OUTLAW

LEAD PUMP (30X-0000)

OPERATIONS AND MAINTENANCE MANUAL

ONLINE RESOURCES

BAZOOKA FARMSTAR

4/30/2024

OVERVIEW

- High performance force feeder trailer 32’ boom and 15” submersible pump
- 8” plumbing to efficiently deliver manure to main pump
- Redesigned boom for easy maintenance and maneuverability into pump outs
- Simple, single axle trailer design for easy transport and efficiency
- High ground clearance trailer design
- Single location operator station

For videos and additional resources, point phone camera at QR code and click the link.
http://bazookafarmstar-5546834.hs-sites.com/en-us/en-us/resourcehub-outlaw

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SAFETY AND WARNINGS

BEFORE OPERATION:

- **Warning: Operating this equipment without experience and a thorough understanding of how it functions could result in damage to the equipment, injury, or death**
- Read and understand this manual and all safety signs before operating and maintaining. Review the safety instructions and precautions annually
- The Outlaw should only be operated by responsible persons who have thoroughly read the operators manual and have been properly instructed to do so. Do not allow untrained persons to operate the machine
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty
- Replace any CAUTION, WARNING, DANGER or instruction safety decal that is not readable or is missing
- Give the unit a visual inspection for any loose hardware, worn parts or cracked welds, and make necessary repairs prior to using the product
- Check all hose clamps for a tight fit before operating

HIGHWAY AND TRANSPORT OPERATIONS:

- Always utilize safety chains when transporting the Outlaw on public highway. Follow state and local regulations regarding safety chain and auxiliary lighting
- Always drive at safe speeds that match the rated speed of the tires. Ensure your speed is low enough for an emergency stop to be safe and secure.
- Watch for obstructions overhead and to the side during transport
- Use caution working on or near the machine. Identify slippery or rough terrain and plan accordingly to safely navigate these areas

SAFETY AND WARNINGS

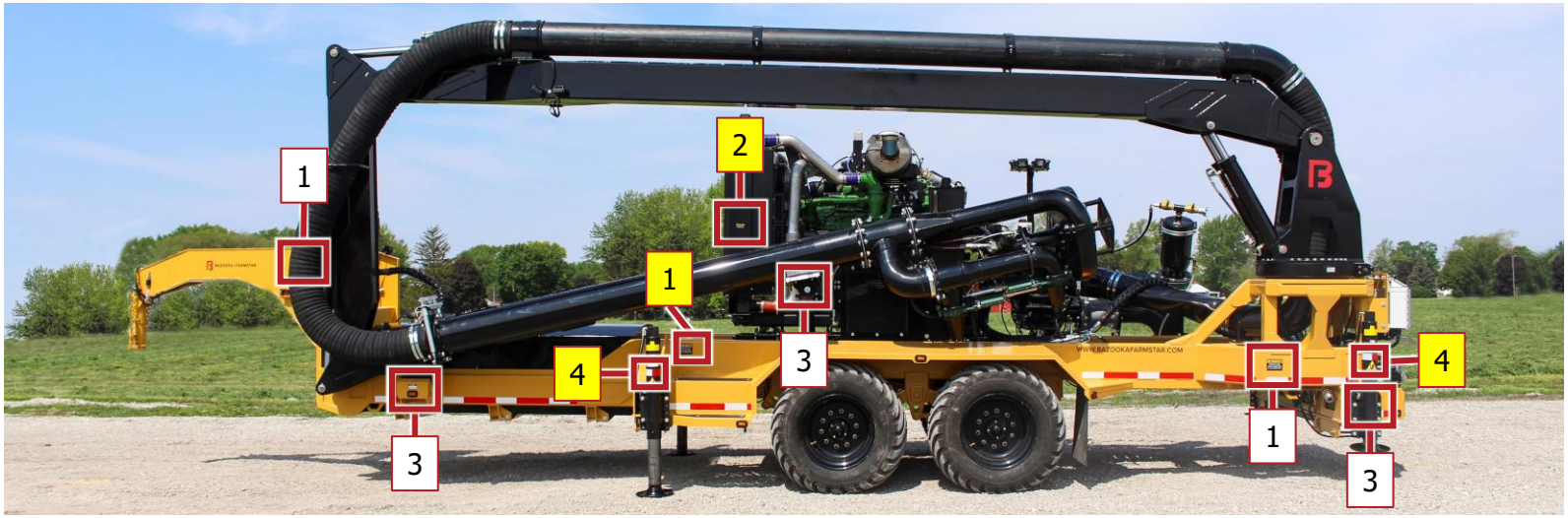
DURING OPERATION:

