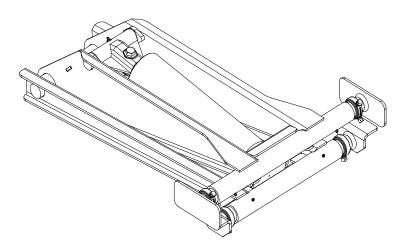


AN AFFILIATE OF



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

TRAILER CONVERSION HOIST



Operation & Installation Manual

Notes

It is recommended that the Owner/Operator record the following information immediately after purchasing. So that when calling for Parts or Service, the information will be readily on hand.

Dump Trailer Body Model Number	
Serial Number	
Subframe Assembly	
Model Number	
Serial Number	
Hoist Assembly	
Model Number	
Serial Number	
Truck	
Year	
Make	
Model	
Truck Number	

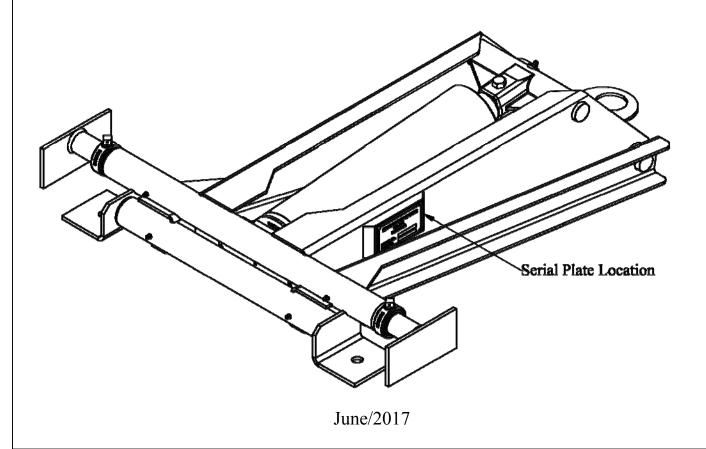


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Notice: Before Operating, Maintaining, or Repairing the Hoist read this manual completely and refer to it continuously.

Safety Alert Symbols

The terms Danger, Warning, and Caution are used to indicate different levels of potential hazard to equipment and personnel.

Indicates a hazardous situation which, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.

AWARNING Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

ACAUTION Indicates a hazardous situation which, if not avoided, could result in minor injury.

NOTICE Used to warn of a potential hazard to the equipment.



Safety Decal Locations

Safety Check	klists
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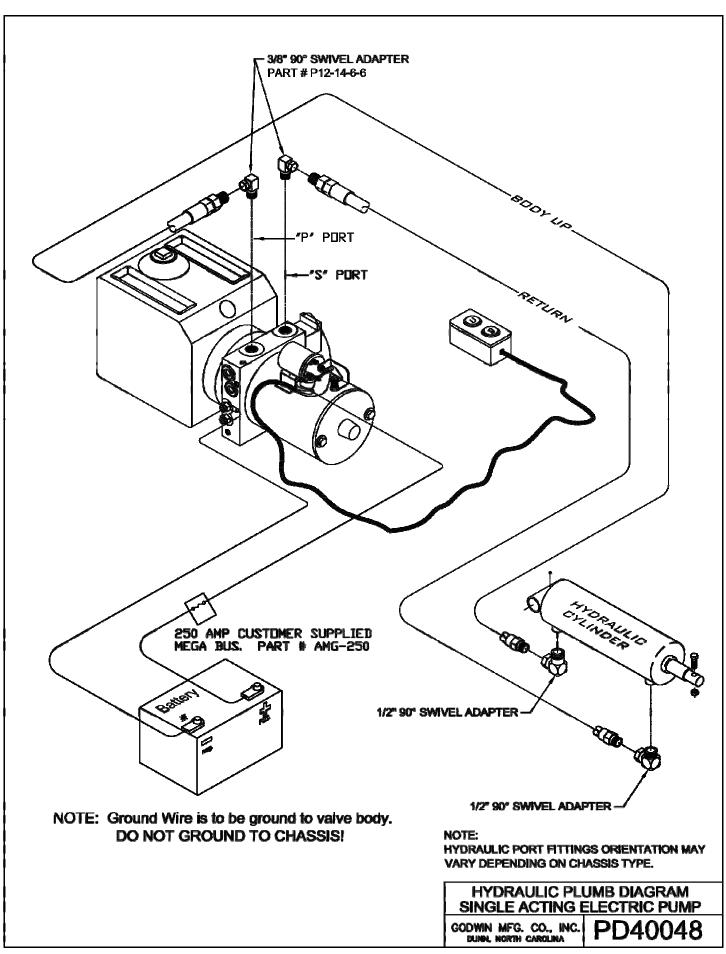
To prevent possible death or injury to personnel and damage to the equipment, the fol-A DANGER lowing checklist is to be performed prior to operating and while operating the Trailer and Hoist.

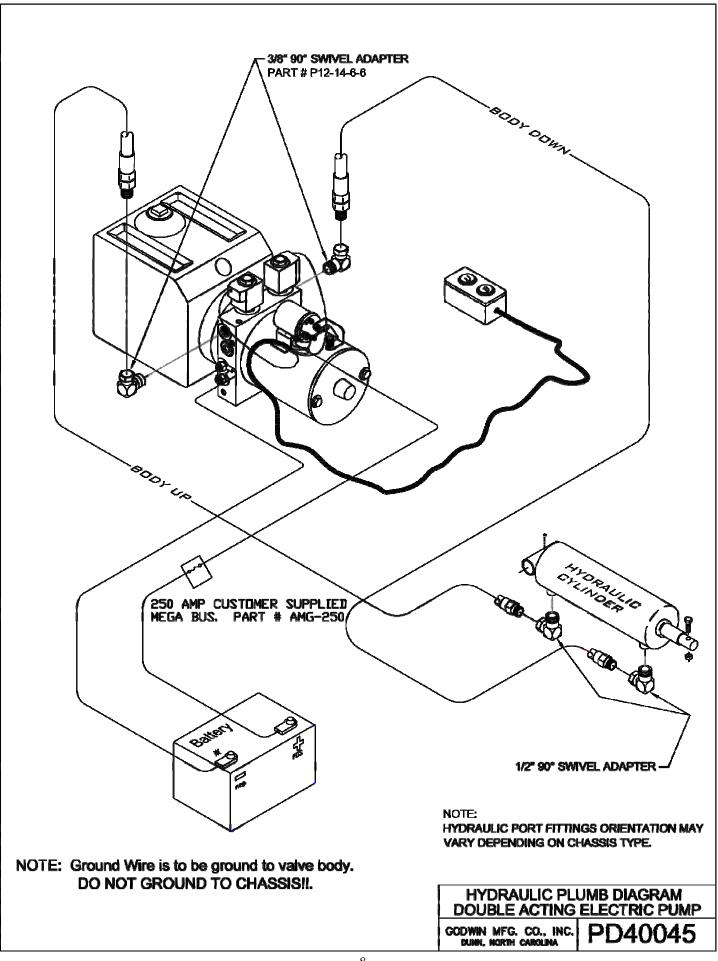
Pre-	Opera	ation	Checl	clist
110	Oper	ution	CHCC	ZIIDU

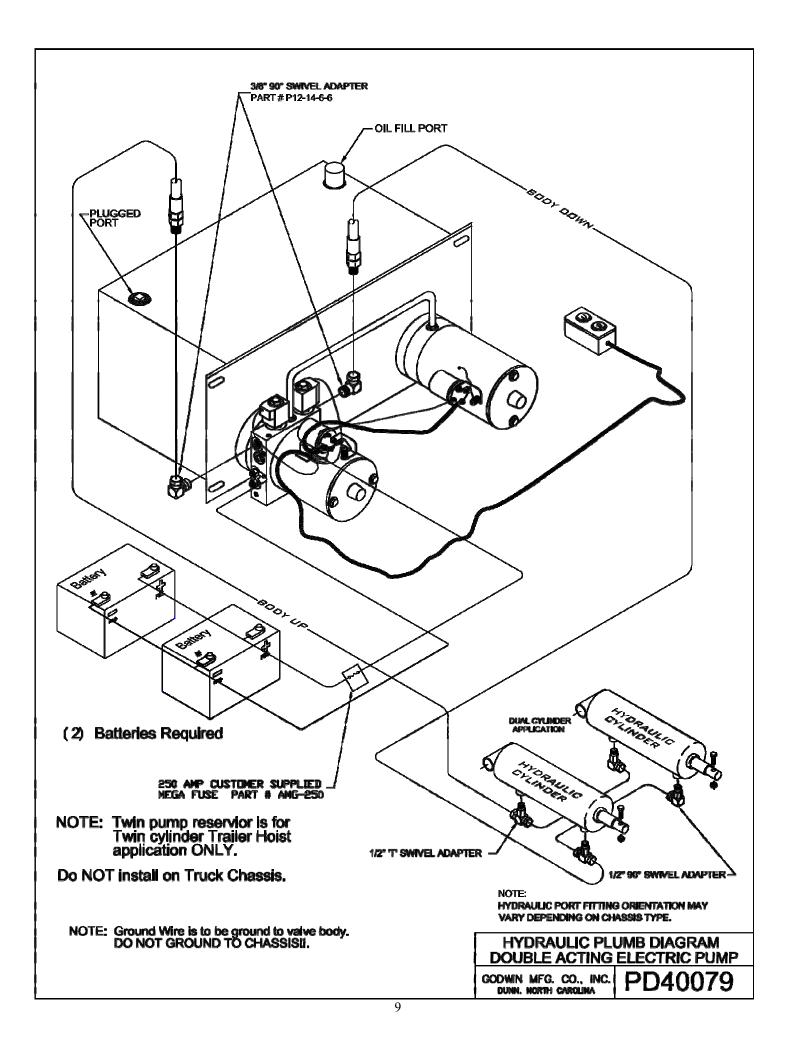
Pre-	Operation Checklist
	Prior to initial operation of Trailer and Hoist read this manual completely and refer to it continuously.
	Prior to operation of Hoist read and understand all the Safety Symbols, (Cautions, Warnings, and Dangers) in this manual, identify them on the Trailer and Hoist, and follow their instructions carefully. If any Safety Symbols are missing or incomplete on the Hoist order them from Godwin Manufacturing
	Do not allow unauthorized personnel to operate this equipment.
	Do not allow personnel to ride in or on the trailer body.
	Do not operate a loaded trailer on unlevel or soft surfaces.
	Prior to operation of Hoist inspect to ensure that the safety props, pump/valve guard are in place and ir good working order.
Ope	rational Checklist
	Before loading the Trailer make sure that the load does not exceed the Gross Vehicle Weight (GVW) rating of vehicle or the Hoist's rated lifting capacity.
	Always load the Dump Body evenly from side-to-side and from front-to-rear.
	Prior to operating the hoist ensure the area is clear of personnel and equipment.
	Do not allow hoist controls and the area around them to become cluttered with tools, cans, etc.
	Do not operate the hoist under Power Lines.
	Do not raise the hoist when trailer is in motion.
	Do not move the trailer with the hoist raised.
	Always release tailgate latching controls prior to lifting the dump body.
	Always operate the hoist controls from inside the truck cab.
	Do not go underneath a loaded and raised trailer body under ANY circumstances.
	Do not go underneath a truck with the engine running.
	Do not go underneath an unloaded raised trailer body unless the safety props are properly installed.
	Do not leave trailer unattended with trailer body raised.
Post	Operation Checklist

- Do not use hands or other body parts to check for hydraulic leaks.
- Follow all Federal, State, and local regulation pertaining to this equipment.
- Keep all equipment properly maintained and serviced.

