THIRTY 30 SERIES®

HYDRA BED

THANK YOU

Thank you for choosing Hydra Bed®. It is a sincere privilege to serve North America's farmers and ranchers and an opportunity we take seriously. Our goal is to provide the most rugged and reliable equipment while continuing to build on a legacy of innovative products that solve real ranch problems. We are proud to play an important role not only in the agriculture industry but in the daily lives of the hard working men and women that feed the world.

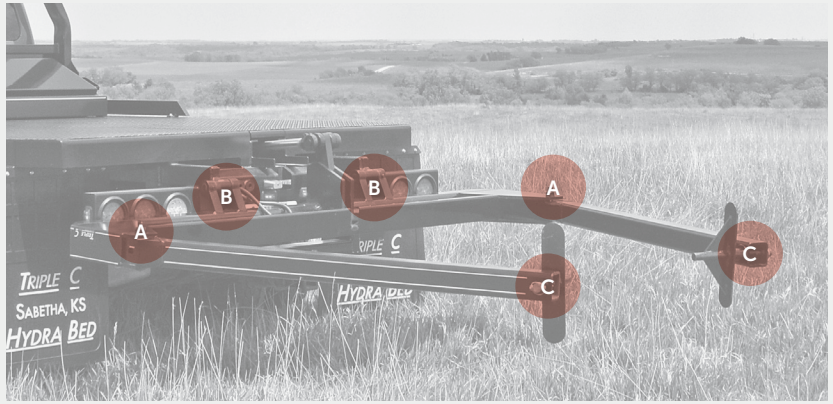
TABLE OF CONTENTS

QUICK SPECS

FILTER INTERCHANGE

FRAM	P1653	AC	PF16
WIX	51551	BALDWIN	BT 839-10
LENZ	CP-752-10	CASE	S-62427

GREASE LOCATIONS



A	B	C
Left & right side arm bolts	Main lift hinge pins *2 zerks per hinge*	Spinner bushings

NOTES

QUICK SPECS

ENGINE DRIVEN

GPM	PSI
11*	2,500

LOAD SPEED
as fast as
4 SECONDS*

HYDRAULIC OIL

reservoir	*system*
5 GALLONS	7 GALLONS

-15°F and above
ISO 46
- CONOCO POWER TRAN
- JOHN DEERE HY-GARD
- CASE HY-TRAN ULTRA

-15°F and below
ISO 32
- CONOCO POWER TRAN
- JOHN DEERE HY-GARD (LOW VISCOSITY)
- CASE HY-TRAN ULTRA SSL

BELT #

* *at 2,000 truck engine RPM*

ELECTRIC/HYDRAULIC

GPM	PSI
4-7*	2,500

LOAD SPEED
as fast as
12 SECONDS*

HYDRAULIC OIL

reservoir	*system*
5 GALLONS	7 GALLONS

all temperatures
ISO 32
- CONOCO POWER TRAN
- JOHN DEERE HY-GARD (LOW VISCOSITY)
- CASE HY-TRAN ULTRA SSL

INTERNAL THERMAL PROTECTION
Motor will stop automatically until internal temperature reduces to a safe level.

CHARGING SYSTEM
E/H unit requires properly functioning truck charging system and batteries in good operating condition. Any limitations in these areas will reduce hydraulic performance.

* *load dependent*


PROUDLY
MADE IN THE
USA
by
SKILLED CRAFTSMEN
Aaron

2 YEAR ★ SYSTEM
WARRANTY

5 YEAR
STRUCTURAL
WARRANTY

LIFETIME WARRANTY

ON 30 SERIES BALE LOADING ARMS

see page 26 for full warranty »

LEGACY

RUGGED. RELIABLE. RANCH PROVEN.

The original flatbed bale handler. Born of necessity and rancher ingenuity. Outworking and outlasting in the harshest conditions on North American ranches since 1983.