- Do not attempt to operate this equipment under the influence of drugs or alcohol
- Ensure operator and bystanders are entirely clear of machine before starting and operating
- Be certain that gate valves are in the desired position and all clamps are in a locked position before operating the hydrostatic driven submersible pump.
- Stay clear of any moving parts, such as shafts, couplings and universal joints. Do not wear loose fitting clothing which may catch in moving parts. Wear closed-toe shoes and protective clothing.
- Be certain all shields and guards are kept in place during operation. Use proper safety lockout/tagout procedures when performing any machine service or maintenance.

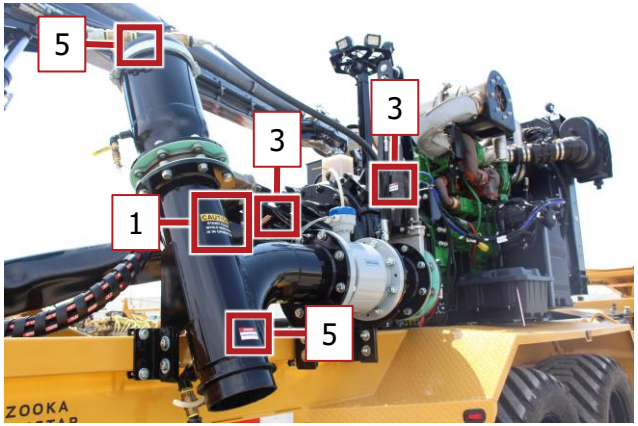
PERFORMING MAINTENANCE:

- Follow the maintenance schedule outlined in this manual. It is the owner's responsibility to ensure the equipment has been maintained for operation.
- Do not attempt any maintenance or service procedure without proper safety precautions and training.
- Wear appropriate PPE (Personal Protective Equipment) such as, but not limited to, safety glasses, steel toe shoes, gloves, and hearing protection when performing service or maintenance on machine.
- Hydraulic system parts and connections can contain high pressures which, if suddenly and unexpectedly released, can cause serious injury or death. Do not check for leaks with your bare hands.
- Hydraulics may be pressurized even with machine off. Use caution when removing hydraulic hoses or components.
- Repair any loose or damaged hydraulic hoses. Inspect all hoses carefully before use. Tighten all connections securely.
- Do not perform maintenance with engine running.
- Park machine on flat level ground and chock tires before performing maintenance.
- Support equipment properly at all times so there is no chance of accidental collapse or tipping, especially when working beneath it.

