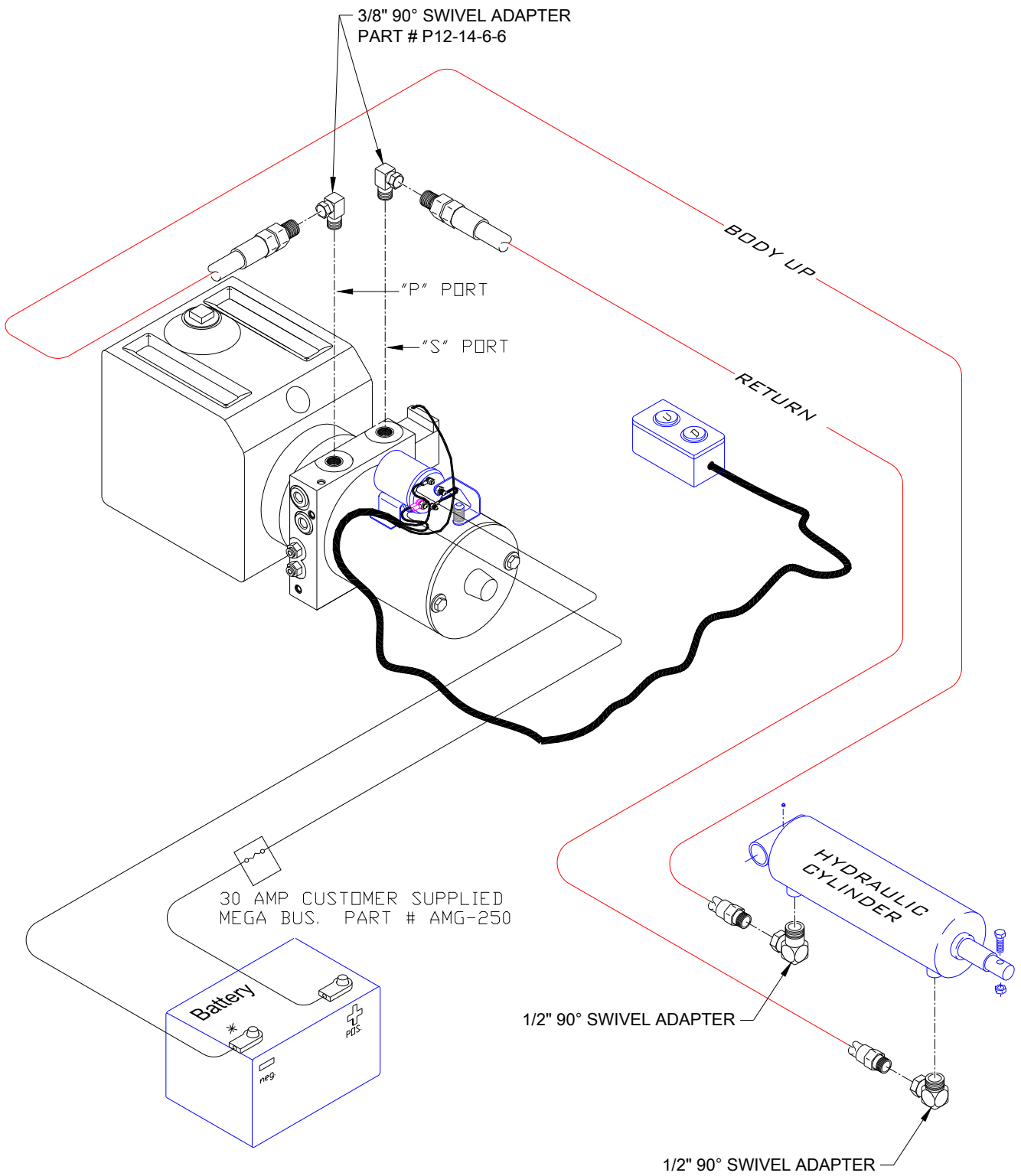


THE P21 AND P22 PUMPS ARE BI-DIRECTIONAL AND OFFER SIDE AND REAR (NPT) PORTING. THE PUMPS ARE SHIPPED WITH THE SIDE PORTS PLUGGED. TO UTILIZE SIDE PORTING MOVE THE STEEL PLUGS FROM THE SIDE PORTS TO THE REAR PORTS AND PLUMB ACCORDINGLY.

USE THE ILLUSTRATION ABOVE FOR PORT DESIGNATION BASED ON PUMP ROTATION.

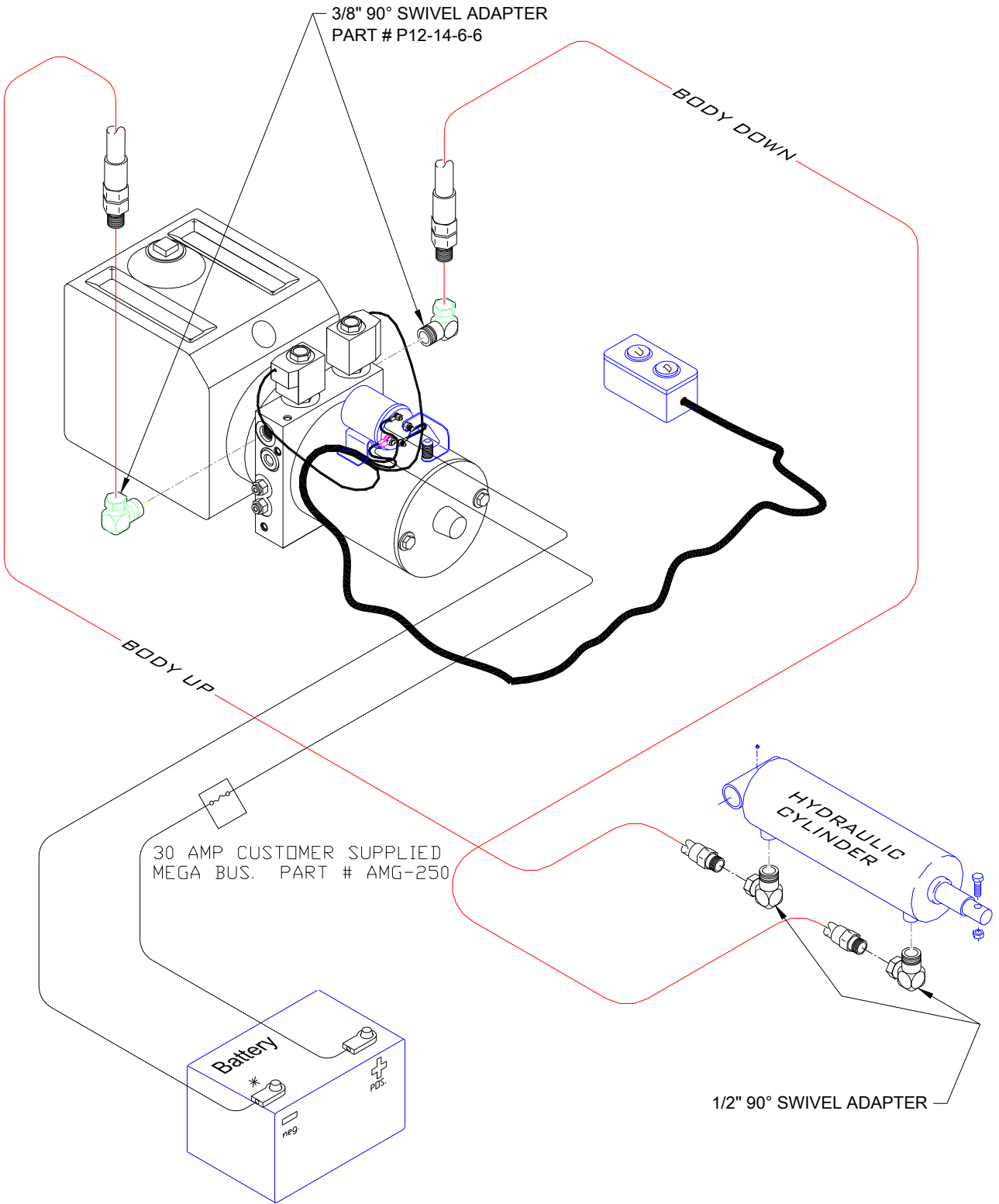
**HELPFUL HINT:**

TO DETERMINE PUMP ROTATION, DO NOT REMOVE THE PLASTIC SHIPPING PLUGS. TEMPORARILY BOLT PUMP TO THE MOUNTED PTO. START TRUCK ENGINE AND ENGAGE PTO FOR APPROXIMATELY (3) SECONDS AND SHUT-OFF. THE PLASTIC SHIPPING PLUG ON THE PRESSURE PORT SHOULD HAVE POPPED OUT OF THE PUMP HOUSING.



NOTE: Ground Wire is to be ground at SOURCE.  
DO NOT GROUND TO CHASSIS!!

<b>HYDRAULIC PLUMB DIAGRAM SINGLE ACTING ELECTRIC PUMP</b>	
GODWIN MFG. CO., INC. DUNN, NORTH CAROLINA	<b>PD40048</b>



NOTE: Ground Wire is to be ground at SOURCE.  
DO NOT GROUND TO CHASSIS!!