The f	Periodic Inspections following checklist is to be followed prior to operating and while operating the Trailer and Hoist.
Daily	y Inspection (Before Operating)
	Check hydraulic oil level and add more to the reservoir as needed. For PTO driven pumps use HD 32 hydraulic oil. For electric driven pumps use ATF, automatic transmission fluid.
	Check for any fluid leaks under truck and hoist.
	Make sure all components are securely fastened, such as frame/pump guard, tool box is closed, hydraulic hoses for spreader/plow properly stowed, etc.
	Check all lighting to be sure it is functioning properly.
	Check lighting on any towed equipment.
	Inspect hitch if towed equipment is attached and be sure safety chains are fastened.
	Test hydraulic functions and observe for proper operations.
	Check tire pressure per markings on the tires.
Weel	kly Inspection
	Perform all of the above checks.
	Inspect all mechanical functions, i.e., hoist pivots, rear hinge pivots, single hitch, etc. Be sure they have been properly lubricated and show no signs of stress.
	Test Low Oil Shutdown system to be sure it is operating properly.
Bi-M	Ionthly Inspection
	Lubricate all hoist pivot points and rear hinge assemblies with chassis grease.
	Lubricate pintle hitch with chassis grease.
Six N	Months to One Year (Depending upon usage)
	Change hydraulic oil filter. (1st change after 50 hours of operation.)
	Inspect suction strainer in oil tank.
	Check hydraulic oil for contamination, discoloration, signs of wear, etc.







Electric Pump Priming Procedure Single acting (M-3519) or Double acting (M-3551)

- A. Be sure hoist and electric pump are completely installed and ready to safely operate. Fill electric pump reservoir with Automatic Transmission Oil to within 1 inch of top.
- B. Power the hoist "Up" using the "White" button 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, yellow) "C1" port = hoist raise (white button) = 3200psi.

"C2" port = hoist lower (black button) =1200psi.

Monarch 3519 (Single acting, orange) "P" port = hoist raise (white button) = 3200psi.

"S" port = lower/vent to res (black button) = 0 psi.

NOTICE

To prevent damage to the equipment, Do Not allow the hydraulic reservoir to run out of hydraulic, Automatic Transmission Oil. Always maintain at least a half tank of oil.

- C. When powering the hoist 'Up" the first time it is <u>imperative</u> that the reservoir <u>NOT</u> run out of oil. Maintain a half tank of oil on the first lift by stopping and filling as needed.
- D. Check for leaks during lifting operations and check for obstructions.
- E. For Double Acting Pump Only Lower the hoist by pressing the black button.

NOTE: Lower the hoist 1/3 and stop for 20 seconds, repeat two more times until hoist is fully lowered. Once the hoist has fully lowered CONTINUE to hold the "black" button until the oil in the reservoir stops moving (turbulence), about 20 seconds. The turbulence in the reservoir during this crucial step is filling the top side (or down side) of the cylinder. This typically has to be done only upon the initial installation or when the unit has run low in oil and is being refilled.

F. After steps A through E have been done fill the reservoir as needed to maintain ²/₃ to ³/₄ full with the bed down.

Helpful Hints:

- 1. Perform the above priming steps no more than twice in 30 minutes due to oil aerating.
- 2. If the reservoir overflows when lowering, the following could cause overflowing.
 - (a) Aerated oil
 - (b) "Hoist lower" line too small or obstructed
 - (c) Wrong ports used on pump
 - (d) extremely cold conditions.
- 3. Make sure the customer understands that the electric power unit (used when necessary) has the same lifting capacity but will be slower than a PTO driven unit.
- 4. Do not operate pump more than (2) minutes at a time or without truck engine running so as to keep a charge in battery.

Electric Pump Priming Procedure

C H A M PIO N

Hobt and Equipment

Dunn, North Carolina, U.S.A.

910 - 897 - 4995

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MP50398

Electric Pump Troubleshooting Procedure

Single acting (M-3519) or Double acting (M-3551)

Electric pump Solenoid does not click

- A. Bad hot (+) or ground (-) cables(s) from battery to pump. Be sure to use both cables and connect directly to the battery. Install a 250 amp 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. Two individual positive and ground cables from battery to electric pump unit are needed to correct for the higher current draw.
- B. Check for 12 volt signal at small post of solenoid when pressing the "Up" button on the control. If voltage is below 12 volts it may be 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. Bad motor.
- D. Seized pump.

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 coils magnetized when button is pressed? Could be bad coil or connector.
- C. Cartridge stem could be bent. Lower bed completely, remove cartridge and roll it on a table to check for alignment.
- D. Check pump unit pressure. Up should be 3200psi 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. Check for bent stem on "Down" cartridge. Call for service technician. DO NOT ATTEMPT TO REPAIR!

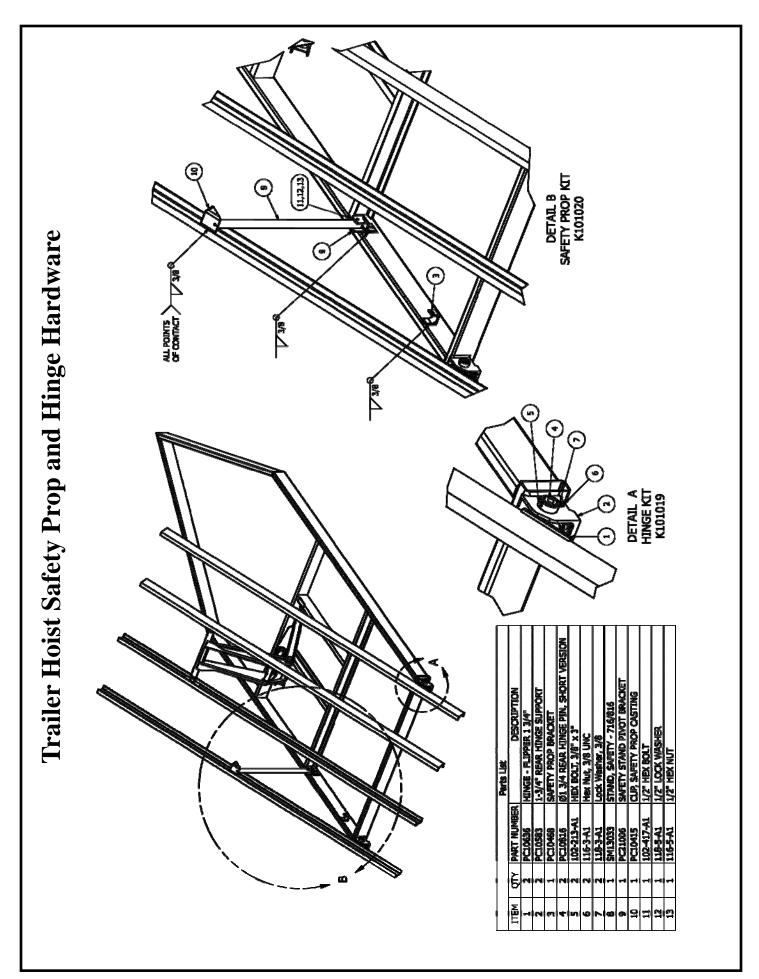


A Hoist that is stuck in the Up position is an extremely dangerous situation and must A DANGER be handled with great care. DO NOT ATTEMPT TO REPAIR! Call for a Service Technician.

> **Electric Pump Priming Troubleshooting**

CHAMPION

MP50399



Safety Prop Installation

Federal Regulation 1926.601, paragraph 10, requires the use of a Safety Prop (Safety Strut or Body Prop) on Dump Trucks and Dumping Trailers.

A DANGER

- Do not place any personal body parts between the trailer chassis and the moving parts of the Hoist and Dump Body.
- Do not use the Safety Prop when the Dump Body is loaded.
- Do not use damaged, bent, or loose Safety Props. Replace if damaged or bent and tighten all loose bolts.
- Read and understand the Safety Labels accompanying the Safety Prop. If label is damaged or missing, replace with a new label.

Safety Prop Information

- 1. Safety Prop is **not** designed to be used when the Dump Body is loaded. It is designed to be used only when the body is empty and needs cleaning, inspecting, or maintenance.
- 2. Godwin hoists are equipped with a single Safety Prop for Dump Bodies below 13 feet in length, and two Safety Props for Dump Bodies above 13 feet in length.
- 3. To prevent damage to Safety Prop and other equipment, keep Safety Prop stowed in Prop mounting bracket when not in use.

Using the Safety Prop

- 1. Use the Hoist Controls to raise the Dump Body high enough to stand the Safety Prop up.
- 2. Align the Safety Prop with the Safety Cup and slowly lower the Dump Body down onto the Safety Prop.
- 3. When the Safety Prop is no longer required. Use the Hoist Controls to raise the Dump Body high enough to clear the Safety Prop and lower the Safety Prop down into a safe position.

Safety Prop & Cup Installation

Note: The following instructions are for single Safety Prop trailers. Extra care must be taken when locating dual Safety Props to prevent drilling into a hydraulic hose or an electrical wire.

1. Use the Hoist to raise the Dump Body high enough to allow for measurement of correct alignment of Safety Prop & Cup. Leave body raised until installation is complete.

Note: The Safety Prop Cup must be located on a Dump Body cross channel. This means that the cup will be tucked-up inside of the dump body so that it can be welded to the cross channel, and the floor of the body. **Note:** When correctly installed the Safety Prop will angle slightly (80°) towards the rear of the trailer. Put another way, 90° is perpendicular (vertical) to the trailer frame therefore 80° is 10° off of vertical. This will prevent the Safety Prop from slipping out of the Safety Cup.

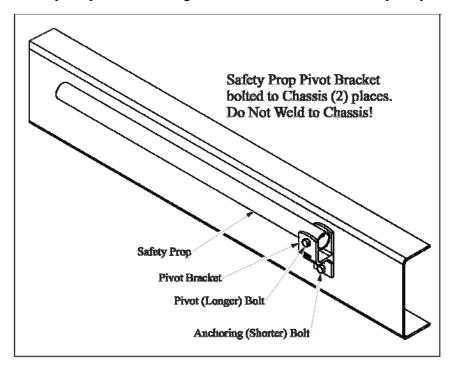
- 2. Assemble the Safety Prop and Pivot Bracket by inserting a ½ inch bolt through the bracket and the prop. Secure it lightly with a nut.
- 3. Align the Pivot Bracket even with the top of the trailer chassis and tip the Safety Prop 80° towards the rear of the trailer. Slide the bracket and prop assembly along the chassis until the location of the Safety Cup is determined.

Prior to locating the Safety Cup & Prop carefully inspect the area for any wiring or hydraulic hoses.