Hydra Bed #3 circa 2013 at Triple C 30th Anniversary celebration with original one-owner John Hervey

Hydra Bed #3 circa 1984

Feeding hay to hungry cattle without the proper equipment can be everything from frustrating to dangerous. So can life. You were looking for a better way to feed when you found the Hydra Bed®. If you are looking for a better way to live your life, there is a solution to that problem also.

Like the Hydra Bed®, this solution can give you the power to do things you could never accomplish by your own strength. It's power comes from an unseen force, just as you can't actually see the hydraulic pressure powering your Hydra Bed®. The power is made evident though when you tap it. It is always available and (unlike hydraulic pressure) has no limits.

Do you think maybe you don't fit the picture? Just as the Hydra Bed® fits various sizes of bales, this way fits any and every person who chooses it sincerely.

Now comes the contrast: We asked you to pay hard-earned money for your Hydra Bed®. In contrast, Jesus paid the full price for our eternal life when he willingly gave up his life on the cross for us.

That's right, He established a choice for us, either to live as part of this sinful world or to freely accept His gift of life and then begin a new life in Him. 1 John chapter 5 verses 11 & 12 explain it clearly:

"This is the testimony, God has given us eternal life, and this life is in His son. He who has the Son, has life, he who does not have the Son of God does not have life."

Jesus understood livestock people like you and me. In fact, he used a parable about sheep to explain the way to a good, full, happy life in John chapter 10. He knew how to relate to the herdsmen and craftsman of that time. The meaning of Isaiah chapter 53, verse 6 is as clear today as it was in Christ's time:

"We all like sheep have gone astray, each of us has turned to his own way, and the Lord has laid on Him the iniquity of us all."

Just like a ewe or a cow gone astray, we think only of our own way and desires. This is one way we all sin and are separated from God, just as straying separates an animal from it's master. We must acknowledge to the Lord that we know we have sinned, and accept His saving grace for those sins. We must realize that He has borne our burden for us.

He promises to enter our hearts and be with us eternally. Revelation chapter 3 verse 20 says it very well:

"Here I am! I stand at the door and knock. If anyone hears my voice, and opens the door, I will come in and eat with him, and he with Me."

The decision is simple, the commitment is eternal, the blessings are incredible, and the choice is yours!

(Scripture references from New International Version)

FEATURES

LIFT CAPACITY

3,000 LBS.
LIFT CAPACITY

ALL MODELS CAN
LOAD AND HAUL
TWO BALES

ARM SYNCHRONIZATION

AUTOMATIC BALE
CENTERING PROVIDED
BY REPHASING
CYLINDERS

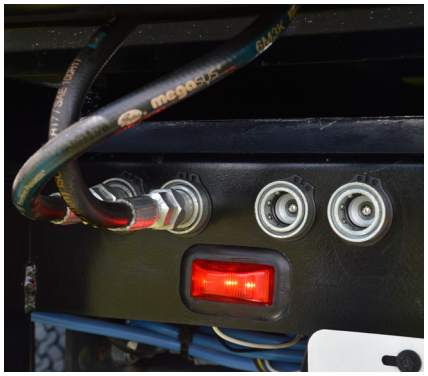
FEATURES

FREE-FLOAT UNROLL

MECHANICAL & FULLY
AUTOMATIC
WHILE UNROLLING

COMPENSATES FOR
UNEVEN GROUND

PUSH-TO-CONNECT QUICK COUPLERS



PIONEER
PUSH-TO-CONNECT
(3RD SPOOL AUXILIARY
QUICK COUPLERS SHOWN)
SIZES: MALE 8010-15,
FEMALE 4250-15

AS WITH ANY DEVICE DESIGNED TO HANDLE LARGE ROUND BALES, SOME PRECAUTIONS ARE IN ORDER.

KEEP THIS MANUAL WITH YOUR HYDRA BED® AT ALL TIMES. REFER TO IT REGULARLY.

SAFETY GUIDELINES

NEVER exceed the manufacturer's gross vehicle weight or gross axle weight rating for your truck.