# ELECTRIC PUMP PRIMING PROCEDURE

( Single or Double acting )

(A) Be sure hoist and electric pump are completely installed and ready to safely operate. Fill electric pump reservoir with Automatic Transmission Fluid to within 1" of top.

(B) Power the hoist "Up" using the "White" button on the push button controller.

NOTE: If hoist does not start to raise within 10 seconds, stop and check that the hydraulic lines are correctly installed. See below:

Monarch 3551 (double acting) "C1" port = hoist raise (white button) = 2800psi  
"C2" port = hoist lower (black button) = 800psi

Monarch 3519 (single acting) "P" port = hoist raise (white button) = 2800psi  
"S"port = lower/vent to res. (black button) = -0- psi

(C) When powering the hoist "Up" the first time it is imperative that the reservoir NOT run out of fluid. Maintain a half tank of fluid on the first lift by stopping and filling as needed.

(D) As you are fully raising the hoist safely check for leaks, any visual obstructions, etc.

(E) **For Double Acting pump only** - "Lower" the hoist by pressing the "black" button. Once the hoist has fully lowered CONTINUE to hold the "black" button until the oil in the reservoir stops moving. (about 20 seconds) The turbulence you see in the reservoir during this crucial step is in reality filling the top side (down side) of the cylinder. This typically has to be done only upon the initial installation or when the unit has run out of oil and is being refilled.

(F) Once this has been done fill the reservoir as needed to maintain 2/3 to 3/4 full.

## HELPFUL HINTS:

(1) Perform the above priming steps no more than twice in 30 minutes due to the oil aerating.

(2) If the reservoir overflows when lowering, the following could cause this.

- (a) Aerated oil
- (b) "Hoist lower" line too small or obstructed
- (c) Wrong ports used on pump
- (d) Extremely cold conditions.

(3) Electric power units are NOT to be used with twin cylinder hoists or any hoist with a volume larger than a 6" bore X 24" stroke cylinder.

(4) Make sure the customer understands that the electric power unit (used when necessary) will have the same capacity but be slower than a PTO driven unit.

(5) If voltage drops below about 10.5vdc the up and down coils may be affected first.

**MONARCH M-3519 (single acting). M-3551 (double acting)  
ELECTRIC PUMP TROUBLESHOOTING**

**Motor on pump does not operate.**

**Electric pump Solenoid does not click.**

- (A) Bad hot(+) or ground(-) cable(s) from battery to pump. Be sure to use both cables and connect directly to battery. It is advisable to install a 250amp Mega fuse at the positive battery connection. *Note: On newer trucks the ground cable from battery to chassis is too small to carry the load of the electric pump unit. This is why you need (2) individual positive and ground cables from battery to electric pump unit.*
- (B) Check for 12v signal at small post of solenoid when pressing the “up” button of the control. If voltage is below 12 volts it may be a sign of an alternator or battery issue. If no voltage it may be the switch or a broken or corroded wire

**Electric pump Solenoid clicks but motor does not operate.**

- (A) Check battery connection between solenoid and motor.
- (B) Contacts in solenoid could be burned. (Check this by shorting the two large posts on the solenoid, if motor turns replace solenoid assembly)
- (C) Motor could be bad.
- (D) Pump could be seized.

**Motor/pump turns but hoist will not work.**

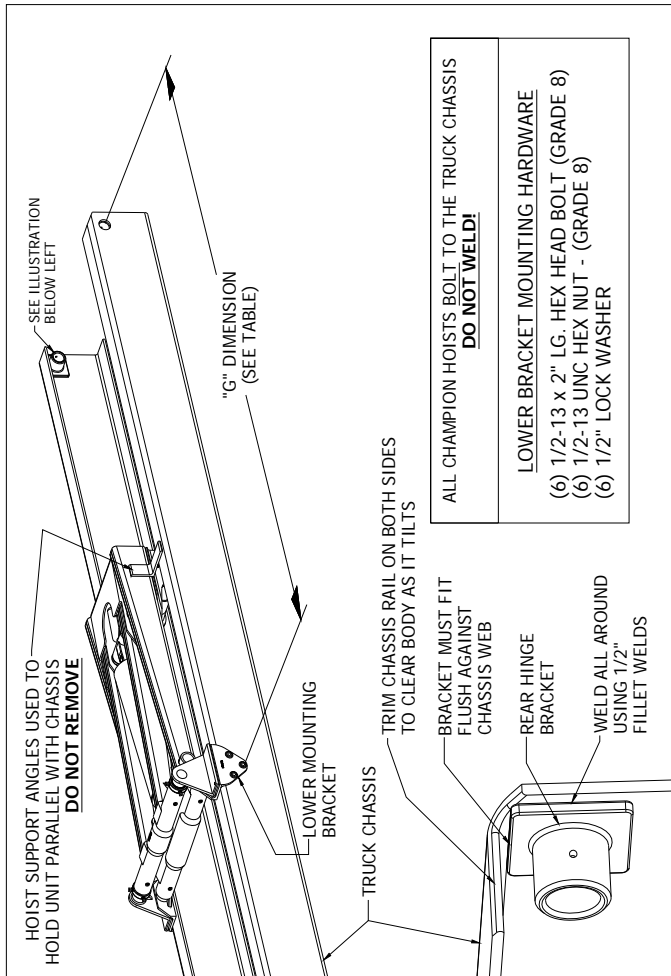
- (A) Check for 12 volts at valve coil(s). Could be bad switch or broken wire.
- (B) Is/are coil(s) magnetized when button is pressed? Could be bad coil/ or connector.
- (C) Cartridge stem could be bent. With bed down, remove cartridge and roll on table to check for alignment.
- (D) Check pump unit pressure. Up should be 2800psi and down (on double acting units) should be 800psi.

**Hoist stuck in up position, will not come down.**

- (A) Check for 12 volts at “down” coil.
- (B) Bent stem on “down” cartridge. Call for service technician. **DO NOT ATTEMPT TO REPAIR!**

Rev. 5/15/09 JrG

## PROCEDURE I - HOIST LOCATION ON TRUCK CHASSIS



GVWR	HOIST MODEL	RECOMMENDED BED LENGTH
8,000 – 10,000 LBS.	GS 515	10 – 12 FT.
11,000 – 14,000 LBS.	GS 615	10 – 12 FT.
11,000 – 15,000 LBS.	GS 615 LS	10 – 12 FT.
14,000 – 18,000 LBS.	GS 615 HD	10 – 12 FT.
18,000 – 24,000 LBS.	GS 6615	12 – 14 FT.
14,000 – 18,000 LBS.	GS 620 HD	12 – 16 FT.
24,000 – 28,000 LBS.	GS 628	14 – 16 FT.
24,000 – 28,000 LBS.	GS 6620	14 – 16 FT.
28,000 – 35,000 LBS.	GS 5530	18 – 20 FT.
35,000 – 50,000 LBS	GS 6630	18 – 24 FT.

"G" DIMENSION TABLE		
MODEL	40° TILT	45° TILT
GS 515	86"	77"
GS 615	86"	77"
GS 615 HD	94"	84"
GS 6615	94"	84"
GS 615 LS	103"	93"
GS 620 HD	118"	106"
GS 628	149"	135"
GS 6620	118"	106"
GS 5530	163"	146"
GS 6630	163"	146"

### PROCEDURE STEPS:

(SEE ILLUSTRATION LEFT)

LOCATE AND MARK CENTERLINES FOR REAR HINGE PIVOT. (THIS DIMENSION IS USUALLY 6" BEHIND THE REAR SPRING HANGER BRACKET BUT MAY VARY ON CERTAIN CHASSIS MODELS.

BASED ON THE HOIST MODEL, SELECT THE "G" DIMENSION FROM THE TABLE ABOVE. MARK THE CENTERLINE OF THE LOWER MOUNTING BRACKET.