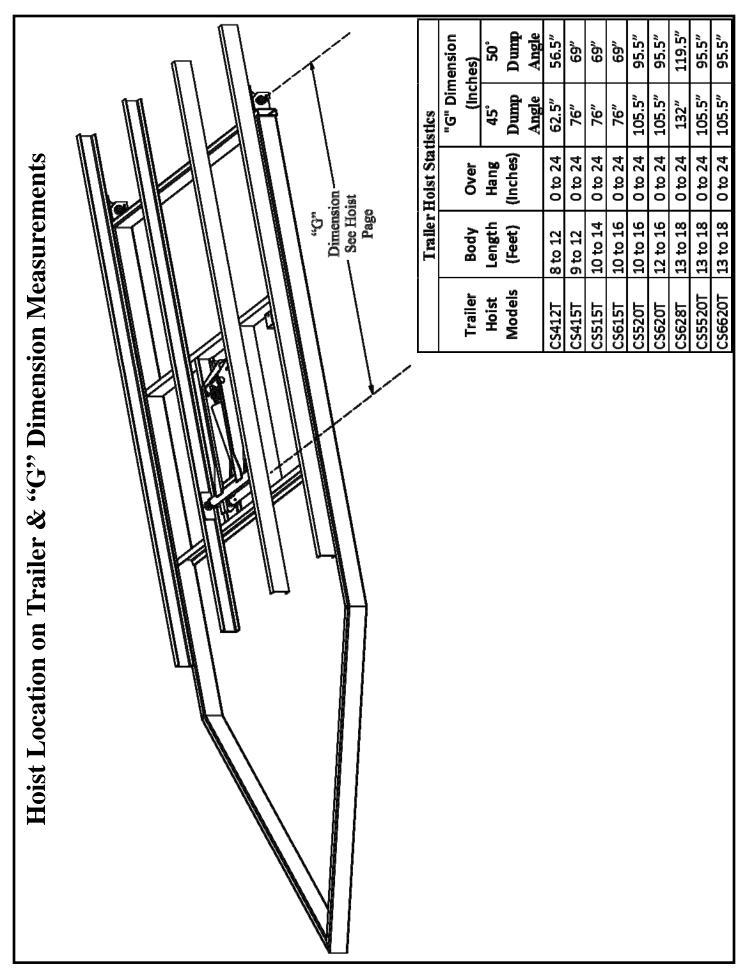
Pay particular attention to the inside of the chassis where the two holes for the Pivot Bracket will be drilled. It may be necessary to temporarily move any wiring or hoses out of the way when drilling the two holes.

Safety Prop Instructions (continued) Safety Prop & Cup Installation (continued)

- 4. Mount the Safety Cup to the cross member, and underside of the floor. Secure it with a C-Clamp and weld all contact points with 3/8 inch bead.
- 5. Place the end of the Safety Prop in the newly mounted Safety Cup (at the 80° angle) and mark the location for the holes to be drilled into the truck chassis.
- 6. Disassemble the Safety Prop and Pivot Bracket by removing the ½ inch bolt holding the bracket and the prop together.
- 7. Align the Pivot Bracket to the mark on the chassis and remark the holes.
- 8. Remove the Pivot Bracket and drill the two holes. (Refer to Notice above.)
- 9. Mount the Pivot Bracket to the chassis with the lower bolt and assemble the Safety Prop to the Pivot Bracket and chassis using the longer bolt.
- 10. Tighten the lower (shorter) bolt firmly to the chassis and tighten the upper (longer) bolt enough to allow the Safety Prop to move back and forth, with effort.
- 11. Align the Safety Prop with the Safety Cup and rest the body on the Safety Prop and test for stability. (The Safety Prop should not move and should stay in the Safety Cup.)
- 12. Lift body off of Safety Prop and check tightness of bolts.
- 13. Lower Safety Prop forward alongside the chassis and lower body fully.



Safety Prop Installation



Removing Slack from Hoist and Rear Hinge

INCORRECT INSTALLATION BODY LONG SILL UPPER LIFT ARM **MOVED FROM HOIST AND** REAR HINGE DURING IN-**IMPORTANT!** SLACK MUST BE RE-

STALLATION.

Procedure Steps:

Refer to Illustration Left)

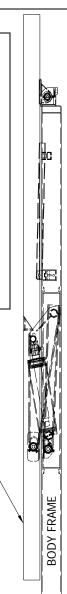
proximately 1-1/2" as measured from the Using the Hoist Power, Raise the Body apend of bed. Weld Lift Arms to Long Sills using 3/8" con-

Make sure Hoist is Centered within the Rails tinuous Fillet Weld. (See Below) and secure in place with collars.

A CAUTION

could cause Hoist Failure Failure to perform this procedure as specified

and therefore VOIDS Associated Warranty.



UPPER LIFT ARMS AND TOP OF LONG

SILLS MUST BE PARALLEL.

- LONG SILL

.1/4" x 4 1/2" PLATE SUPPLIED BY INSTALLER NOTE: IF LOWER LIFT ARM IS EXTENDED OUT FURTHER THATN 2"
THEN COLLAR MUST BE USED. -PART # PC12161 (COLLAR) -PART # W12391/PC10626 (UPPER) 1/4 V < TYP. 24 MIN. 30 MAX. LONG SILL OF BODY √3/8 TYP. TYP. > 3/8 1∕ 6 3/8 MIN.

> NOTE: Make sure to grease all Lubrication Fittings before operating. Refer to Hoist illustrations for fitting locations.

Hoist and Dump Body Installation Procedure for Trailers

Measuring the Trailer and Dump Body for correct installation

Determine Rear Hinge Location and Install Hinge

Note: The following instructions are based on the assumption that care has been taken to properly match the trailer and dump body in length, width, and height. Care must also be taken to properly match the weights of the dump body and hoist to the trailer so as not to exceed the Gross Vehicle Weight Requirement (GVWR) of the trailer when fully loaded.

- 1. Prior to measuring the trailer for hoist and dump body installation, determine if the trailer has any obstructions on the tongue of the trailer that could interfere with the operation of the dump body.
- 2. Measure 3 inches from the rear of the obstruction towards the rear of the trailer along the top of the trailer chassis and mark the distance with a suitably bright marker pen, or a piece of brightly colored tape.
- 3. Measure and record the distance from the 3 inch mark to the end of the trailer chassis.
- 4. Measure and record the length of the Long Sills on the bottom of the dump body.

Note: The difference in these two lengths will determine how much Overhang is needed and/or how much must be removed from the rear of the trailer chassis.

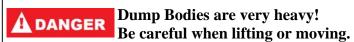
- 5. Once the correct distance is determined, cut a notch into the ends of the chassis rails to accommodate the Rear Hinge Flipper Assembly and remove any excess rails.
- 6. Align the Rear Hinge Flipper Assembly in the notches and install it with a 1/2 inch continuous fillet weld on all contacting surfaces between the chassis rails and the rear hinge flipper assembly.

Install Hoist Assembly

Determine Hoist Location and Install Hoist

- 1. Using an appropriate lifting device, i.e., overhead crane, place the hoist on the chassis and check approximate location on dump body for dump body Crossmember interference. The hoist may be repositioned slightly fore or aft to relieve any interference with trailer components.
- 2. The hoist must be located as near to the (side-to-side) center of the trailer and the dump body as possible.
- 3. Locate and mark centerline for rear hinge pivot.
- 4. Based on the hoist model, select the "G" dimension from the table associated with the hoist.
- 5. Mark the centerline of the lower mounting bracket on the hoist assembly. (This distance must equal the "G" dimension of the hoist. Refer to figure on page 14.)
- 6. After successful hoist location, drill trailer chassis and mount the lower mounting brackets, to the chassis using approved hardware.
- 7. Upper Lift Arms of hoist must be parallel with the top of the Chassis Rails and therefore the Long Sills of the body. (Refer to figure "Removing Slack from Hoist and Rear Hinge" above.
- 8. Connect hydraulic lines to the hoist and use hoist controls to raise and lower the hoist to test operation.

Install Dump Body



Determine Body Location and Install Body

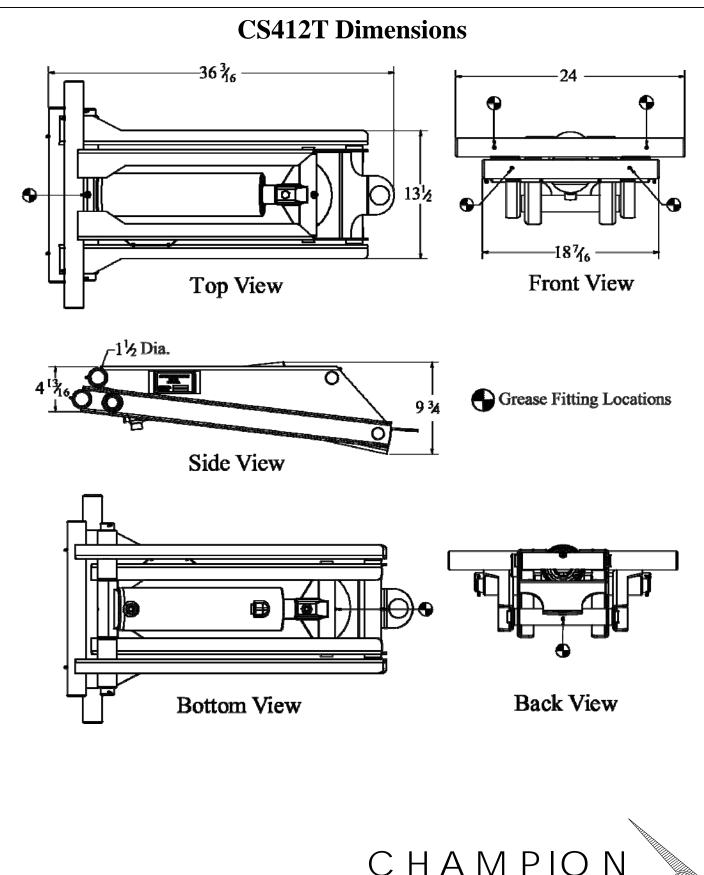
- 1. Using an appropriate lifting device, i.e., overhead crane, place the body on the chassis and check for correct alignment with chassis. Be sure that the body is aligned with the measurements in the steps above.
- 2. Weld Rear Hinge Flippers to the dump body with a 1/2 inch continuous fillet weld.
- 3. Using the hoist controls, raise the body 1-1/2" as measured from the front end of the body.
- 4. Weld Lift Arms to the Long Sills of the body using a 3/8" continuous fillet weld.
- 5. Using the hoist controls, raise the body high enough to engage the Safety Prop.
- 6. Inspect all welds and check operation of Hoist and Body.
- 7. Allow welds to cool and grease all Pivot Points and grease fittings with EP-2 chassis grease, or equivalent. (Refer to Hoist Dimensions, Capacities, & Parts pages of Hoist for grease fitting locations.)