NEVER exceed the tire manufacturer's gross weight rating.

NEVER allow yourself or anyone else to go near a bale or any other object that is suspended by any means: hydraulic, mechanical or other.

NEVER increase or decrease the factory relief valve setting. This action automatically voids all warranties and could endanger the operator and/or bystanders.

NEVER operate the truck and Hydra Bed® on dangerous terrain.

NEVER operate the pump at engine speeds in excess of 3,000 RPM or serious damage may result that will not be covered by warranty.

NEVER allow children or other unauthorized personnel access to the controls for your Hydra Bed®.

ALWAYS use sound judgment and common sense when operating your truck and Hydra Bed®.

ALWAYS attach trailers or equipment only to factory installed gooseneck hitch or rear drop hitch.

ALWAYS respect the weight of the load you are carrying and allow more stopping distance than normally required for an empty truck.

ALWAYS make certain that there is no foreign material in the arm-receiving areas and/or the area where the arm cross tube assembly comes to rest. Hydraulic pressure will be sufficient to cause damage if the arm assembly is placed in the stowed position over foreign material.

OPERATION

LOAD

MAKE CERTAIN THAT THE UPPER SURFACE OF THE UNIT IS CLEAR.
(SPINNERS NOT REQUIRED FOR BALE LOADING)

1. Turn system ON. Indicator light will notify pump activation.
2. Activate UNLOAD control. The complete arm assembly will raise out of the stowage areas and rotate rearward.
3. When the outer ends of the bale grabbing arms are at the center of the bale to be lifted, release UNLOAD control. Arms will stop their rearward motion.
4. To grip bale, activate GRIP control until arms have squeezed bale sufficiently. Release GRIP control.
5. To raise bale, activate LOAD control until bale is resting solidly on the flat surface of the Hydra Bed®. Release LOAD control.
6. If you desire to haul only one bale, turn OFF system with the switch.

OPERATION

LOAD *continued*

7. If you desire to haul a second bale, activate RELEASE control until the bale grabbing arms have released bale #1.
8. To load the second bale, repeat steps 3 and 4, then activate LOAD control until bale #2 touches bale #1 and pushes it forward into firm contact with the headache rack.
9. Turn off system with the switch.

Failure to shut off clutch pump will cause it to be damaged at highway speeds.

UNLOAD

To unload bales, reverse the previous steps 1 through 9.

OPERATION

UNROLL

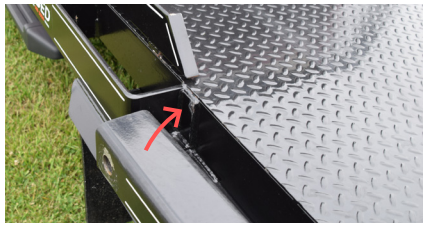
SPINNERS REQUIRED

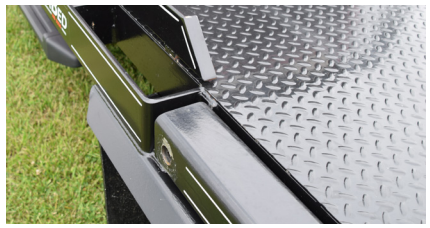
1. To unroll bale, insert spinners in bushings near the outer end of the bale grabbing arms. Lock in place with lynch pins provided.
2. Grab bale in fashion previously described, making sure that the points of the spinners enter the bale at its center. Load the bale as previously described.
3. Proceed to the unrolling site and unload the bale as previously described.
4. Raise bale 1 to 2 feet off the ground and remove twine or wrap.
5. Drive forward.
6. Lower bale until it begins to turn. If the bale will not turn, activate RELEASE control momentarily to allow bale to begin rotating.
7. Raise or lower bale as you drive to regulate the amount of hay unrolled. Speed of travel and gripping pressure contribute to overall unrolling performance and rate.