PLACE THE HOIST ON THE CHASSIS AND CHECK FOR CROSSMEMBER INTER-

## PROCEDURE II - BED SPACER AND REAR HINGE INSTALLATION

**PROCEDURE STEPS:**  
(SEE ILLUSTRATIONS LEFT)

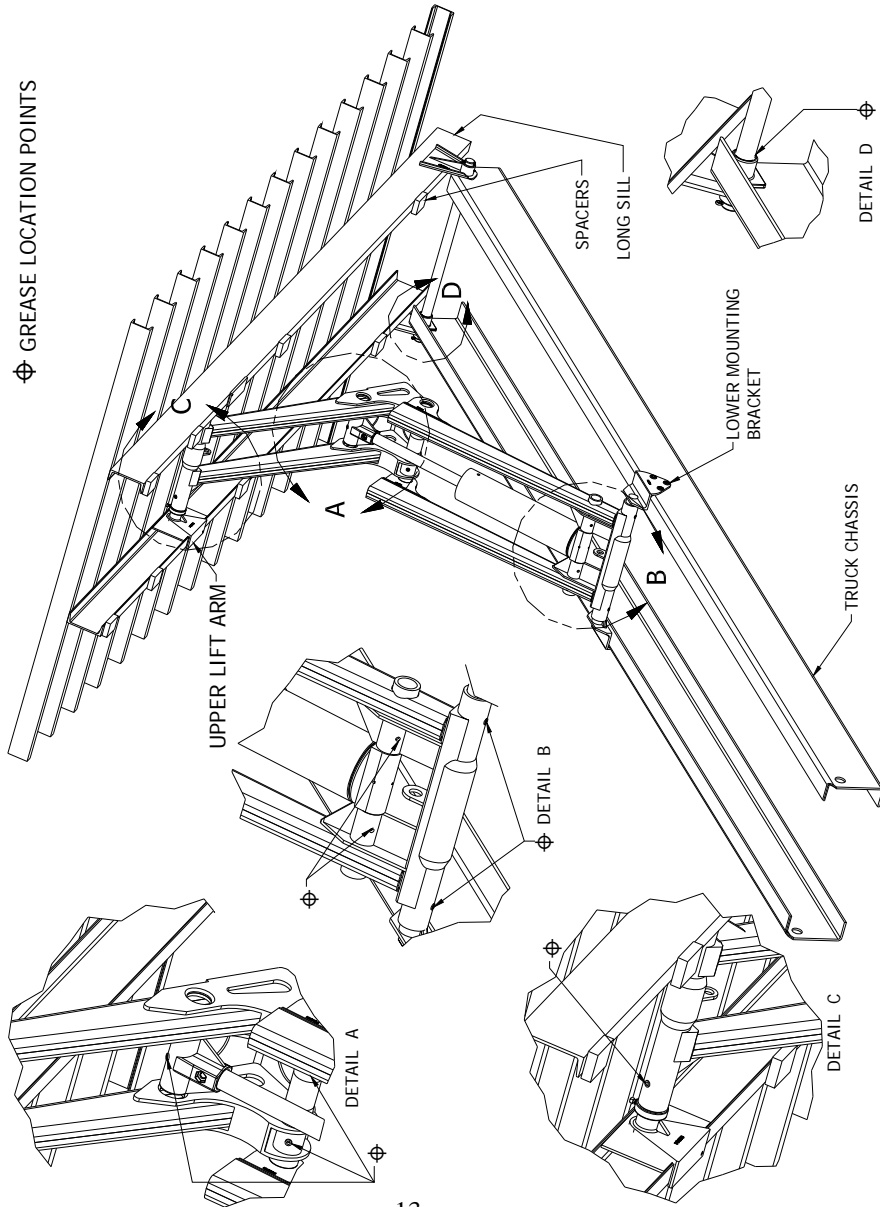
CUT SPACER BLOCKS (1" x 3" x 4" LG).  
POSITION BLOCKS ON TOP OF THE TRUCK CHASSIS RAIL ON EITHER SIDE OF THE LOWER HOIST MOUNTING BRACKETS APPROXIMATELY 48" APART. THE 1" THICK SIDE SHOULD FACE UP ON LONG SILL.

PLACE BODY ON CHASSIS APPROXIMATELY 2-1/2" FROM CAB. THE BODY MUST BE PARALLEL WITH THE CHASSIS RAILS.

WELD REAR HINGE FLIPPERS TO LONG SILLS. USING 1/2" CONTINUOUS FILLET WELDS AROUND ALL CONTACT AREAS.

WELD BODY SPACERS TO LONG SILLS OF BODY.

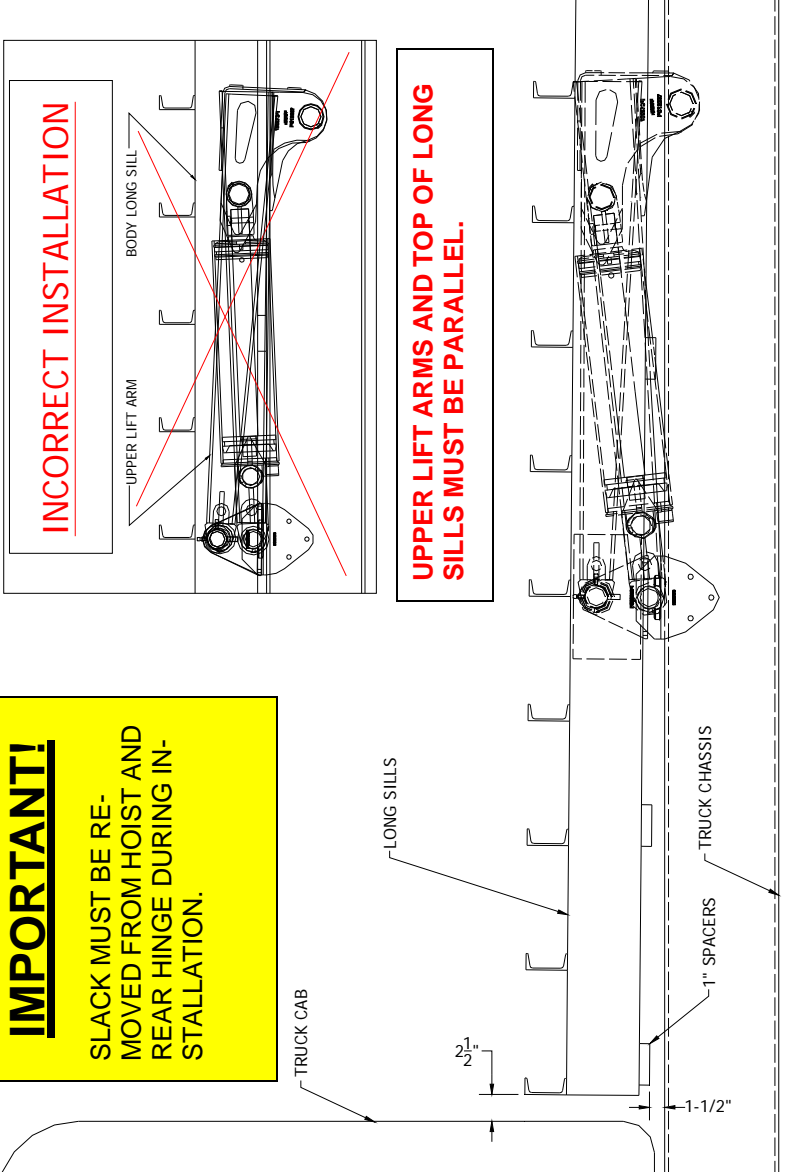
**CAUTION:** FAILURE TO PERFORM THIS PROCEDURE AS SPECIFIED COULD CAUSE HOIST FAILURE AND THEREFORE VOIDS ASSOCIATED WARRANTY.



**PROCEDURE III - REMOVING SLACK FROM HOIST AND REAR HINGE**

**IMPORTANT!**

SLACK MUST BE REMOVED FROM HOIST AND REAR HINGE DURING INSTALLATION.

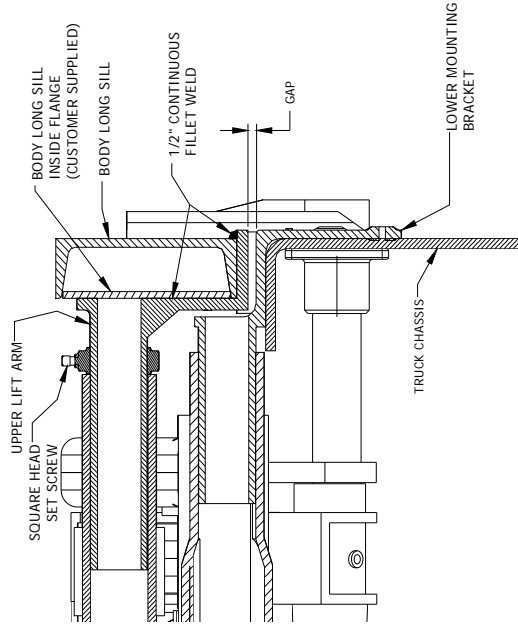


**INCORRECT INSTALLATION**

**UPPER LIFT ARMS AND TOP OF LONG SILLS MUST BE PARALLEL.**

**PROCEDURE STEPS:**  
(SEE ILLUSTRATION LEFT)

USING THE HOIST POWER, RAISE THE BODY APPROXIMATELY 1-1/2" AS MEASURED FROM THE END CLOSEST TO THE CAB.  
 WELD LIFT ARMS TO LONG SILLS USING 1/2" CONTINUOUS FILLET WELD. (SEE BELOW)  
 MAKE SURE HOIST IS CENTERED WITHIN THE TRUCK CHASSIS RAILS.  
 SLIDE THE HOIST SET COLLARS FIRMLY AGAINST THE LIFT ARM SHOULDERS AND TIGHTEN THE SQUARE HEADED



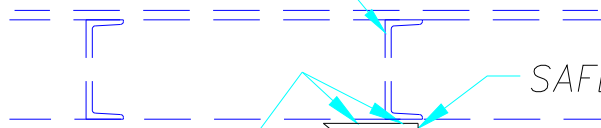
**SCREWS.**

**CAUTION:** FAILURE TO PERFORM THIS PROCEDURE AS SPECIFIED COULD CAUSE HOIST FAILURE AND THEREFORE VOIDS ASSOCIATED WARRANTY.

NOTE: MAKE SURE TO GREASE ALL LUBRICATION FITTINGS BEFORE OPERATING. REFER TO PAGE (8) FOR FITTING LOCATIONS.