CS412T Capacities

CS412T Hoist Capacity (Tons)				
Body Length Overhang		Dump Angle (Degrees) "G" Dimension (Inches)		
(Feet)	(Inches)	45 Deg.(62.5 Inches)	50 Deg. (56.5 Inches)	
8	0	5.70	5.20	
8	12	7.70	6.90	
8	18	9.20	8.30	
8	24	11.50	10.40	
9	0	5.10	4.60	
9	12	6.60	5.90	
9	18	7.70	6.90	
9	24	9.20	8.30	
10	0	4.60	4.20	
10	12	5.70	5.20	
10	18	6.60	5.90	
10	24	7.70	6.90	
11	0	4.20	3.80	
11	12	5.10	4.60	
11	18	5.70	5.20	
11	24	6.60	5.90	
12	0	3.80	3.50	
12	12	4.60	4.20	
12	18	5.10	4.60	
12	24	5.70	5.20	



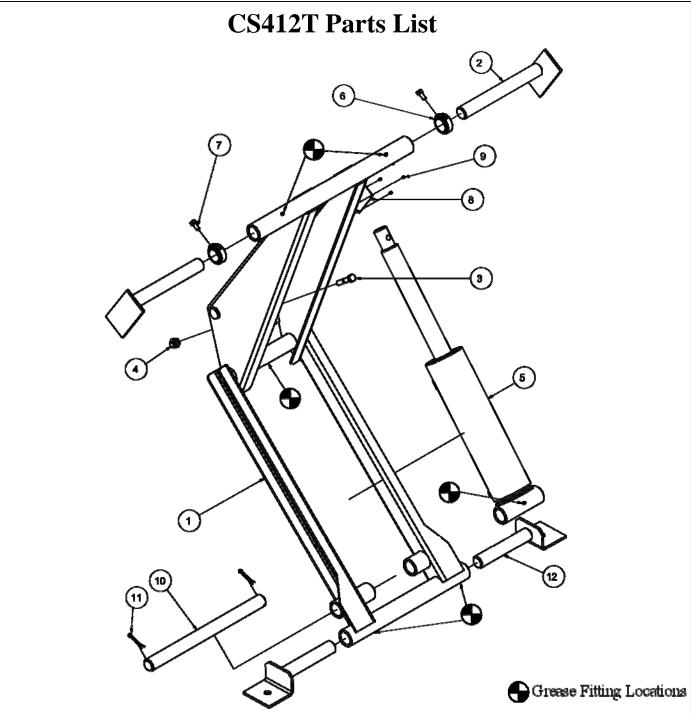
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CHAMPIC Hoist and Equipment

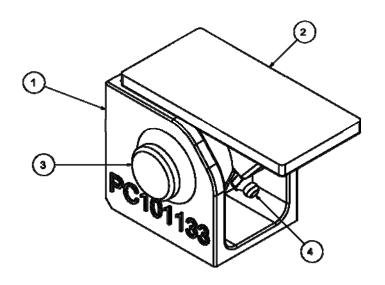
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	CS412T Parts List (refer to engineering drawing A12454)				
Item	Qty.	Part Number	Description		
1	1	W12439	Scissor Hoist Weldment, CS412T		
2	2	W12451	Upper lift Arm Weldment, CS412T		
3	1	102-411-A1	Hex Bolt, 1/2" x 2 1/2"		
4	1	162-10-S	Lock Nut, 1/2"		
5	1	A21324	Cylinder Assembly 412		
6	2	PC12458	Collar, Lift Arm 1-7/16"		
7	2	P34	Set Screw 3/8"-16 x 3/4" Square Head		
8	1	P10100	Serial Plate		
9	4	PAAP43	Rivet, 1/8" Cherry Pop		
10	1	SM12580	Bottom Cylinder Shaft, 412T		
11	2	125-256	Pin, Cotter		
12	2	W12582	Lower Lift Point Weldment 412T		

CS412T Rear Hinge Assembly



PARTS LIST			
ITEM QTY PART NUMBER DESCRIPTION			
1	1	PC101133	REAR HINGE SUPPORT, 1"
2	1	PC101134	HINGE BLOCK, 1"
3	1	S13823	REAR HINGE PIN, 1"
4	1	P800	1/8" PIPE THREAD GREASE FITTING



Dunn, North Carolina, U.S.A.

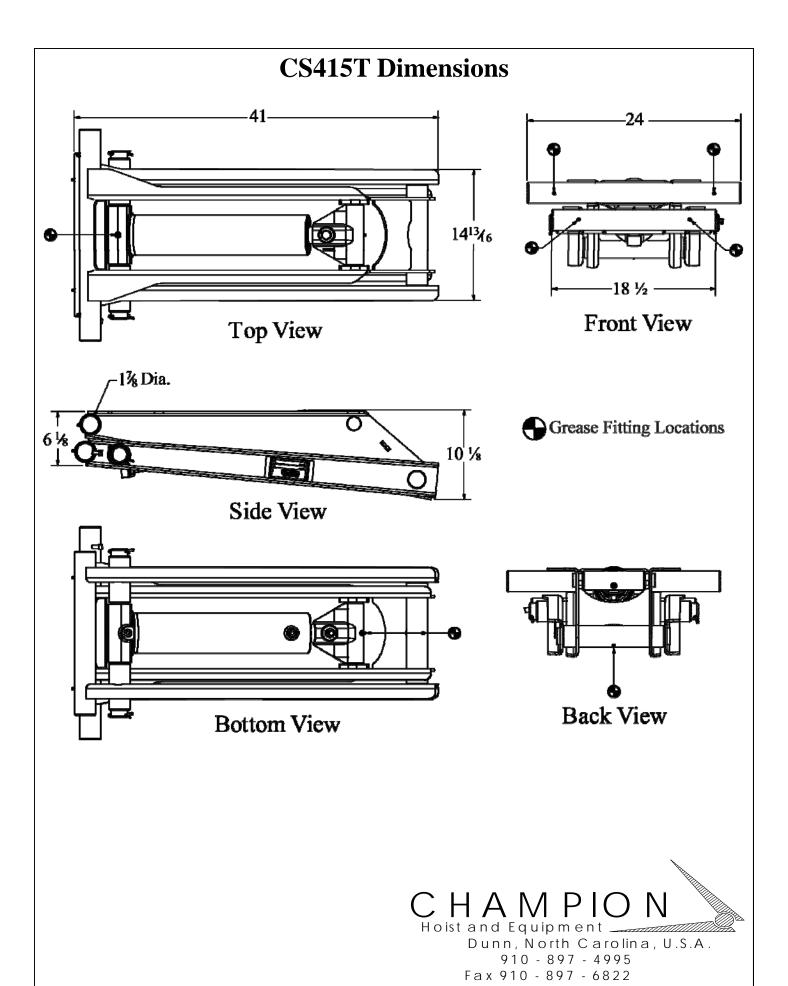
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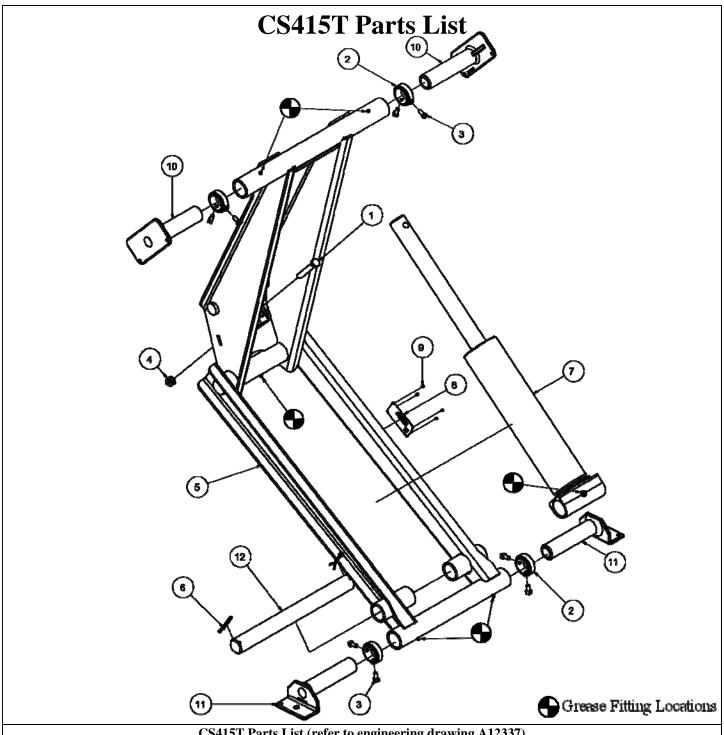
CS415T Capacities

CS415T Hoist Capacity (Tons)				
Body Length	Overhang	Dump Angle (Degrees) "G" Dimension (Inches)		
(Feet)	(Inches)	45 Deg.(76 Inches)	50 Deg. (69 Inches)	
	0	5.50	5.00	
9	12	7.10	6.40	
9	18	8.20	7.50	
	24	9.90	9.00	
	0	4.90	4.50	
10	12	6.20	5.60	
10	18	7.10	6.40	
	24	8.20	7.50	
	0	4.50	4.10	
11	12	5.50	5.00	
11	18	6.20	5.60	
	24	7.10	6.40	
12	0	4.10	3.70	
	12	4.90	4.50	
	18	5.50	5.00	
	24	6.20	5.60	



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	CS415T Parts List (refer to engineering drawing A12337)				
Item Qty. Part Number Description					
1	1	102-617-L	Hex Cap Screw, 5/8 x 4, GR 9		
2	4	PC12161	Collar, Lift Arm 1-7/8"		
3	8	P34	Set Screw 3/8"-16 x 3/4" Square Head		
4	1	143-7	Nylon Lock Nut, 5/8"		
5	2	W12334	Scissor Hoist Weldment, 415T		
6	2	125-259	Cotter Pin, 1/4" x 2 1/2"		
7	1	A21321	Cylinder Assembly 415 DA		
8	1	P10200	Serial Plate		
9	4	PAAP43	Rivet, 1/8" Cherry Pop		
10	2	PC12573	Upper Lift Arm Weldment, 415T		
11	2	PC12574	Lower Lift Point Weldment 415T		
12	1	SM12016	Bottom Cylinder Shaft, 415T		