SAFETY SIGN LOCATIONS



highlighted items are on both sides of the machine



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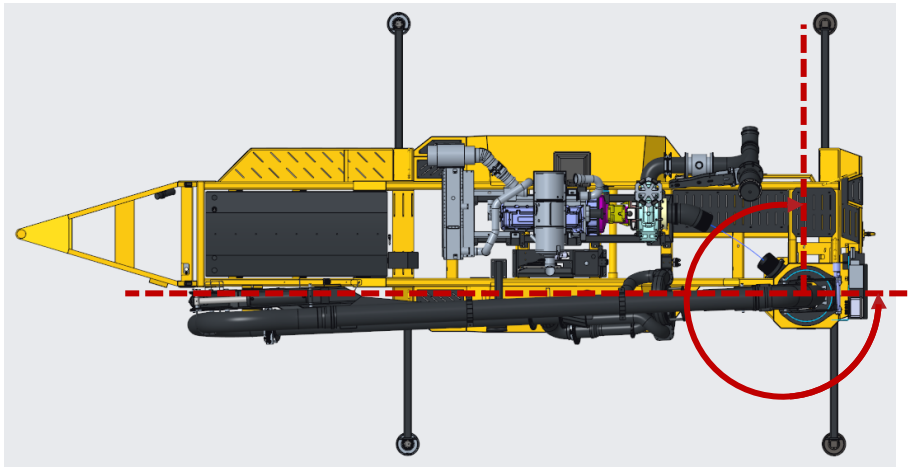
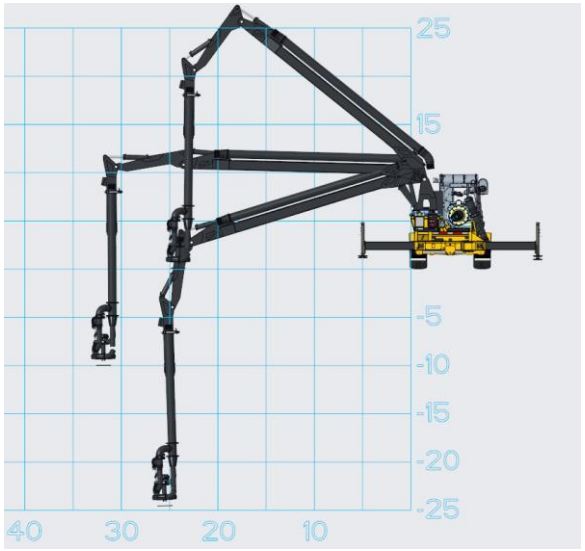
OUTLAW BOOM SPECIFICATIONS

Boom	Max depth	Max Reach
32’ Pit Boom	13’ (below grade) at 16’ from side of trailer	28” (from drivers' side of trailer) at ground level



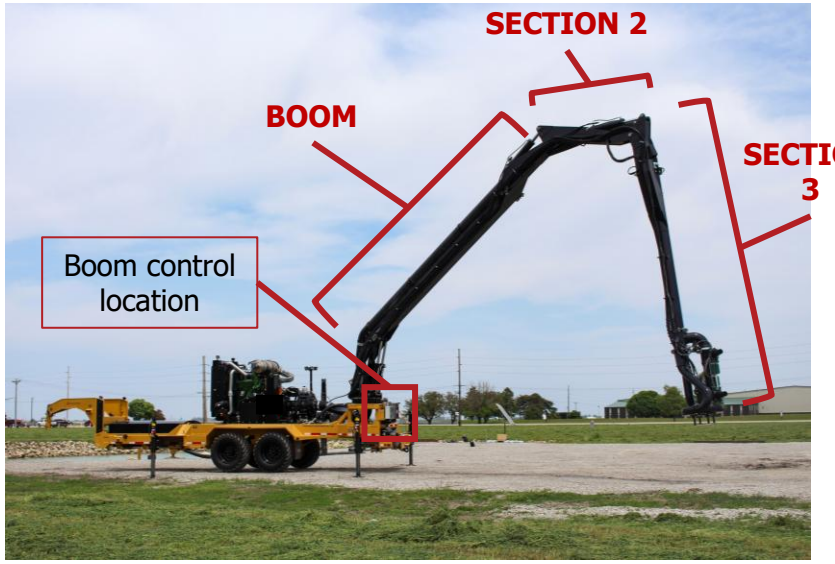


- The Outlaw boom has 180° of rotation over the driver side of the trailer and 90° of rotation over the passenger side of the trailer
- Angle of rotation may be able to exceed maximum rotational limits given that the hydraulic hoses in the boom pedestal are not binding

OUTRIGGER OPERATION

- Before operating the boom, ensure outriggers are fully extended out and deployed firmly against the ground
- Outriggers are to be operated only at low engine idle using the toggle switches at the front or rear of trailer
- Outriggers and downriggers are operated with the on-board 12VDC pump when the engine is not running (master disconnect switch must be turned to ON position)
- Use outrigger pads on soft ground to ensure maximum stability
- The front outriggers also act as the trailer jacks and can be controlled with the toggle switches on the gooseneck or at the rear on the electrical control box

OUTLAW BOOM OPERATION



BOOM CONTROLS

PRE-OPERATION:

- All Outriggers must always be fully extended out, lowered and set on a solid, stable surface before operating the boom. It is recommended to use blocks under the outrigger pads when operating on soft surfaces and lifted so most of the machine weight off the tires
- Trailer must be level and balanced before operating boom

BOOM OPERATION:

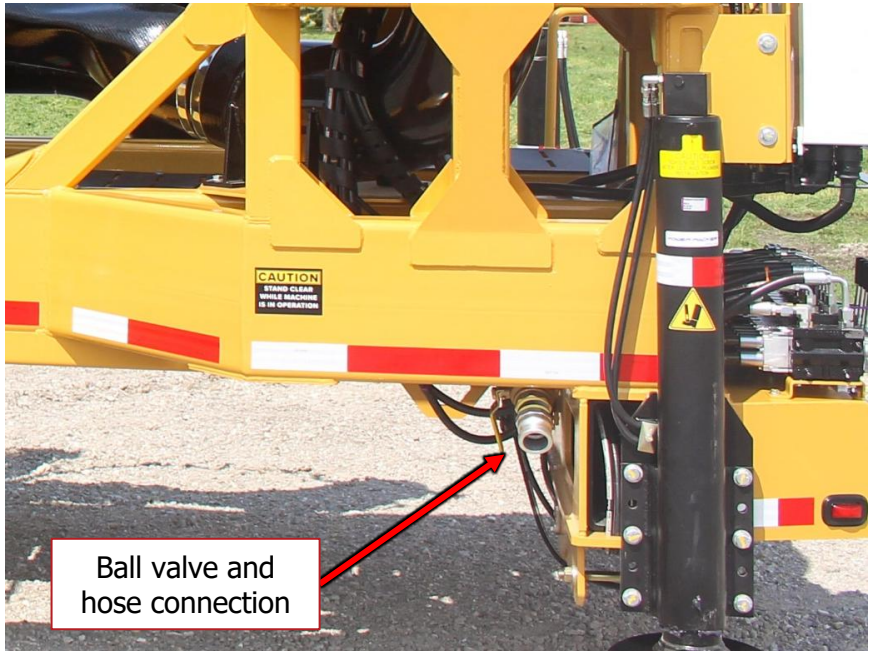
- The boom is to be operated only at low engine idle. (900-1000 rpm)
- Move only one function at a time on the control valve
  - Generally, the procedure is to boom up as far as needed, rotate to desired position, and unfold 2nd and 3rd boom sections alternating several feet at a time
- Carefully monitor boom position as it is unfolded
- When folding boom back onto the trailer:
  - Pull section 2 and section 3 in as far as possible
  - Set the front boom rest on the stand
  - Extend the Section 3 to set the submersible pump on its resting pad TOO MUCH DOWNPRESSURE MAY DAMAGE COMPONENTS

BOOM CONTROL LOCATION

OUTLAW BOOM DRAINING OPERATION

METHOD 1
A ball valve is standard underneath the boom pedestal that allows the intake plumbing to be drained when open. Ensure pump discharge gate valve is closed prior to opening ball valve. Hose may be added to drain back to the pit.

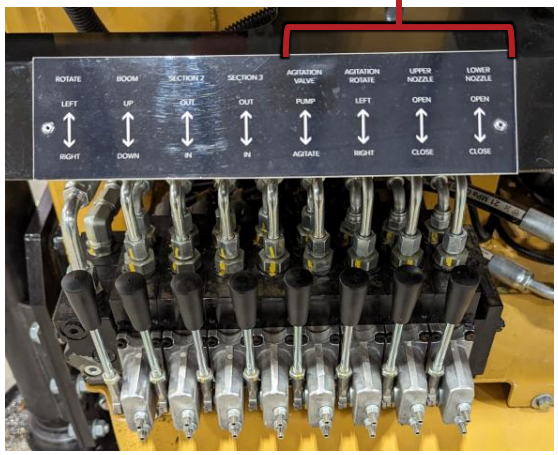
METHOD 2
Lift submersible pump above liquid level while main pump is still running at idle speed to allow all liquid in boom to be discharged into hose. Once drained, close the pump discharge gate valve to seal off cleaned out boom and pump.