OPERATION

STOW

BEFORE RETURNING ARMS TO THE STOWAGE POSITION, MAKE CERTAIN THAT THERE ARE NO BYSTANDERS NEAR THE HYDRA BED®, ESPECIALLY NEAR THE AREA WHERE THE ARMS AND REAR CROSS TUBES WILL COME TO REST.





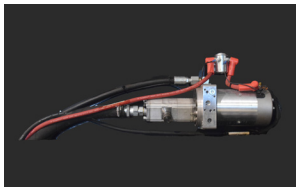
1. To return arms to their stowage areas, make certain that all hay and other foreign material is cleared from bed and cross tube stowage area.
2. Activate GRIP/RELEASE control until both arms are slightly open from 90 degrees to the rear cross tube.
3. Move "LOAD/UNLOAD" control until spinners contact floor or arms are stowed.
4. If spinners are not installed, squeeze arms against side of bed after they are in contact with their rests.
5. Shut off pump.

3RD SPOOL AUXILIARY (if equipped)

QUICK COUPLERS PROVIDE DOUBLE-ACTING HYDRAULIC CAPABILITIES.

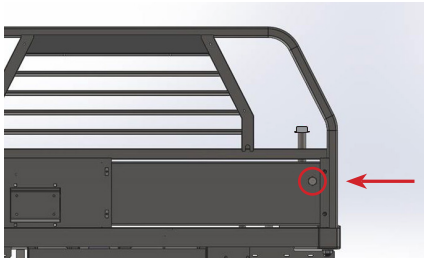
SPECIAL NOTE FOR E/H SYSTEM

MOTOR IS EQUIPPED WITH THERMAL PROTECTION FROM HEAT DAMAGE. IF MOTOR STOPS AFTER EXTENDED USE, A COOLING PERIOD WILL BE REQUIRED. RESET WILL OCCUR AUTOMATICALLY AFTER ADEQUATE COOL DOWN.



MAINTENANCE
general

OIL



1. Maintain oil supply at reservoir check plug level with recommended grade (see **page 5**).
2. Any leaks should be repaired or corrected immediately.

* *to change oil, see filter replacement instructions below*

FILTER

1. Turn truck and system OFF. Place container under oil filter to catch oil.
2. Loosen current filter to allow oil to begin draining. Once oil has stopped draining, completely remove old filter.
3. Clean the filter mounting surface and then lubricate rubber gasket on new oil filter with clean hydraulic oil.
4. Spin new oil filter onto filter housing until it makes contact. Then, tighten oil filter another 3/4 turn.
5. Refill system to reservoir check plug with recommended oil.

FILTER INTERCHANGE

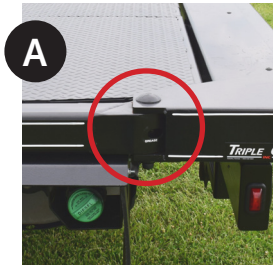
FRAM	P1653
WIX	51551
LENZ	CP-752-10
AC	PF16
BALDWIN	BT 839-10
CASE	S-62427

Do not attempt to change oil or filter when oil is hot.

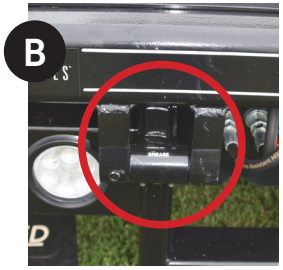
MAINTENANCE
general

LUBRICATION

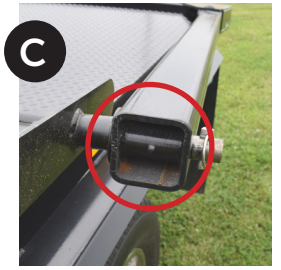
GREASE MONTHLY OR EVERY 100 BALES, WHICHEVER OCCURS FIRST.