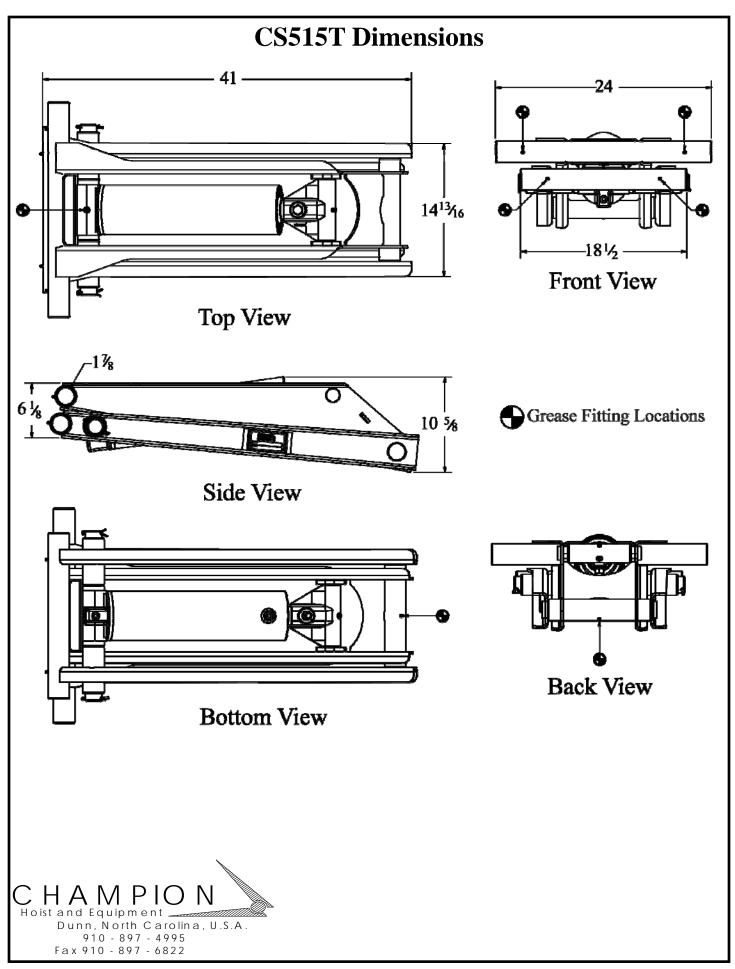
CS515T Capacities

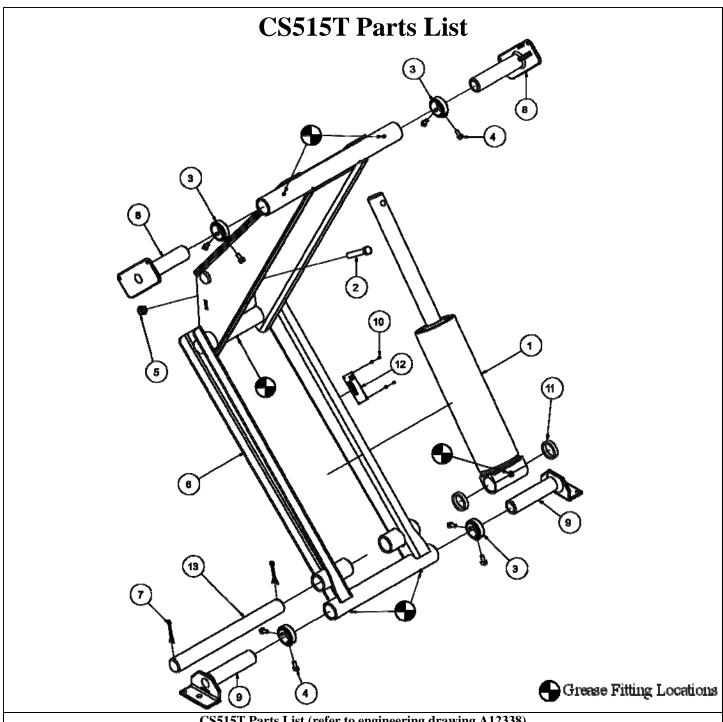
CS515T Hoist Capacity (Tons)				
Body Length Overhang		Dump Angle (Degrees) "G" Dimension (Inches)		
(Feet)	(Inches)	45 Deg.(76 Inches)	50 Deg. (69 Inches)	
	0	7.70	7.00	
10	12	9.70	8.80	
10	18	11.00	10.00	
	24	12.90	11.70	
	0	7.00	6.40	
11	12	8.60	7.80	
11	18	9.70	8.80	
	24	11.00	10.00	
	0	6.40	5.80	
12	12	7.70	7.00	
12	18	8.60	7.80	
	24	9.70	8.80	
	0	5.90	5.40	
12	12	7.00	6.40	
13	18	7.70	7.00	
	24	8.60	7.80	
	0	5.50	5.00	
14	12	6.40	5.80	
14	18	7.00	6.40	
	24	7.70	7.00	



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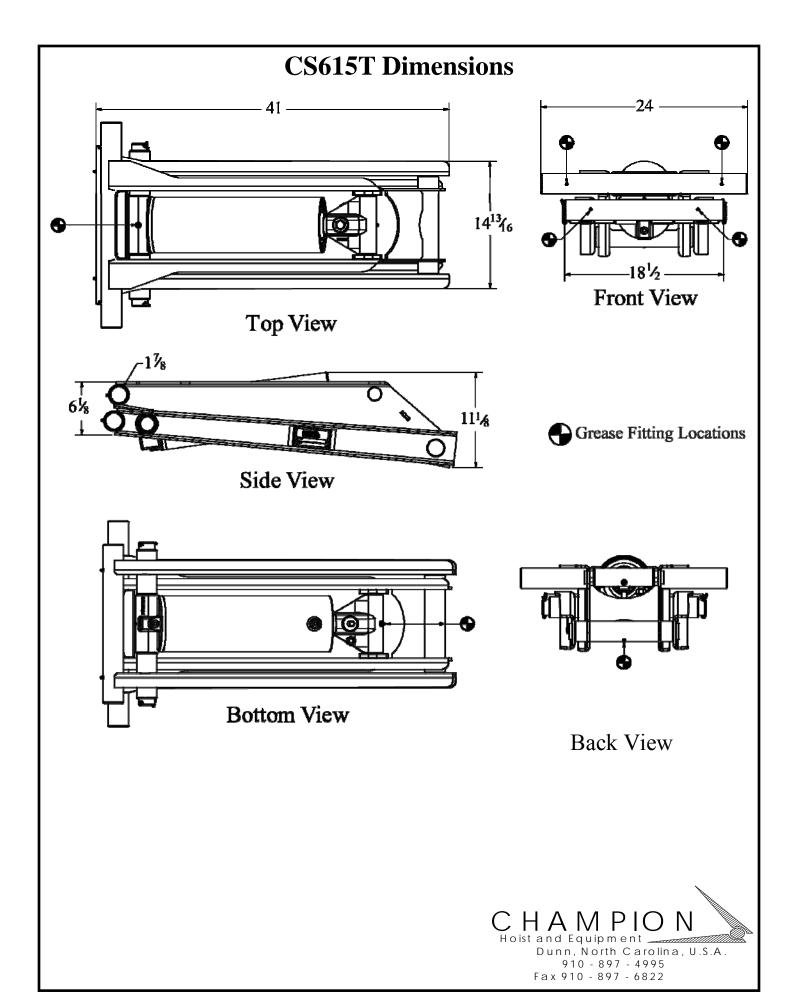


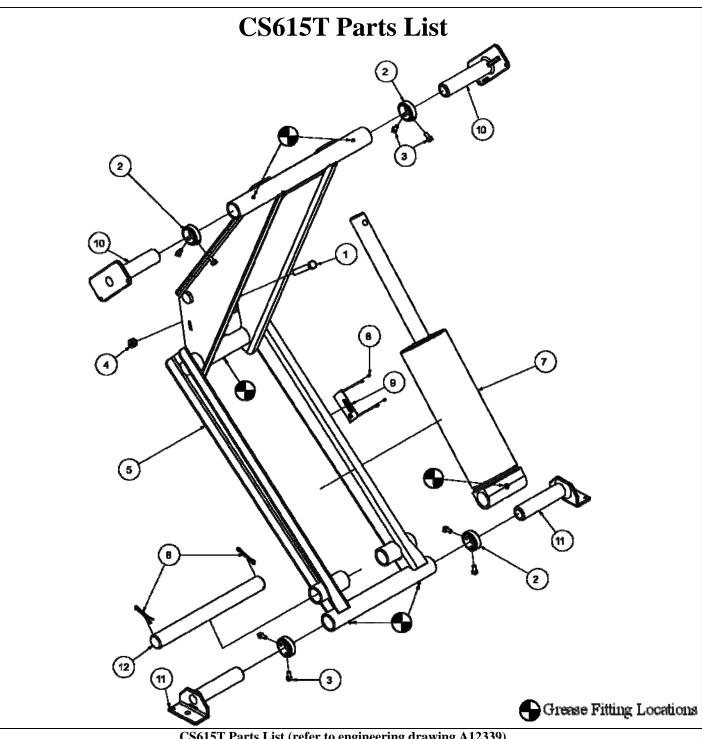
CS515T Parts List (refer to engineering drawing A12338)			
Item	Qty.	Part Number	Description
1	1	A21322	Cylinder Assembly, 515 DA
2	1	102-617-L	Hex Cap Screw, 5/8 x 4, GR 9
3	4	PC12161	Collar, Lift Arm 1-7/8"
4	8	P34	Set Screw 3/8"-16 x 3/4" Square Head
5	1	143-7	Nylon Lock Nut, 5/8"
6	1	W12334	Scissor Hoist Weldment, 515T
7	2	125-259	Cotter Pin, 1/4" x 2 1/2"
8	2	PC12573	Upper lift Arm Weldment, 515T
9	2	PC12574	Lower Lift Point Weldment 515T
10	4	PAAP43	Rivet, 1/8" Cherry Pop
11	2	PC12572	2" Spacer
12	1	P10200	Serial Plate
13	1	PC12651	Bottom Cylinder Shaft, 515T

CS615T Capacities

CS615T Hoist Capacity (Tons)				
Body Length	Overhang (Inches)	Dump Angle (Degrees) "G" Dimension (Inches)		
(Feet)		45 Deg.(76 Inches)	50 Deg. (69 Inches)	
	0	11.10	10.10	
10	12	13.90	12.60	
10	18	15.90	14.40	
	24	18.50	16.80	
	0	10.10	9.20	
11	12	12.40	11.20	
L.L	18	13.90	12.60	
	24	15.90	14.40	
	0	9.30	8.40	
12	12	11.10	10.10	
12	18	12.40	11.20	
	24	13.90	12.60	
	0	8.60	7.80	
13	12	10.10	9.20	
13	18	11.10	10.10	
	24	12.40	11.20	
	0	7.90	7.20	
14	12	9.30	8.40	
1 4	18	10.10	9.20	
	24	11.10	10.10	
	0	7.40	6.70	
15	12	8.60	7.80	
13	18	9.30	8.40	
	24	10.10	9.20	
	0	7.00	6.30	
16	12	7.90	7.20	
10	18	8.60	7.80	
	24	9.30	8.40	

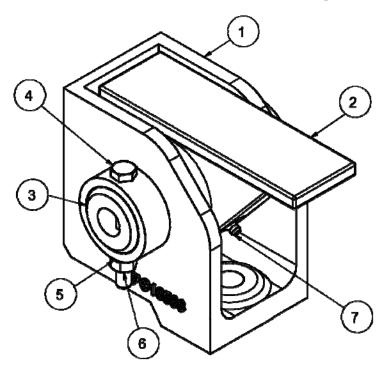






CS615T Parts List (refer to engineering drawing A12339)			
Item Qty. Part Number Description			Description
1	1	102-617-L	Hex Cap Screw, 5/8 x 4, GR 9
2	4	PC12161	Collar, Lift Arm 1-7/8"
3	8	P34	Set Screw 3/8"-16 x 3/4" Square Head
4	1	143-7	Nylon Lock Nut, 5/8"
5	1	W12334	Scissor Hoist Weldment, 615T
6	2	125-259	Cotter Pin, 1/4" x 2 1/2"
7	1	A21323	Cylinder Assembly, 615DA
8	4	PAAP43	Rivet, 1/8" Cherry Pop
9	1	P10200	Serial Plate
10	2	PC12573	Upper Lift Arm Weldment, 615T
11	2	PC12574	Lower Lift Point Weldment 615T
12	1	SM12016	Bottom Cylinder Shaft, 615T

CS415T/CS515T/CS615T Rear Hinge Assembly



415T/515T/615T Rear Hinge Assembly - Parts List				
Item	Qty.	Part Number	Description	
1	1	PC10583	Rear Hinge Block, 1-3/4"	
2	1	PC10636	Hinge Flipper, 1-3/4"	
3	1	PC10816	1-3/4" Rear Hinge Pin, Short Version	
4	1	102-214	Hex Cap Screw, 3/8 X 3 1/4	
5	1	118-3-A1	Lock Washer, 3/8	
6	1	116-3-A1	Hex Nut, 3/8 UNC	
7	1	P800	1/8" Pipe Thread Grease Fitting	