## DETAIL "A"

BODY CROSS MEMBER

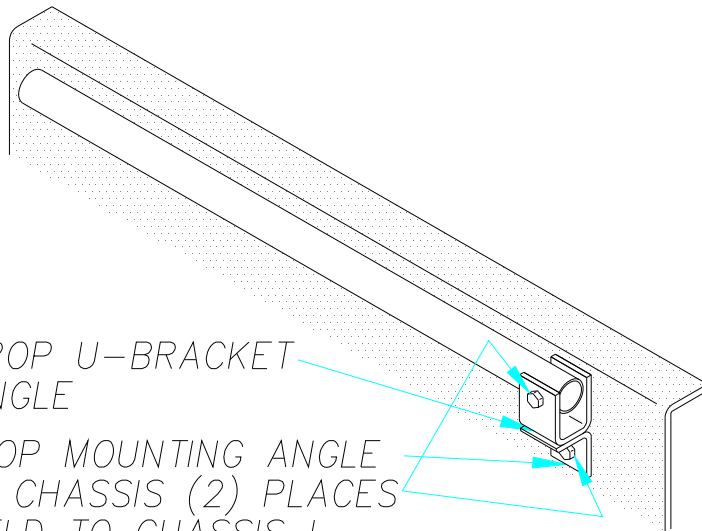


SAFETY PROP CUP

3/8" WELD AT  
ALL POINTS OF  
CONTACT

LOCATE SAFETY PROP CUPS ON BODY MAIN  
RUNNER SO THAT THE SAFETY PROP IS ANGLED  
SLIGHTLY TO THE REAR. ALSO, BE SURE CUPS  
ARE SUPPORTED BY A BODY CROSS CHANNEL.

## DETAIL "B"



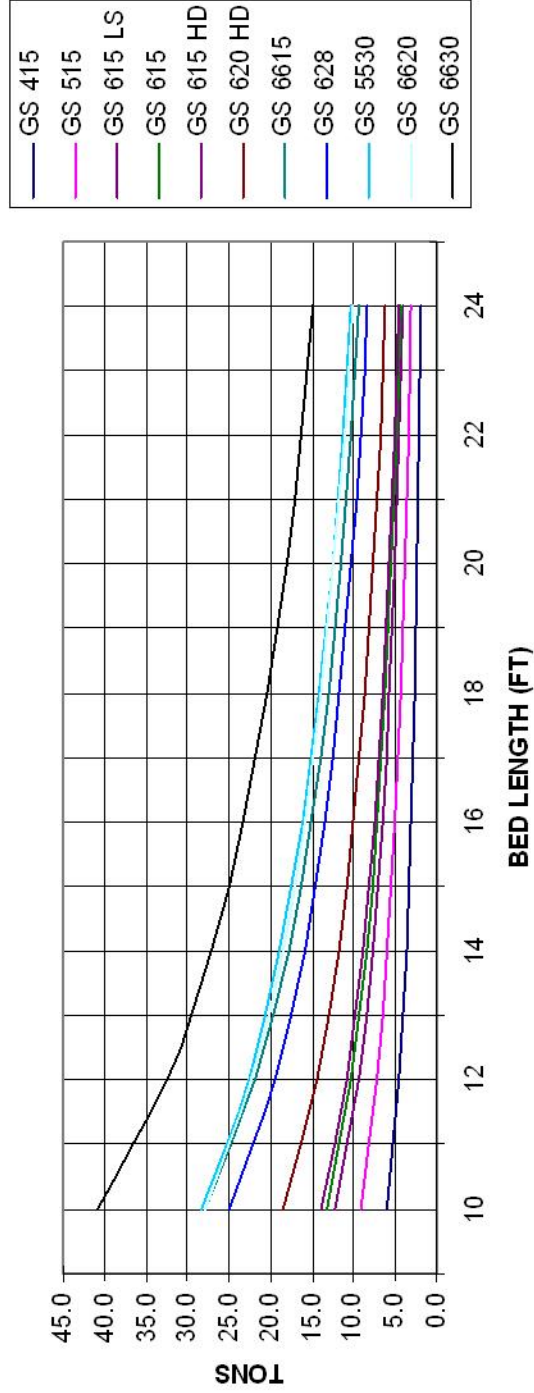
WELD SAFETY PROP U-BRACKET  
TO MOUNTING ANGLE

SAFETY PROP MOUNTING ANGLE  
BOLTED TO CHASSIS (2) PLACES  
DO NOT WELD TO CHASSIS !

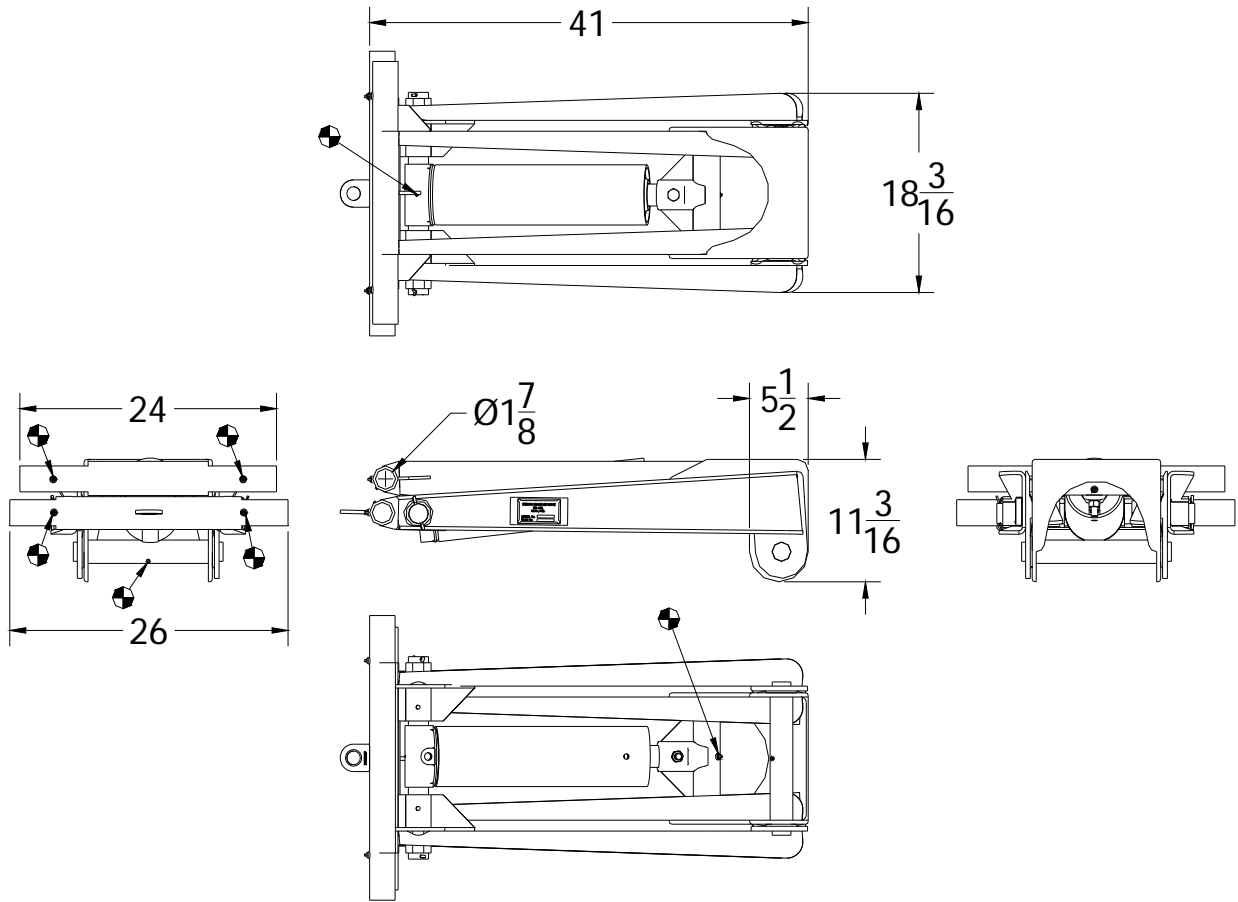
### CHAMPION HOIST RATINGS

Hoist	NTEA Class	System Pressure	Capacity (TONS) - Truck Bed Length (FT) - 18 inches Overhang									
			10	12	14	16	18	20	22	24		
GS 415		3,000	5.9	4.6								
GS 515	C	3,000	9.2	7.2								
GS 615	C	3,000	13.2	10.3								
GS 615 HD	C	3,000	13.9	10.8								
GS 615 LS	C	3,000	12.2	9.5								
GS 620 HD	D	3,000		14.4	11.8	10.0						
GS 6615	E	3,000		21.8	17.8							
GS 628	G	3,000		19.5	16.0	13.5						
GS 5530	G	3,000						14.2	12.6	11.3		
GS 6620	G	3,000			18.6	15.9						
GS 6630	H	3,000						20.4	18.1	16.3		14.8

**RATED CAPACITY**  
18 INCHES OVERHANG



# GS415



☉ - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	86 inches
45° TILT	77 inches