Left & right side arm bolts



Main lift hinge pins
2 zerks per hinge



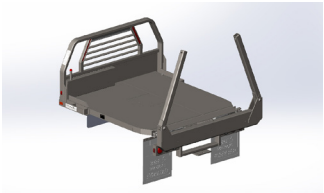
Spinner bushings

ARM RESYNCHRONIZATION

WITH TRUCK ENGINE RUNNING AND SYSTEM **ON**

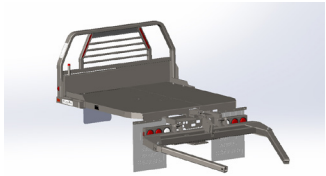
3100, 3200 & 3300
Single-Rear-Wheel Models

1. Move arms to position perpendicular to the bed (straight up in the air).
2. Activate GRIP control to bring arms together and hold fully gripped for 30 seconds.



3250, 3350 & 3550
Dual-Rear-Wheel Models

1. Move arms to their fully rearward position (all the way to the ground).
2. Activate GRIP control to bring arms together and hold fully gripped for 30 seconds.



OCCASIONALLY REMOVE ACCUMULATED DEBRIS FROM THE ARM BASE SOCKET AREA. ACCUMULATED ROCKS, DIRT OR HAY MAY PREVENT THE ARM FROM FULL MOVEMENT. WASH THIS AREA THOROUGHLY.

MAINTENANCE
power-specific

Engine-Driven

BELT TENSION

Efficient power transfer requires proper belt tension. If belts are slipping, re-tensioning and/or replacement will be required.

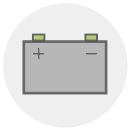
BELT REPLACEMENT

On serpentine belt applications, use the appropriate size driver or socket to unload the tensioner. Then remove the belt from the pulleys. In applications using a smooth pulley, always install the belt on the smooth pulley last. On most brackets with engines utilizing v-belt drive a hinging pump mounting bracket is used to adjust the belt tension. By loosening this bracket, tension on the belt is released allowing the belt to be removed.

CLUTCH BURNISHING

It is imperative that all clutch pump systems go through a short clutch burnishing period to generate the required torque prior to use. This is a process of cycling the clutch to "break in" the internal friction surfaces. Upon initial Hydra Bed system run-in, cycle the clutch at a rate of 5 seconds ON – 5 seconds OFF for a total of 25 cycles. Vary the truck RPM between an idle and 1500 RPM throughout this process. The system must be at full pressure during this process. Develop full pressure by raising the arms straight into the air and holding the grip function. ***It is recommended to repeat this process annually to maintain the maximum torque possible.***

MAINTENANCE
power-specific



Electric/Hydraulic

CHARGING SYSTEM & BATTERIES

Your E/H unit requires properly functioning truck charging system and batteries in good operating condition. Any limitations in these areas will reduce hydraulic performance.

POWER CABLES

Routinely check cables & connections. Corrosion and/or loose cable connections will result in excessive heat and substantial reductions in hydraulic output and may completely prevent E/H pump function.

TRIPLE C LIMITED WARRANTY

1 What do I need to do to be covered?
You must properly complete and return the warranty card found at the front of the manual.

2 What does this Warranty cover?
Triple C will warranty the Hydra Bed®, Pro Spear, Hydra Feeder, Post Hole Digger, Across Bed Toolbox, and Dump Box to be free from defects in material and workmanship when properly installed and operated under normal conditions.

3 What does this Warranty not cover?
The warranty does not cover equipment that has been damaged by:

- Misuse (including operation above its rated capacity), abuse, or accident;
- Failure to follow the operating instructions or maintenance protocols that we provided (including failure to regularly lubricate equipment);
- Any improper or unauthorized installation, repair or modification to the equipment; or
- Fire, flood, "acts of God," or other contingencies beyond our control.

4 How long does the coverage last?
The warranty period for structural components—for example, the frame, welds, hinges and arms—lasts for **5 years** after purchase date. The warranty period for system components—for example, the valves, pumps, controls, and motors—lasts for **2 years** after the purchase date. The warranty period for the 30 Series Hydra Bed® bale lifting arms lasts for the **lifetime of the product**.