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CS520T Capacities

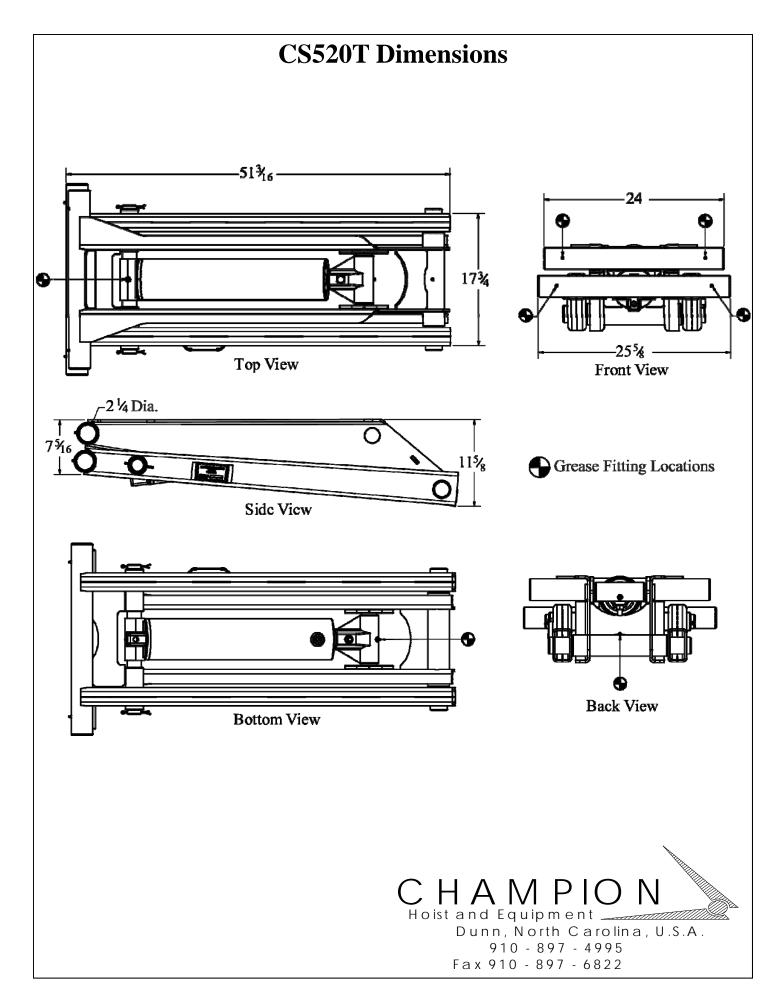
CS520T Hoist Capacity (Tons)			
Body Length (Feet)	Overhang (Inches)	Dump Angle (Degrees) "G" Dimension (Inches)	
(Feet)		45 Deg. (105.5 Inches)	50 Deg. (95.5 Inches)
	0	10.20	9.20
10	12	12.80	11.60
10	18		13.20
	24		15.40
	0	9.30	8.40
11	12	11.30	10.30
11	18	12.80	11.60
	24	14.60	13.20
	0	8.50	7.70
12	12	10.20	9.20
12	18	11.30	10.30
	24	12.80	11.60
	0	7.90	7.10
13	12	9.30	8.40
15	18	10.20	9.20
	24	11.30	10.30
	0	7.30	6.60
1.4	12	8.50	7.70
14	18	9.30	8.40
	24	10.20	9.20
	0	6.80	6.20
1.5	12	7.90	7.10
15	18	8.50	7.70
	24	9.30	8.40
	0	6.40	5.80
1.0	12	7.30	6.60
16	18	7.90	7.10
	24	8.50	7.70

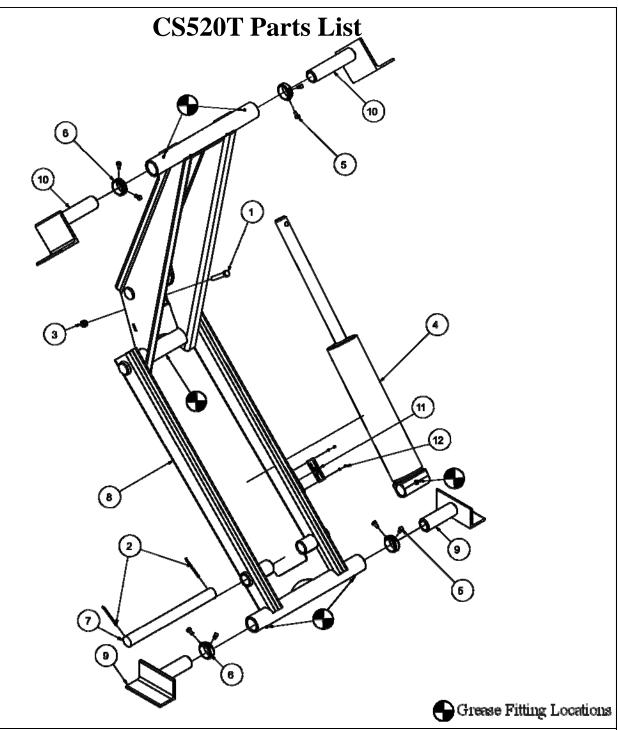
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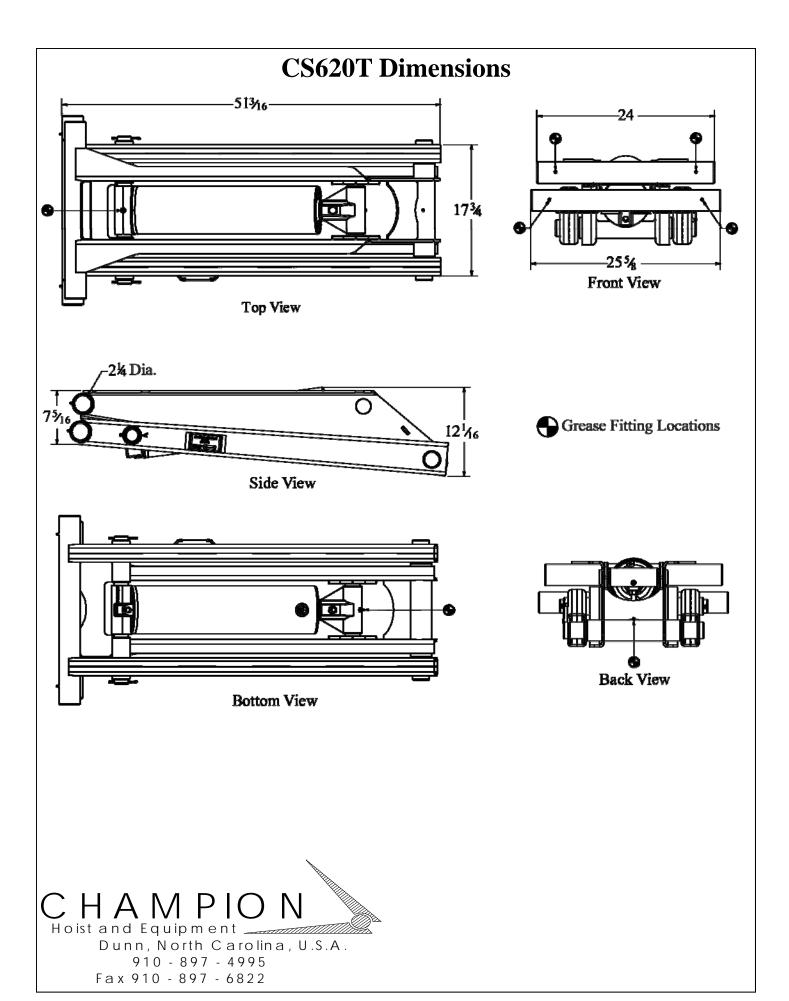
CS520T Parts List (refer to engineering drawing A12340)				
Item	Qty.	Part Number	Description	
1	1	102-617-A1	Hex Cap Screw, 5/8 x 4	
2	2	125-257	Cotter Pin, 2"	
3	1	162-10-S	Lock Nut, 1/2"	
4	1	A21359	Cylinder Assembly, 520 DA	
5	8	P34	Set Screw 3/8"-16 x 3/4" Square Head	
6	4	PC12157	Set Collar for Upper Lift Arm 2-1/4"	
7	1	PC12600	Cylinder Mount Shaft, 520T	
8	1	W12335	Scissor Hoist Weldment, 520T	
9	2	W13905	Lower Lift Arm Weldment, 2-1/4" 520T	
10	2	W13922	Upper Lift Arm Weldment, 2-1/4" 520T	
11	1	P10100	Serial Plate	
12	4	PAAP43	Rivet, 1/8" Cherry Pop	

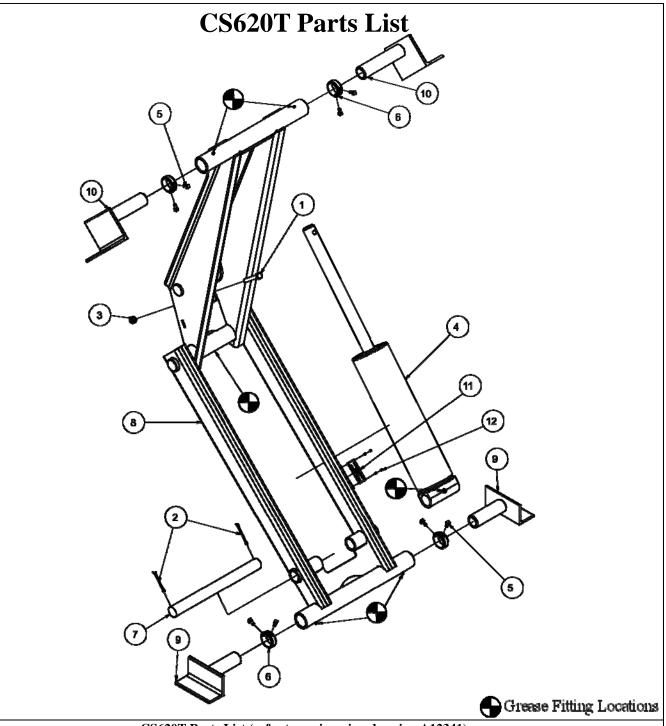
CS620T Capacities

CS620T Hoist Capacity (Tons)				
Body Length (Feet)	Overhang (Inches)	Dump Angle (Degrees) "G" Dimension (Inches)		
(Feet)		45 Deg.(105.5 Inches)	50 Deg. (95.5 Inches)	
	0	12.30	11.10	
12	12	14.70	13.30	
12	18	16.30	14.80	
	24	18.40	16.60	
	0	11.30	10.20	
13	12	13.40	12.10	
13	18	14.70	13.30	
	24	16.30	14.80	
	0	10.50	9.50	
1.4	12	12.30	11.10	
14	18	13.40	12.10	
	24	14.70	13.30	
	0	9.80	8.90	
15	12	11.30	10.20	
15	18	12.30	11.10	
	24	13.40	12.10	
	0	9.20	8.30	
16	12	10.50	9.50	
10	18	11.30	10.20	
	24	12.30	11.10	



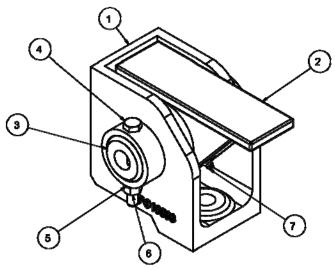
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	CS620T Parts List (refer to engineering drawing A12341)				
Item	Qty.	Part Number	Description		
1	1	102-617-A1	Hex Cap Screw, 5/8 x 4		
2	2	125-257	Cotter Pin, 2"		
3	1	162-10-S	Lock Nut, 1/2"		
4	1	A21328	Cylinder Assembly, 620 DA		
5	8	P34	Set Screw 3/8"-16 x 3/4" Square Head		
6	4	PC12157	Set Collar for Upper Lift Arm 2-1/4"		
7	1	PC12600	Cylinder Mount Shaft, 620T		
8	1	W12335	Scissor Hoist Weldment, 620T		
9	2	W13905	Lower Lift Arm Weldment, 2-1/4" 620T		
10	2	W13922	Upper Lift Arm Weldment, 2-1/4" 620T		
11	1	P10100	Serial Plate		
12	4	PAAP43	Rivet, 1/8" Cherry Pop		

CS520T/CS620T Rear Hinge Assembly



520T/620T REAR HINGE ASSEMBLY - PARTS LIST			
Item	Qty.	Part Number	Description
1	1	PC10583	Rear Hinge Block, 1-3/4"
2	1	PC10636	Hinge Flipper, 1-3/4"
3	1	PC10816	1-3/4" Rear Hinge Pin, Short Version
4	1	102-214	Hex Cap Screw, 3/8 X 3 1/4
5	1	118-3-A1	Lock Washer, 3/8
6	1	116-3-A1	Hex Nut, 3/8 UNC
7	1	P800	1/8" Pipe Thread Grease Fitting