AGITATION OPERATIONS

Agitation valve controller location

Agitation valve control information



AGITATION GATE VALVE:

- It is recommended to turn hydrostat off before changing agitation valve
  - Changing valve when hydrostat is still activated could cause damage to the valve
- Fully open or fully close agitation valve cylinder to ensure valve seal is in proper position

AGITATION NOZZLE ROTATE:

- Nozzle angle adjustments can be made at any time during operation
- Use nozzle indicator located on top of section 3 to see what direction nozzles are pointed while pump is in the pit

NOZZLE GATE VALVES:

- Use the gate valves to turn on and off the agitation nozzles

Agitation Valve

Rotating Nozzles

Gate valves

START UP/SHUT DOWN OPERATIONS (NEXUS)

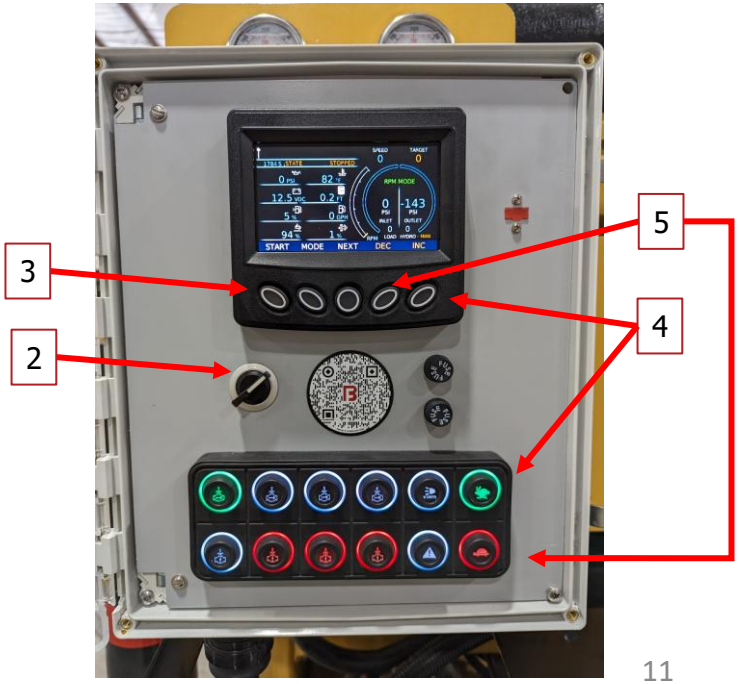
START UP:

- Master electrical switch needs to be turned to the ON position [1]
  - Switch is located on the passenger side of trailer near the engine
- Flip the Nexus to the ON position [2]
- On the engine screen, press the START button on the Nexus [3]
- Throttle engine rpms between 900 and 1000 rpms prior to boom operations using INC button [4]
- Maneuver boom into its desired position
- Once boom is set, turn up engine rpms [4] before engaging hydrostat using button

SHUT DOWN:

- Reduce engine speed to idle using button [5]
- When engine has reached idle, press the red **STOP** button on the left side of the Nexus [3]
- When engine has turned off, Turn off Nexus [2]
- For long term storage, go to side of trailer and turn off master electrical switch [1]
  - On tier 4 engines, the master electrical switch will include a Power On Indicator (POI) light [6]. **Do not turn off master electrical switch until the POI light has turned off and is no longer flashing.**