5 What will Triple C do to correct problems?
Triple C may repair or replace the equipment covered by this warranty at no charge.

6 How do you get service?
6.1 If something goes wrong with your equipment, call your Dealer or Triple C. Your Dealer or Triple C will ask for the equipment's serial number and a description of the problem. Triple C will determine (1) whether the equipment is within the warranty period and (2) whether to repair or replace the equipment.
6.2 If we determine the problem can be resolved by providing a replacement part, Triple C may deliver the part to you or to the Dealer. If the part is sent directly to the end user, Triple C will require prepayment of the retail price of the replacement part and applicable shipping costs. Triple C will also send instructions for returning the replaced part.
6.3 If we determine the problem requires service, your Dealer or Triple C will schedule a service appointment at a mutually convenient time at no charge.
6.4 If you follow the return instructions, Triple C will refund any prepayment for the part and shipping. However, you will not be refunded if (1) you fail to return the part as instructed, (2) we determine that the equipment is not covered under this warranty, or (3) we determine that the problem was due to one of the disqualifying causes in Section 3.

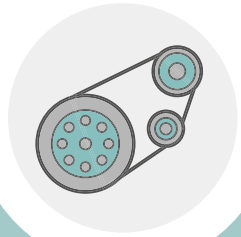
7 What will Triple C not do?
Triple C will not be liable for any amount that exceeds the amount you paid for the equipment. However arising, we will not be liable for:

- Expenses incurred without our written authorization;
- Direct, indirect, incidental or consequential damages, such as the loss of anticipated profits or benefits; or
- Loss or damage of any material used with the equipment.

We make no warranty of merchantability or fitness for a particular purpose.

8 How does state law relate to this Warranty?
This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

TROUBLESHOOTING



Engine-Driven TROUBLESHOOTING GUIDE

ISSUE

1. Bed has lost lifting power and/or speed
2. Loss of arm synchronization
3. Electrical control malfunction
4. Excessive or rapid belt wear
5. No system functions
6. Bed has erratic or jerky operation
7. Excessive pump noise/vibration in cab
8. Oil dripping from reservoir filler cap
9. Grip/Release not working but Load/Unload is
10. Pump won't turn on
11. Manual cable malfunction

TROUBLESHOOTING *engine-driven*

#	(PROBLEM)	
	(POSSIBLE CAUSE - MOST LIKELY TO LEAST LIKELY)	(Remedy)
1	BED HAS LOST LIFTING POWER AND/OR SPEED	
	BELTS SLIPPING	Check belts for wear, cracking or damage; replace with new belts.
		Check for correct belt tension; tighten as needed.
		Check for proper motion and function of any belt idlers; replace as needed.
	CLUTCH SLIPPING	Re-burnish clutch (see **page 24**).
	CONTROL VALVE NOT FULLY SHIFTING	**CABLES:** Check control linkage; adjust cable end clevis and/or cable valve-end mounting nuts as needed to provide full spool travel each direction.
		ELECTRIC: Check actuator control linkage; adjust clevis as needed to provide full spool travel each direction.
2	LOSS OF ARM SYNCHRONIZATION	
	DEBRIS ACCUMULATION BEHIND ARM TAIL	Prevents full cylinder travel. Remove debris; re-synchronize arms (see page 26).
	ARM CYLINDER PISTON SEAL LEAKING INTERNALLY	Check for drift of each arm; replace seal in outward arm cylinder.
3	ELECTRICAL CONTROL MALFUNCTION	
	SEE ELECTRIC CONTROL TROUBLESHOOTING GUIDE	See Wireless Control Troubleshooting Guide under Manuals tab on our website.
4	EXCESSIVE OR RAPID BELT WEAR	
	IMPROPER PULLEY ALIGNMENT	Check for accurate alignment of all pulleys, correct any misalignments.
	IMPROPER BELT TENSION	Check for proper functioning of tensioning idlers, replace as necessary.