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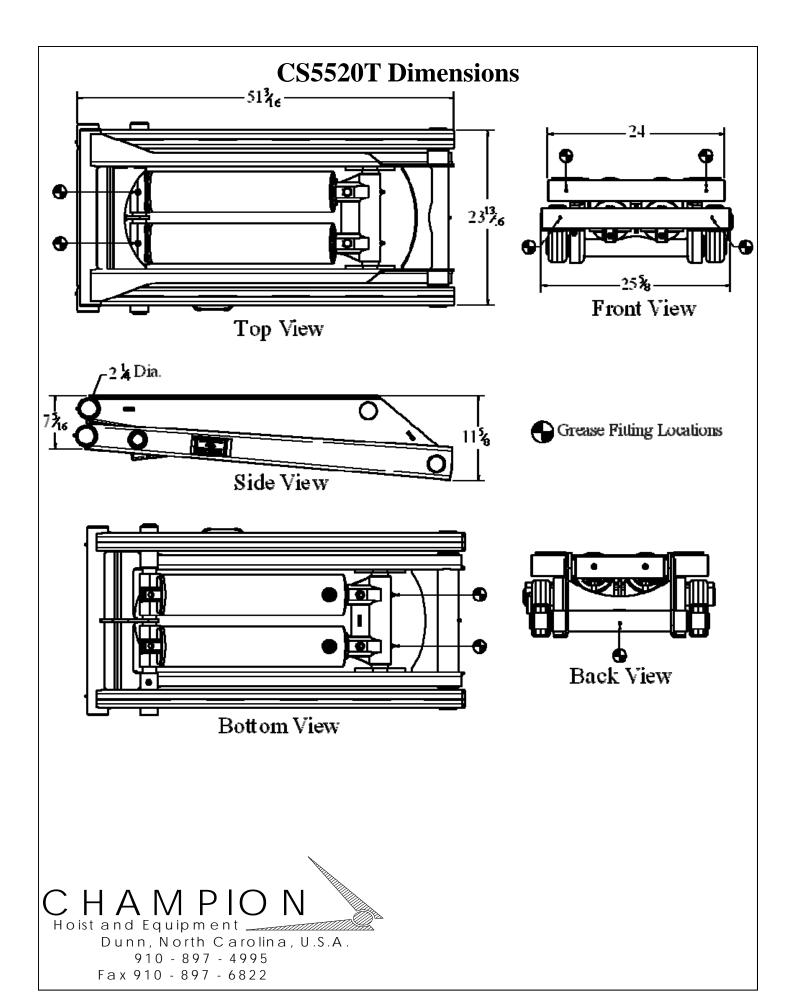
CS5520T Capacities

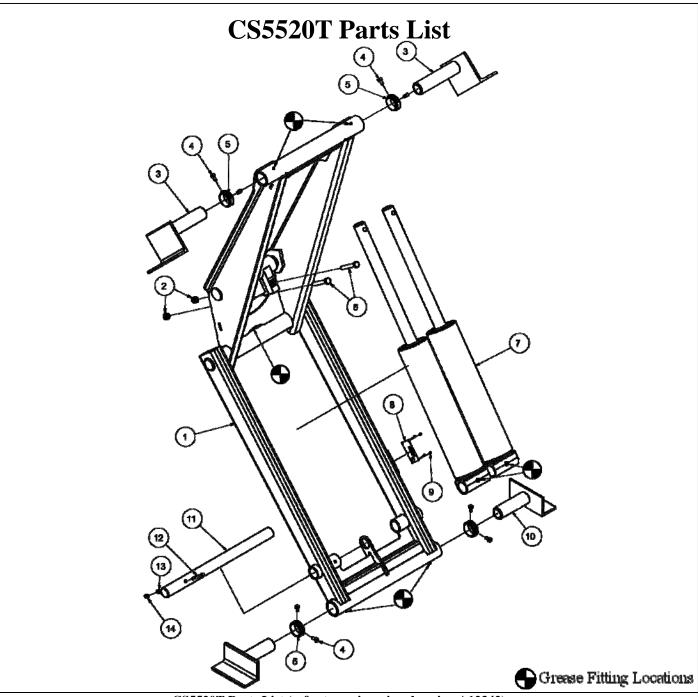
CS5520T Hoist Capacity (Tons)				
Body Length (Feet)	Overhang (Inches)	Dump Angle (Degrees) "G" Dimension (Inches)		
(Feet)	(Thenes)	45 Deg.(105.5 Inches)	50 Deg. (95.5 Inches)	
	0	15.70	14.20	
13	12	18.60	16.80	
13	18	20.40	18.50	
	24	22.70	20.50	
	0	14.60	13.20	
1.4	12	17.00	15.40	
14	18	18.60	16.80	
	24	20.40	18.50	
	0	13.60	12.30	
1.5	12	15.70	14.20	
15	18	17.00	15.40	
	24	18.60	16.80	
	0	12.80	11.60	
16	12	14.60	13.20	
10	18	15.70	14.20	
	24	17.00	15.40	
	0	11.30	10.30	
18	12	12.80	11.60	
18	18	13.60	12.30	
	24	14.60	13.20	



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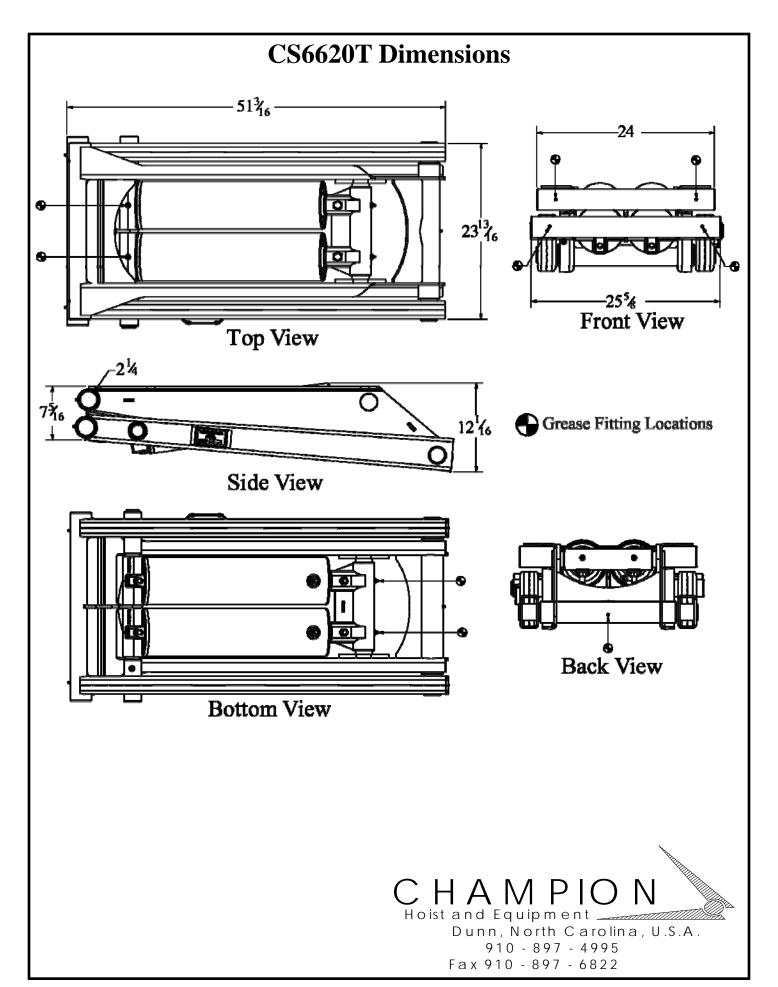


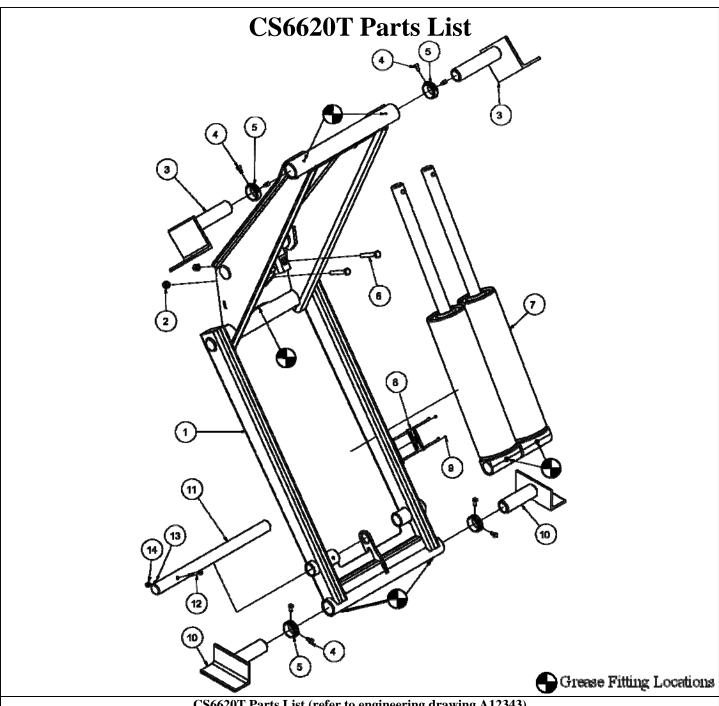


	CS5520T Parts List (refer to engineering drawing A12342)				
Item	Qty.	Part Number	Description		
1	1	W12336	Scissor Hoist Weldment, 5520T		
2	2	162-10-S	Lock Nut, 1/2"		
3	2	W13922	Upper Lift Arm Weldment 2-1/4", 5520T		
4	8	P34	Set Screw 3/8"-16 x 3/4" Square Head		
5	4	PC12157	Set Collar for 2-1/4" Lift Arm		
6	2	102-617-L	Hex Cap Screw, 5/8 x 4, GR 9		
7	2	A21359	Cylinder Assembly, 5520T DA		
8	1	P10100	Serial Plate		
9	4	PAAP43	Rivet, 1/8" Cherry Pop		
10	2	W13905	Lower Lift Arm Weldment 2-1/4", 5520T		
11	1	SM12058	Cylinder Mount Shaft, 5520T		
12	1	102-213-A1	Hex Bolt, 3/8" x 3" LG. GR 8		
13	1	118-3-A1	Lock Washer. 3/8"		
14	1	116-3-A1	Hex Nut, 3/8" UNC		

CS6620T Capacities

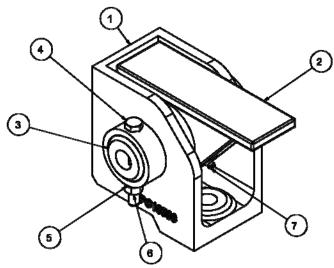
	CS6620T Hoist Capacity (Tons)			
Body Length (Feet)	Overhang	Dump Angle (Degrees) "G" Dimension (Inches)		
(reet)	(Inches)	45 Deg.(105.5 Inches)	50 Deg. (95.5 Inches)	
	0	29.40	26.60	
10	12	36.80	33.30	
10	18		38.00	
	24		44.40	
	0	26.70	24.20	
11	12	32.70	29.60	
11	18	36.80	33.30	
	24	42.00	38.00	
	0	24.50	22.20	
12	12	29.40	26.60	
12	18	32.70	29.60	
	24	36.80	33.30	
	0	22.50	20.50	
12	12	26.70	24.20	
13	18	29.40	26.60	
	24	32.70	29.60	
	0	21.00	19.00	
1.4	12	24.50	22.20	
14	18	26.70	24.20	
	24	29.40	26.60	
	0	19.60	17.70	
15	12	22.60	20.50	
15	18	24.50	22.20	
	24	26.70	24.20	
	0	18.40	16.60	
16	12	21.00	19.00	
16	18	22.60	20.50	
	24	24.50	22.20	
	0	17.30	15.70	
17	12	19.60	17.70	
17	18	21.00	19.00	
	24	22.60	20.50	
	0	16.30	14.80	
18	12	18.40	16.60	
10	18	19.60	17.70	
	24	21.00	19.00	