Truck bed lengths -10 - 12 feet  
GVW - 8000 - 10000 lbs

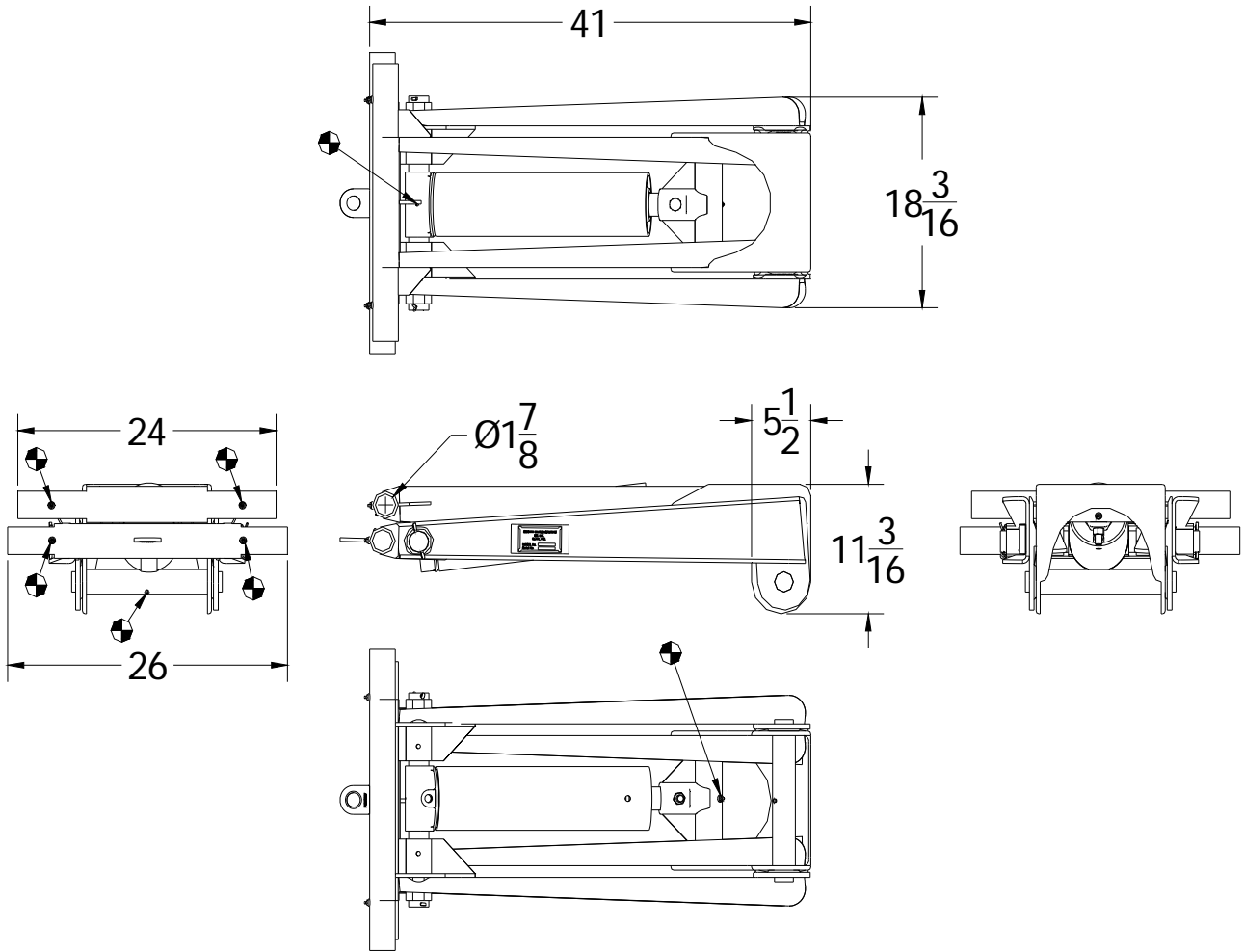
## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS515



☉ - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	86 inches
45° TILT	77 inches

Truck bed lengths -10 - 12 feet  
 GVW - 8000 - 10000 lbs

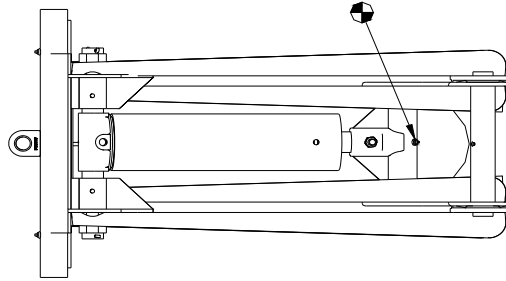
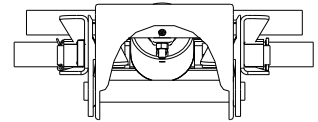
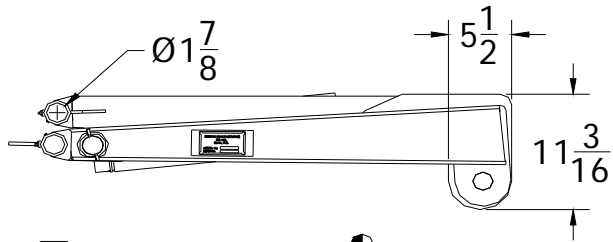
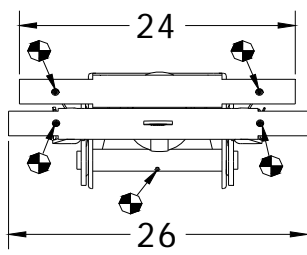
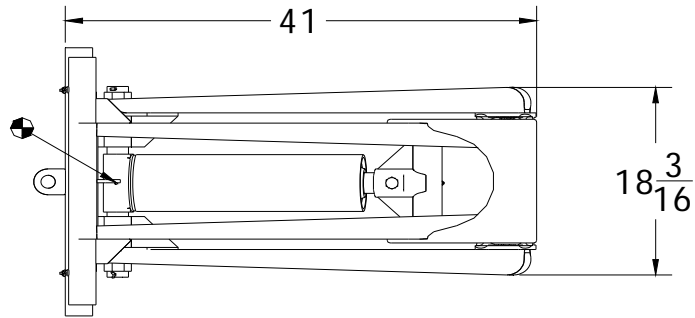
## CHAMPION

Hoist and Equipment  
 Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS615



● - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	86 inches
45° TILT	77 inches

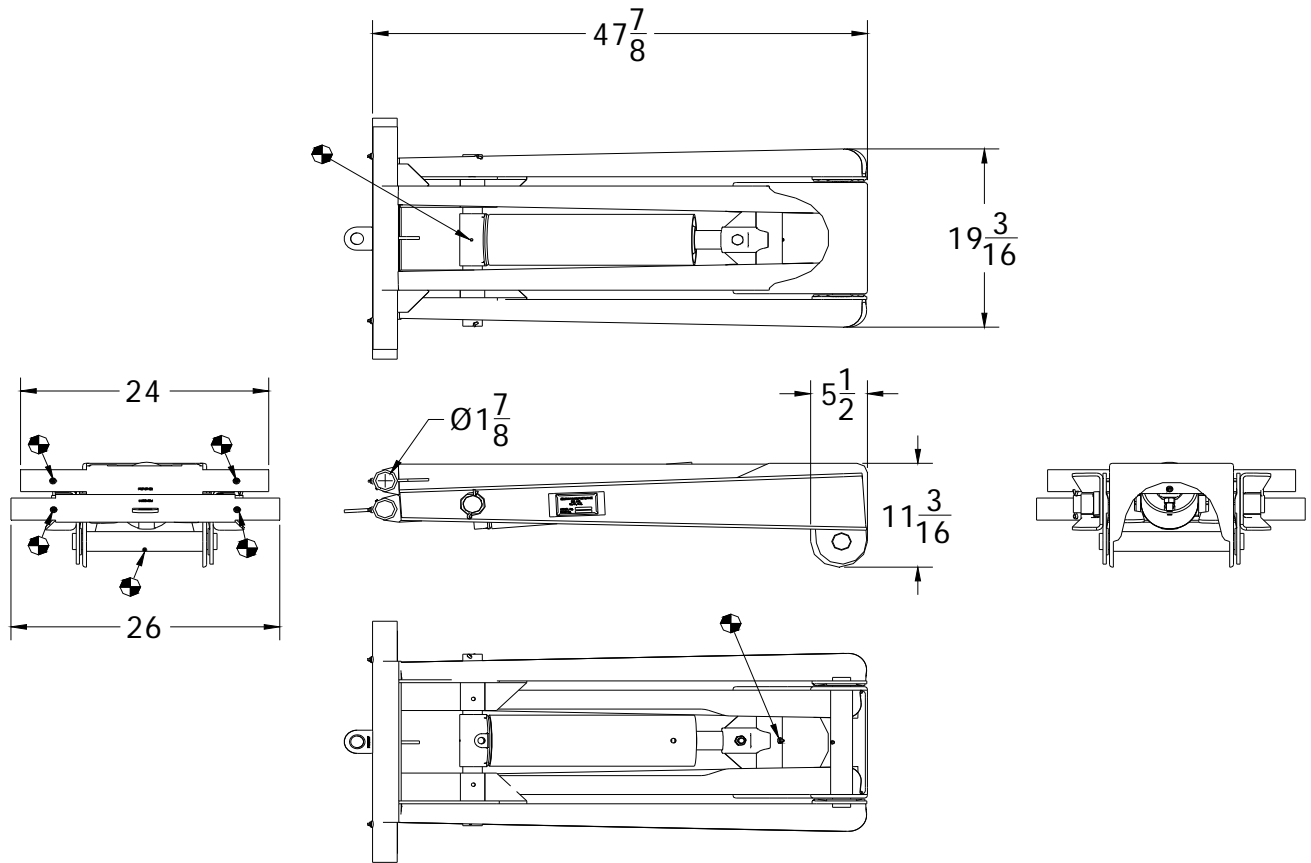
Truck bed lengths -10 - 12 feet  
GVW - 11000 - 14000 lbs

## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.  
910 - 897 - 4995  
Fax 910 - 897 - 6822



# GS615LS



☛ - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	103 inches
45° TILT	93 inches

Truck bed lengths -10 - 12 feet  
GVW - 11000 - 15000 lbs

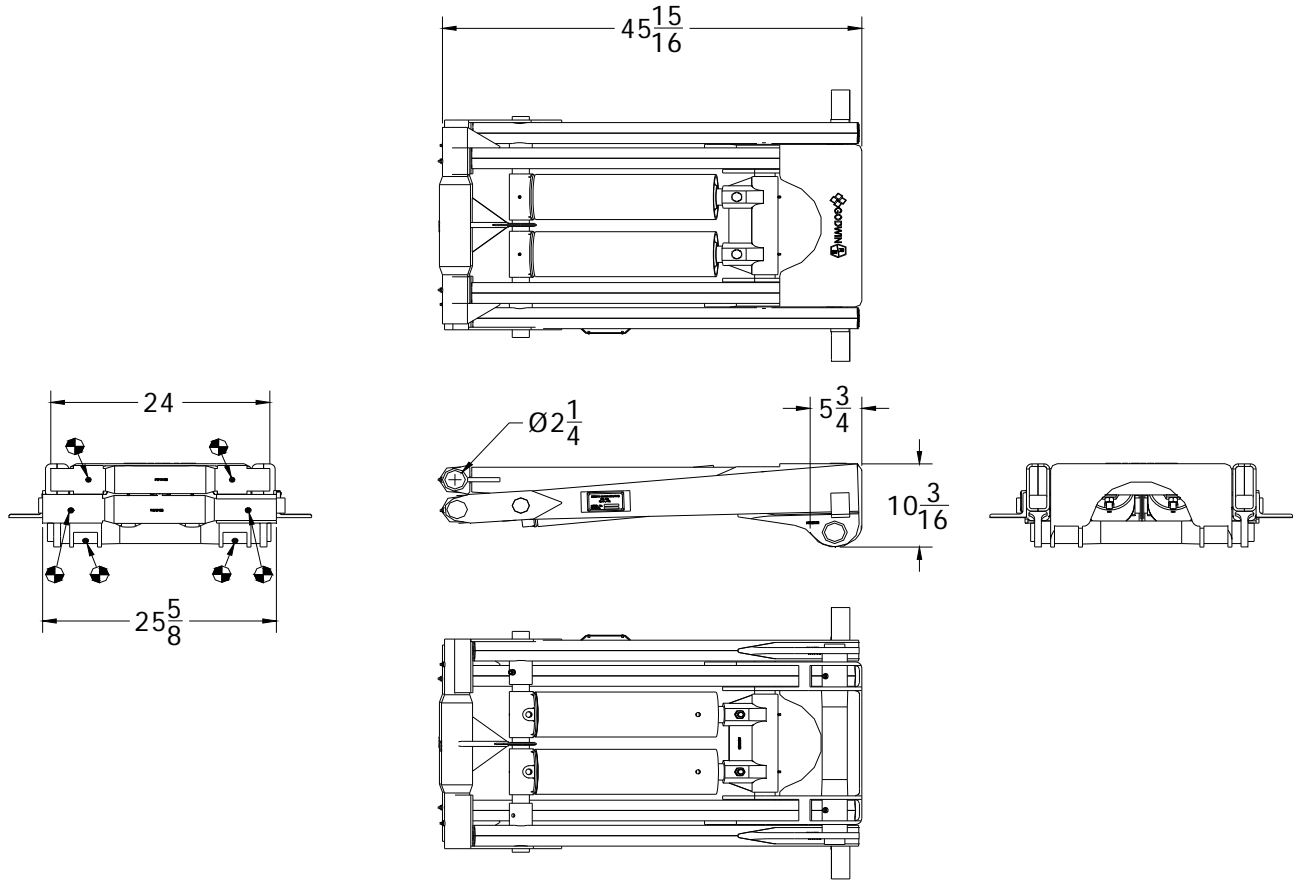
## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS6615



⊕ - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	94 inches
45° TILT	84 inches

Truck bed lengths -12 - 14 feet  
GVW - 18000 - 24000 lbs

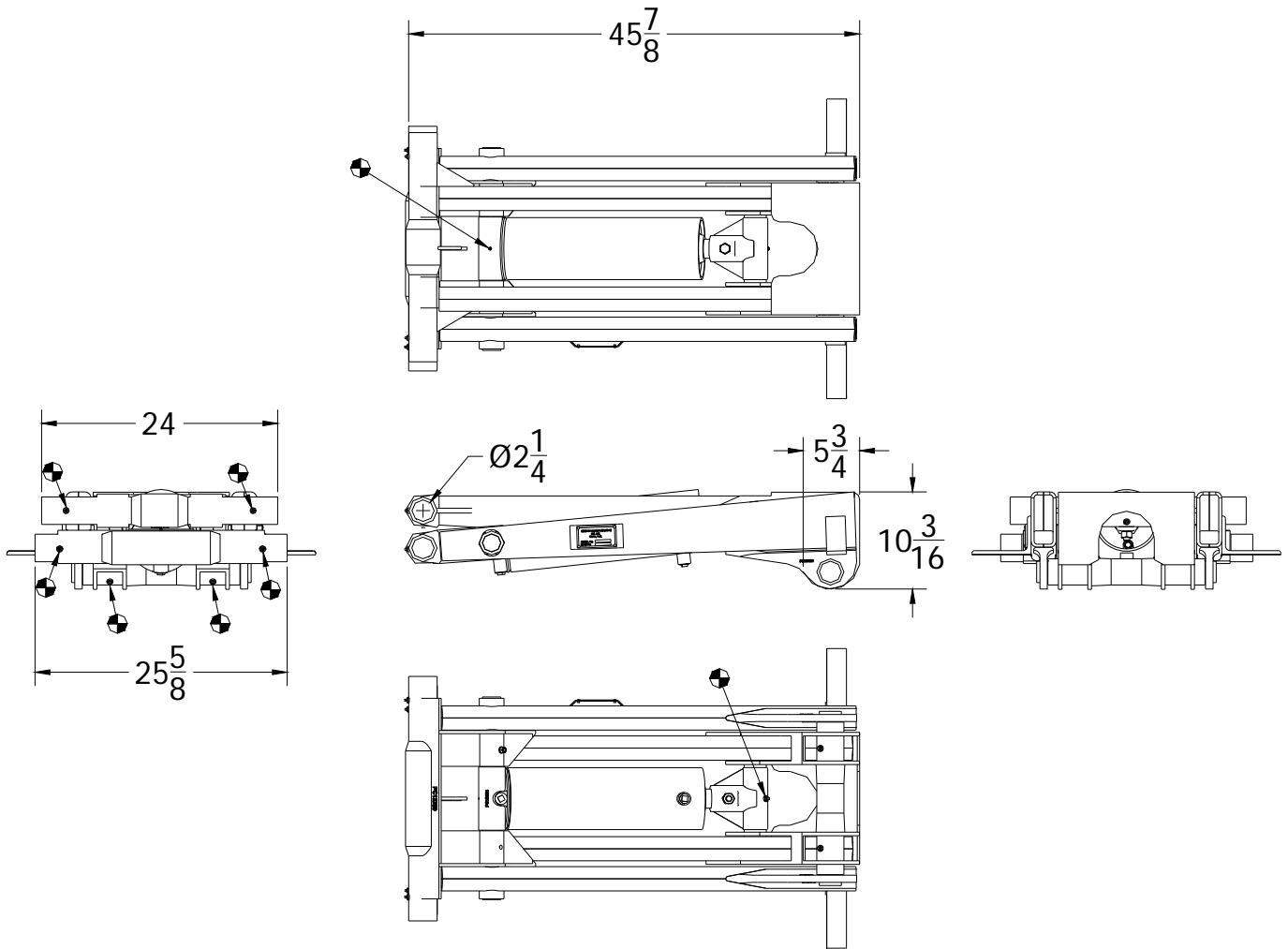
## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS615HD



● - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	94 inches
45° TILT	84 inches