TROUBLESHOOTING *engine-driven*

5	NO SYSTEM FUNCTIONS	
	PUMP NOT PUMPING	Check for clutch circuit fuse & wiring faults; repair/replace as needed.
		Check oil level in reservoir; refill as required.
		Check for broken/missing pump belts; replace.
	ELECTRIC CONTROL SYSTEM MALFUNCTION	See Wireless Control Troubleshooting Guide under Manuals tab on our website.
6	BED HAS ERRATIC OR JERKY OPERATION	
	LOW OIL LEVEL	Confirm presence of oil at the reservoir check plug; add oil if needed (see **page 22**).
	BELTS SLIPPING	Check belts for wear, cracking or damage; replace with new belts.
	CLUTCH SLIPPING	Check for correct belt tension; tighten as needed.
	ELECTRIC CONTROL SYSTEM MALFUNCTION	Check for proper motion and function of any belt idlers; replace as needed.
		Re-burnish clutch (see **page 24**).
		Observe valve actuator on affected circuit; See Wireless Control Troubleshooting Guide under Manuals tab on our website.
7	EXCESSIVE PUMP NOISE/VIBRATION IN CAB	
	PUMP HOSES INCORRECTLY ROUTED/SECURED	Check for direct contact between pump hoses & cab sheet metal; reroute/secure hoses to prevent contact.
8	OIL DRIPPING FROM RESERVOIR FILLER CAP	
	FOAMING OF HYDRAULIC OIL	Check for proper oil characteristics (some lower quality/lower priced oils lack the necessary anti-foaming additives; drain and replace with recommended oil (see **page 5**).
	RESERVOIR OVERFULL	Check for proper oil level at check plug with truck on level surface; drain excess as required.

TROUBLESHOOTING
engine-driven

9	GRIP/RELEASE NOT WORKING, BUT LOAD/UNLOAD IS	
	GRIP-CIRCUIT QUICK COUPLER MAY BE DISCONNECTED	Inspect both quick couplers to verify full engagement and proper location of lock ring.
10	PUMP WON'T TURN ON	
	PUMP CONTROL CIRCUIT MALFUNCTION	**CABLES:** Check for clutch circuit fuse & wiring faults; repair/replace as needed.
		ELECTRIC: Check for system power at pendant; See Wireless Control Troubleshooting Guide under Manuals tab on our website.
	PUMP BELT(S) BROKEN/ MISSING	Check for broken/missing pump belts; replace as required.
11	MANUAL CABLE MALFUNCTION	
	CABLE DAMAGED	Inspect cable, replace as needed.
	CAB-END SHEATH NUTS OVERTIGHTENED	Loosen to reduce compression on sealing O-ring.
	FROZEN MOISTURE INSIDE CABLE	Thaw and lubricate internally with Tri-Flo or other PTFE (teflon) based spray lubricant; if problem recurs, inspect cable assembly for damage to exterior sheath or to valve-end seal, replace cable as required.

TROUBLESHOOTING
electric/hydraulic

Electric/Hydraulic TROUBLESHOOTING GUIDE

ISSUE

1. Weak or dead truck battery
2. Bed has lost lifting power and/or speed
3. Loss of arm synchronization
4. Electrical control malfunction
5. No system functions
6. Bed has erratic or jerky operation
7. Oil dripping from reservoir filler cap
8. Grip/Release not working but Load/Unload is
9. Pump stops or won't turn on