		CS6620T Parts	List (refer to engineering drawing A12343)
Item	Qty.	Part Number	Description
1	1	W12336	Scissor Hoist Weldment, 6620T
2	2	162-10-S	Lock Nut, 1/2"
3	2	W13922	Upper Lift Arm Weldment 2-1/4", 6620T
4	8	P34	Set Screw 3/8"-16 x 3/4" Square Head
5	4	PC12157	Set Collar for 2-1/4" Lift Arm
6	2	102-617-L	Hex Cap Screw, 5/8 x 4, GR 9
7	2	A21328	Cylinder Assembly, 6620T DA
8	1	P10100	Serial Plate
9	4	PAAP43	Rivet, 1/8" Cherry Pop
10	2	W13905	Lower Lift Arm Weldment 2-1/4", 6620T
11	1	SM12058	Cylinder Mount Shaft, 6620T
12	1	102-213-A1	Hex Bolt, 3/8" x 3" LG. GR 8
13	1	118-3-A1	Lock Washer. 3/8"
14	1	116-3-A1	Hex Nut, 3/8" UNC

CS5520T/CS6620T Rear Hinge Assembly



	5520T/6620T REAR HINGE ASSEMBLY - PARTS LIST			
Item	tem Qty. Part Number Description			
1	1	PC10583	Rear Hinge Block, 1-3/4"	
2	1	PC10636	Hinge Flipper, 1-3/4"	
3	1	PC10816	1-3/4" Rear Hinge Pin, Short Version	
4	1	102-214	Hex Cap Screw, 3/8 X 3 1/4	
5	1	118-3-A1	Lock Washer, 3/8	
6	1	116-3-A1	Hex Nut, 3/8 UNC	
7	1	P800	1/8" Pipe Thread Grease Fitting	



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CS628T Parts List

CS628T Hoist Capacity (Tons)				
	Dump Angle (Degrees)			
Body Length	Overhang	"G" Dimension (Inches)		
(Feet)	(Inches)	45 Deg. (132 Inches)	50 Deg. (119.5 Inches)	
	0	14.90	13.50	
10	12	17.60	15.90	
13	18	19.30	17.50	
	24	21.50	19.40	
	0	13.80	12.50	
14	12	16.10	14.60	
14	18	17.60	15.90	
	24	19.30	17.50	
	0	12.90	11.70	
45	12	14.90	13.50	
15	18	16.10	14.60	
	24	17.60	15.90	
	0	12.10	10.90	
10	12	13.80	12.50	
16	18	14.90	13.50	
	24	16.10	14.60	
	0	11.40	10.30	
17	12	12.90	11.70	
17	18	13.80	12.50	
	24	14.90	13.50	
	0	10.70	9.70	
10	12	12.10	10.90	
18	18	12.90	11.70	

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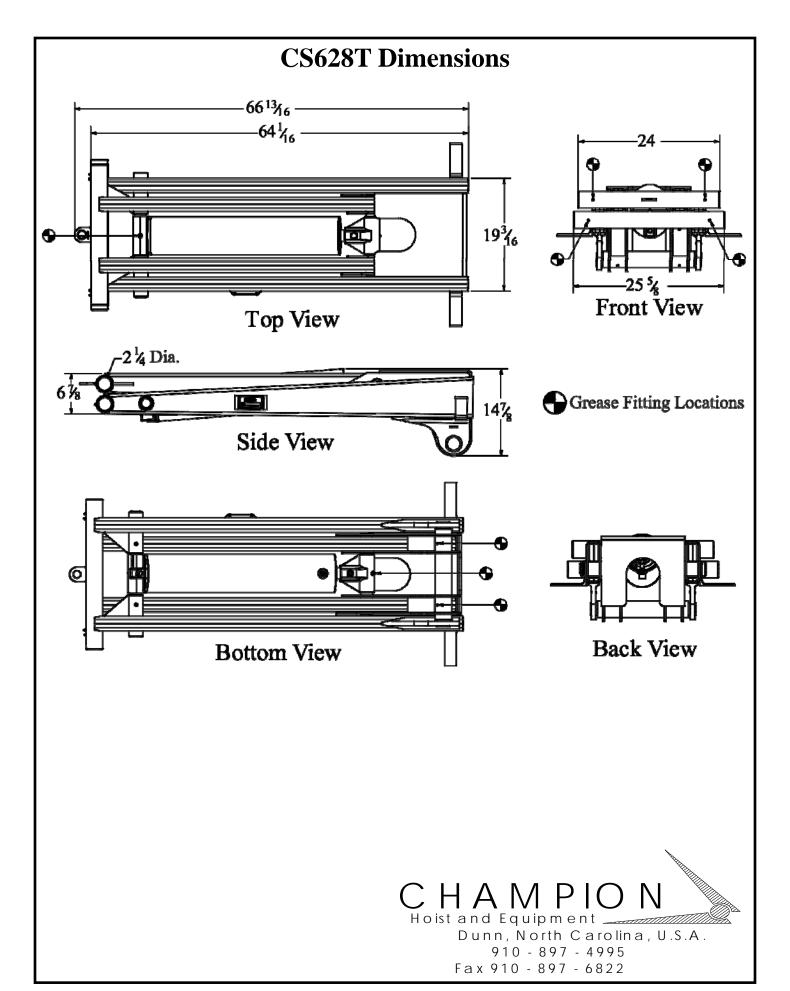
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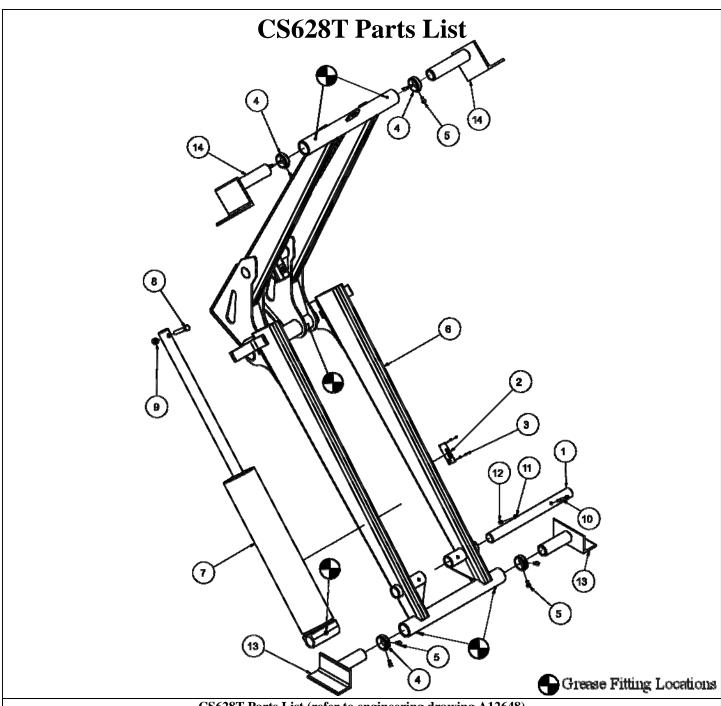
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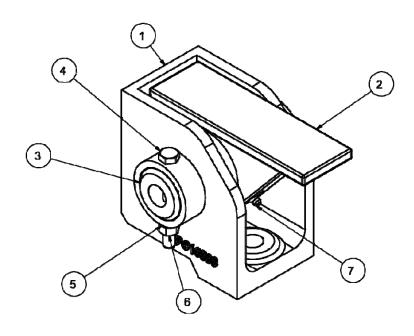
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	CS628T Parts List (refer to engineering drawing A12648)				
Item	Qty.	Part Number	Description		
1	1	SM12048	Cylinder Mount Shaft		
2	1	P10200	Champion Serial Plate		
3	4	PAAP43	Rivet, 1/8" Cherry Pop		
4	4	PC12157	Set Collar for 2-1/4" Lift Arm		
5	8	P34	Set Screw 3/8"-16 x 3/4" Square Head		
6	1	W12508	Scissor Hoist Weldment, 628		
7	1	A21343	Cylinder Assembly, 628 DA		
8	1	102-617-L	Hex Cap Screw, 5/8 x 4, GR 9		
9	1	116-7-A1	Hex Nut, 5/8" UNC		
10	1	102-213-A1	Hex Bolt, 3/8" x 3" LG. GR 8		
11	1	118-3-A1	Lock Washer. 3/8"		
12	1	116-3-A1	Hex Nut, 3/8" UNC		
13	2	W13905	Lower Lift Arm Weldment 2-1/4"		
14	2	W13922	Upper Lift Arm Weldment 2-1/4"		

CS628T Rear Hinge Assembly

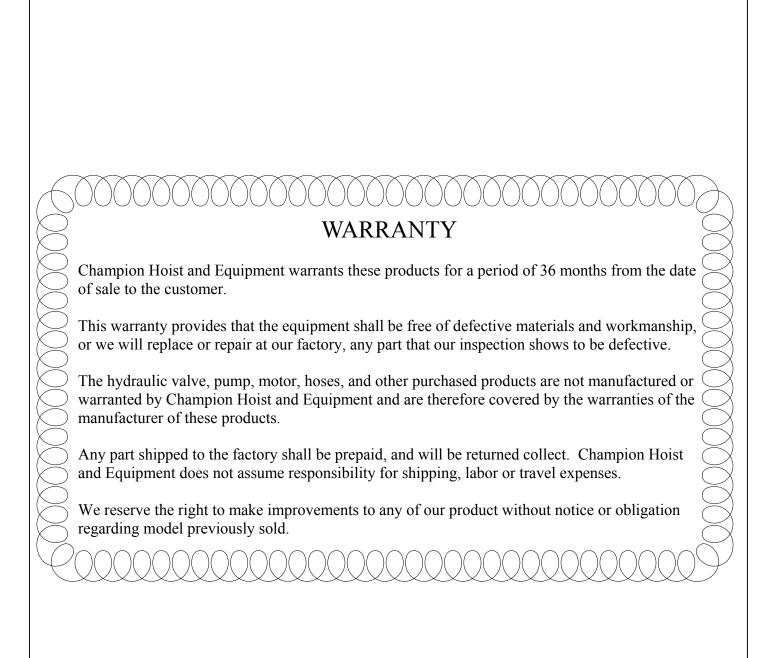


	628T Rear Hinge Assembly - Parts List			
Item	m Qty. Part Number Description			
1	1	PC10583	Rear Hinge Block, 1-3/4"	
2	1	PC10636	Hinge Flipper, 1-3/4"	
3	1	PC10816	1-3/4" Rear Hinge Pin, Short Version	
4	1	102-214	Hex Cap Screw, 3/8 X 3 1/4	
5	1	118-3-A1	Lock Washer, 3/8	
6	1	116-3-A1	Hex Nut, 3/8 UNC	
7	1	P800	1/8" Pipe Thread Grease Fitting	



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	Maintenance and Service Record		
Date	Maintenance and Services Performed		
	1		