Truck bed lengths -10 - 12 feet  
GVW - 14000 - 18000 lbs

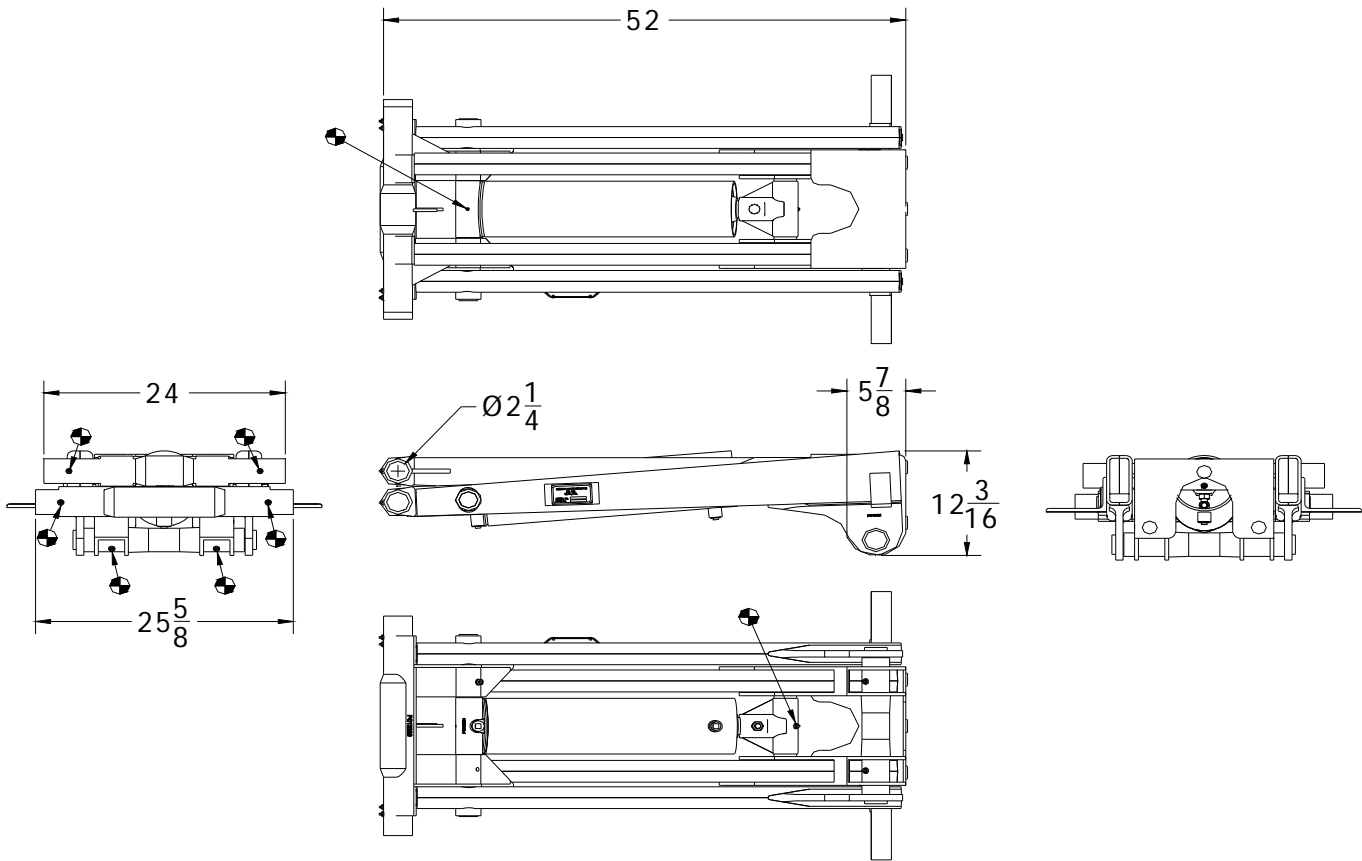
## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS620HD



⊕ - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	118 inches
45° TILT	106 inches

Truck bed lengths -12 - 16 feet  
GVW - 14000 - 18000 lbs

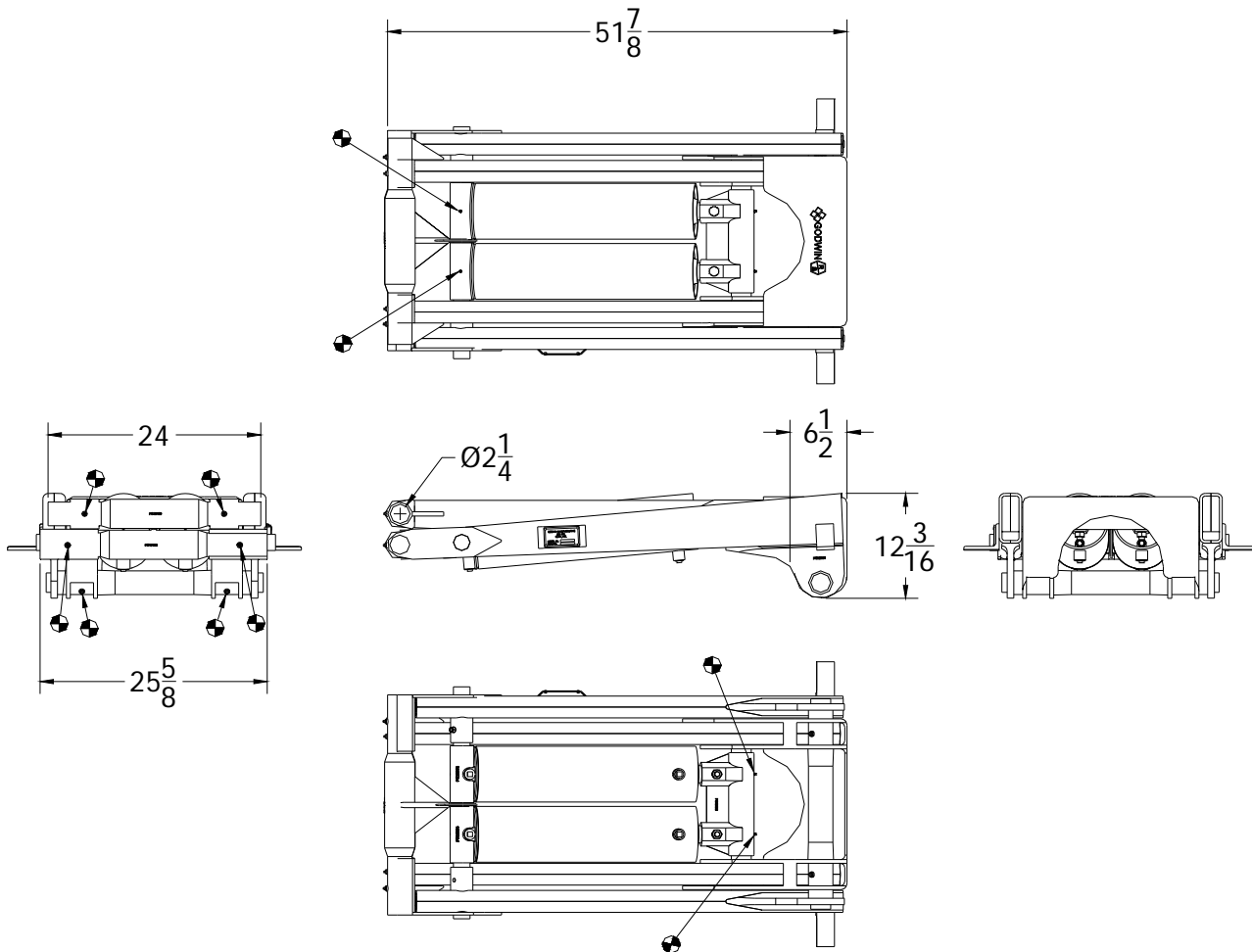
## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS6620



● - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	118 inches
45° TILT	106 inches

Truck bed lengths -14 - 16 feet  
GVW - 24000 - 28000 lbs

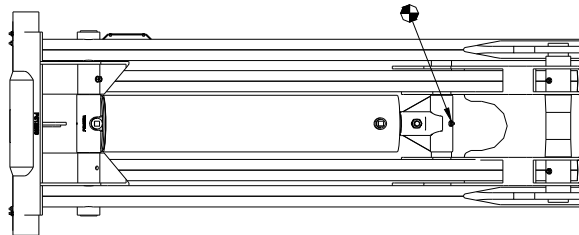
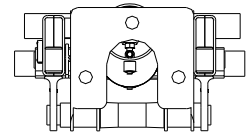
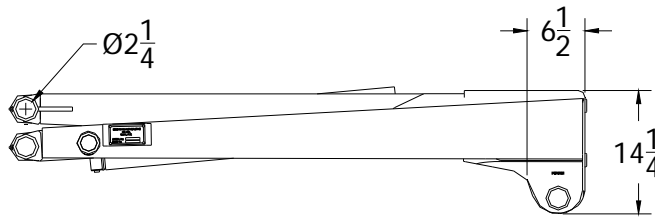
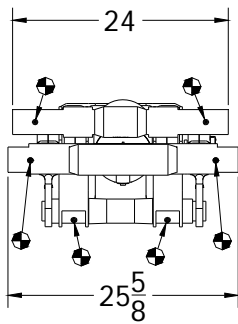
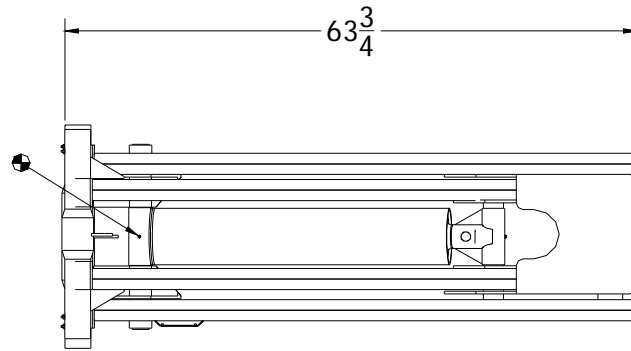
## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS628