TROUBLESHOOTING
electric/hydraulic

#	(PROBLEM)	
	(POSSIBLE CAUSE - MOST LIKELY TO LEAST LIKELY)	(Remedy)
1	WEAK OR DEAD TRUCK BATTERY	
	BATTERY-TO-PUMP (E/H) WIRING ISSUES	Inspect all terminal connections for corrosion, arcing or other problems. Correct as needed.
	INSUFFICIENT CHARGING TIME BETWEEN USES	Avoid use for extended periods and allow adequate recharging time between.
	TRUCK CHARGING SYSTEM FAILURE	Check for proper charging and battery voltage; repair or replace as required.
	DEFECTIVE BATTERY	Replace battery.
	DEFECTIVE PUMP MOTOR	Replace motor.
2	BED HAS LOST LIFTING POWER AND/OR SPEED	
	BATTERY-TO-PUMP (E/H) WIRING ISSUES	Inspect all terminal connections for corrosion, arcing or other problems. Correct as needed.
	INSUFFICIENT ELECTRICAL POWER	Avoid use for extended periods without allowing adequate recharging time between.
		Replace battery.
	CONTROL VALVE NOT FULLY SHIFTING	Check actuator control linkage; adjust clevis as needed to provide full spool travel each direction.
3	LOSS OF ARM SYNCHRONIZATION	
	DEBRIS ACCUMULATION BEHIND ARM TAIL	Prevents full cylinder travel. Remove debris; re-synchronize arms (see **page 23**).
	ARM CYLINDER PISTON SEAL LEAKING INTERNALLY	Check for drift of each arm; replace seal in outward arm cylinder.

TROUBLESHOOTING
electric/hydraulic

4	ELECTRICAL CONTROL MALFUNCTION	
	ELECTRIC CONTROL SYSTEM MALFUNCTION	Observe valve actuator on affected circuit; See Wireless Control Troubleshooting Guide under Manuals tab on our website.
5	NO SYSTEM FUNCTIONS	
	DEAD BATTERY IN WIRELESS REMOTE (IF APPLICABLE)	Replace 9V battery in back of wireless remote. Power system back on and check for functions.
	BATTERY-TO-PUMP (E/H) WIRING ISSUES	Inspect all terminal connections for corrosion, arcing or other problems. Correct as needed.
	PUMP NOT PUMPING	Check for broken/missing pump main fuse and other electrical circuit components; repair or replace as needed.
		Check for pump activation, pressure and flow; repair/replace as needed.
		Check oil level in reservoir; refill as required.
	ELECTRIC CONTROL SYSTEM MALFUNCTION	See Wireless Control Troubleshooting Guide under Manuals tab on our website.
6	BED HAS ERRATIC OR JERKY OPERATION	
	BATTERY-TO-PUMP (E/H) WIRING ISSUES	Inspect all terminal connections for corrosion, arcing or other problems. Correct as needed.
	PUMP INTERNAL HI-LO SHIFT MALFUNCTION	Listen for rapid changes in motor RPM; contact Triple C service department.
	ELECTRIC CONTROL SYSTEM MALFUNCTION	Observe valve actuator on affected circuit; See Wireless Control Troubleshooting Guide under Manuals tab on our website.
7	OIL DRIPPING FROM RESERVOIR FILLER CAP	
	FOAMING OF HYDRAULIC OIL	Check for proper oil characteristics (some lower quality/lower priced oils lack the necessary anti-foaming additives; drain and replace with recommended oil (see **page 5**).
	RESERVOIR OVERFULL	Check for proper oil level at check plug with truck on level surface; drain excess as required.

TROUBLESHOOTING
electric/hydraulic

8	GRIP/RELEASE NOT WORKING, BUT LOAD/UNLOAD IS	
	GRIP-CIRCUIT QUICK COUPLER MAY BE DISCONNECTED	Inspect both quick couplers to verify full engagement and proper location of lock ring.
9	PUMP STOPS OR WON'T TURN ON	
	BATTERY-TO-PUMP (E/H) WIRING ISSUES	Inspect all terminal connections for corrosion, arcing or other problems. Correct as needed.
	PUMP AUTOMATIC THERMAL PROTECTION ACTIVATED	Allow pump to cool and thermal protection to automatically reset.
	PUMP CONTROL CIRCUIT MALFUNCTION	Check for system power at receiver and/or pendant. See Wireless Control Troubleshooting Guide under Manuals tab on our website.

NOTES