⊕ - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	149 inches
45° TILT	135 inches

Truck bed lengths -14 - 16 feet  
GVW - 24000 - 28000 lbs

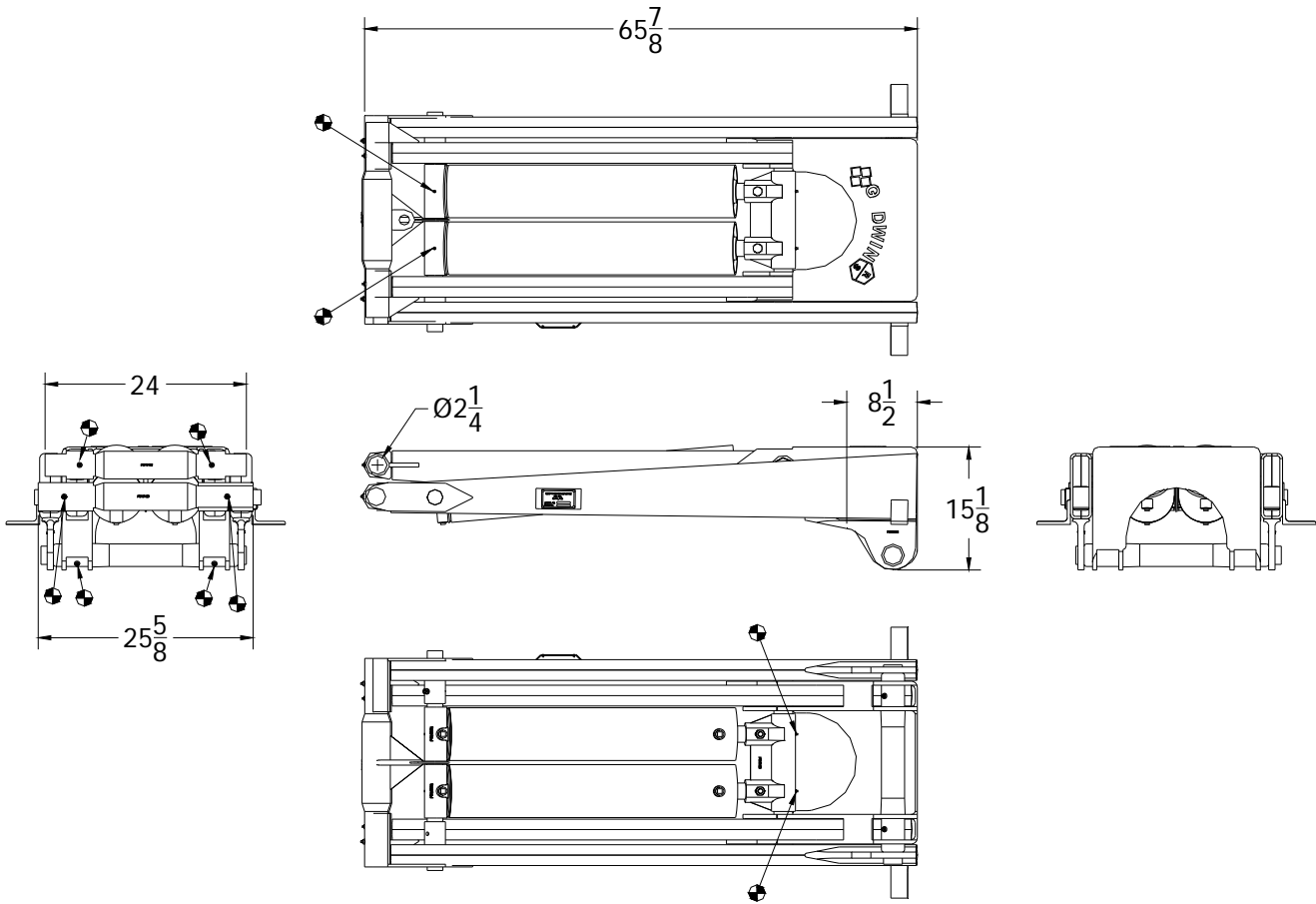
## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS5530



● - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	163 inches
45° TILT	146 inches

Truck bed lengths -18 - 20 feet  
GVW - 28000 - 35000 lbs

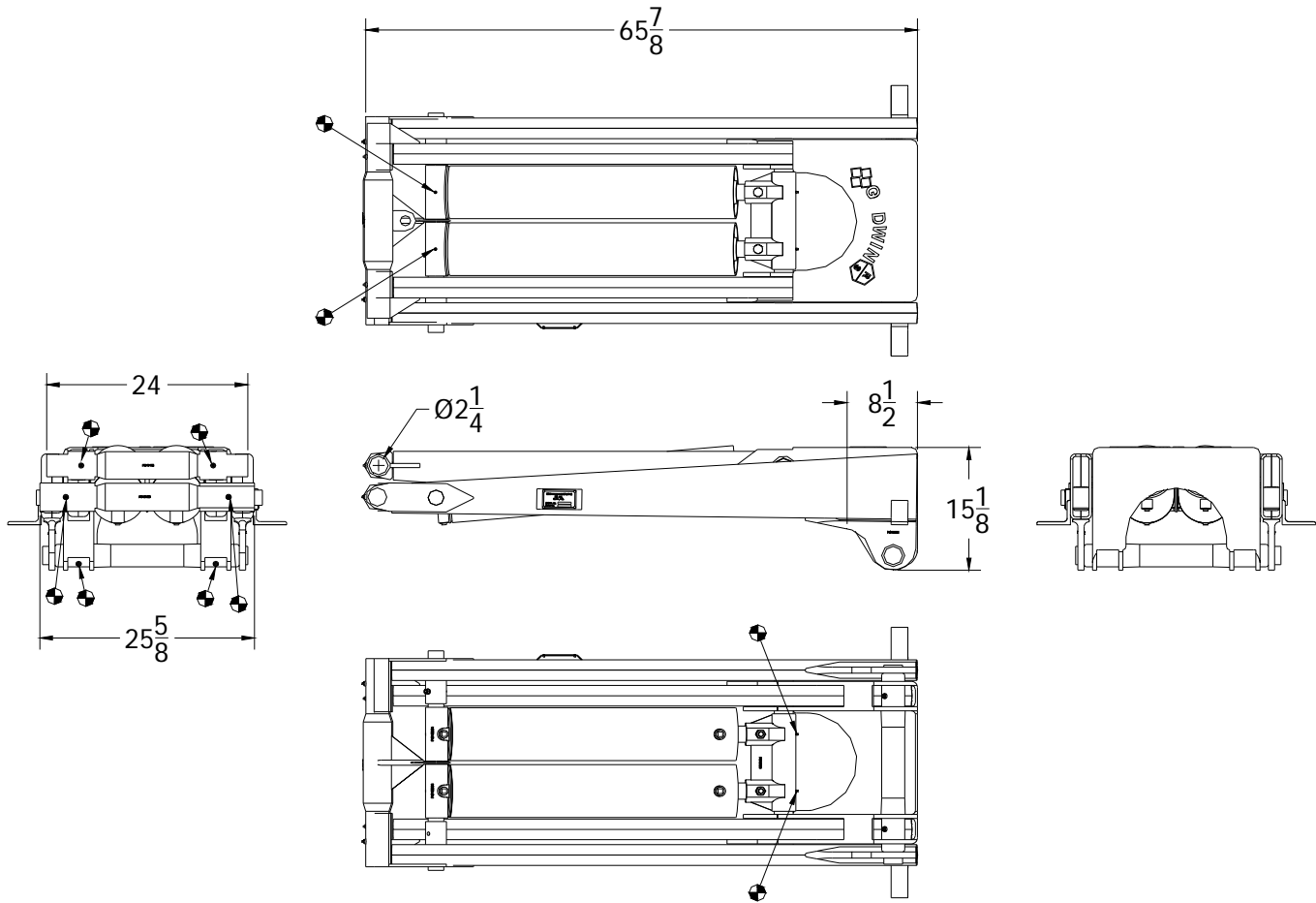
## CHAMPION

Hoist and Equipment  
Dunn, North Carolin, U.S.A.

910 - 897 - 4995

Fax 910 - 897 - 6822

# GS6630



☒ - GREASE FITTING LOCATIONS

"G" DIMENSION	
40° TILT	163 inches
45° TILT	146 inches

Truck bed lengths -18 - 24 feet  
GVWR- 35000 - 50000 lbs

## CHAMPION

Hoist and Equipment  
Dunn, North Carolina, U.S.A.

910 - 897 - 4995

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