- DO NOT USE LARGE RED E-STOP SWITCH ON THE BOTTOM OF NEXUS EXCEPT IN EMERGENCIES



HYDROSTAT SUBMERSIBLE PUMP OPERATION

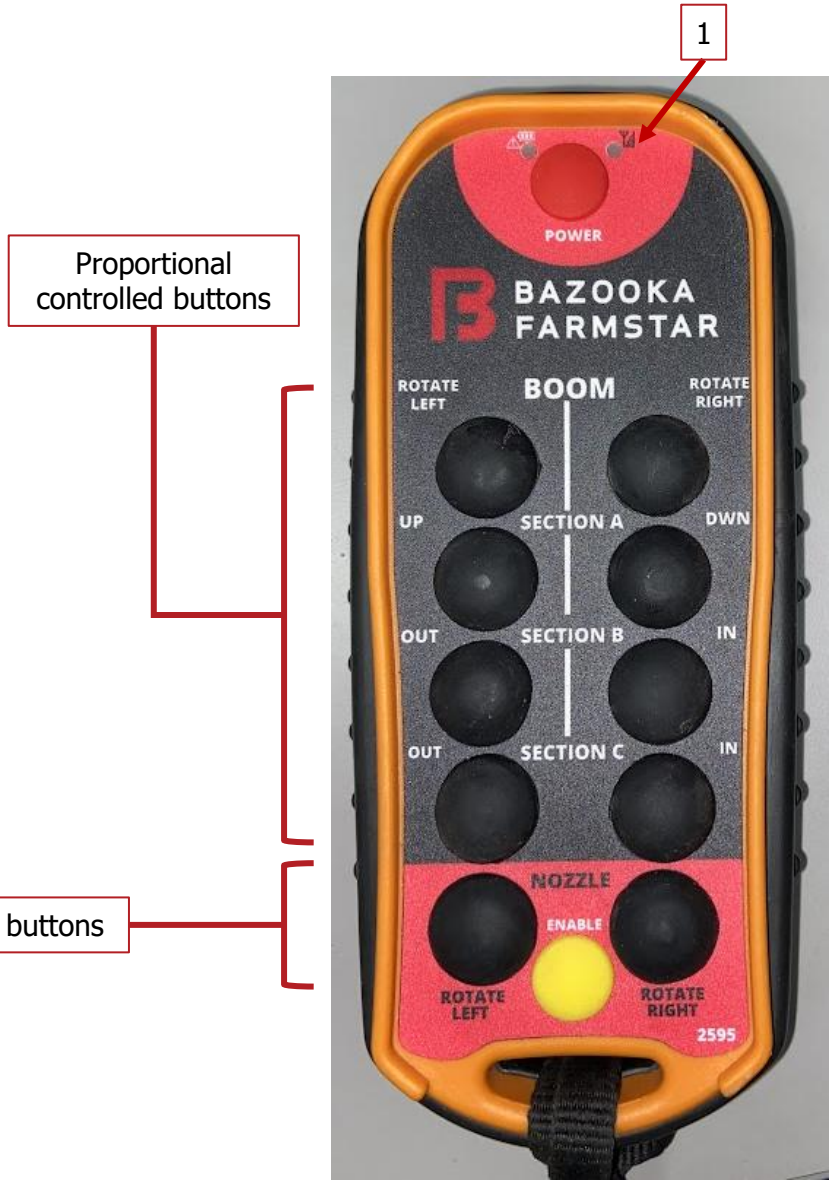
- Hydrostat is controlled via Nexus on Outlaw
- From the engine screen, press the NEXT [1] button on the center of the Nexus controls to access hydrostat controls
- Press the INC [2] button on Nexus to increase the hydrostat throttle. Press the DEC [3] button to decrease the hydrostat throttle
- start pumping and turn the submersible pump throttle up to develop approximately 10-20 psi of suction pressure
- Engage main pump clutch (if applicable) and ensure discharge gate valve is open
- Adjust hydrostat throttle to ensure 5-10 psi is maintained as engine rpm is increased
- To operate pump in reverse, turn the hydrostat throttle to 0 and reduce engine rpms to 900. Press and hold reverse button [4] to run pump in reverse, when the button is released, the pump will stop
    - The reverse speed is automatically set to 50% of hydrostat speed. To increase or decrease pump reverse speed increase or decrease the engine rpms
    - The left pressure gauge located near the hydrostat control knobs will indicate the pump is running in reverse

REMOTE CONTROLS – BOOM OPERATION

- Boom remote operates 5 major functions of the boom

OPERATING:

- Press and hold power button to turn on/off remote
  - Remote will automatically shut off after 5 minutes of no use
- A Green blinking light indicates the controller is connected to the receiver [1]
- The yellow enable button must be pressed before remote will activate. Once enable is pressed the remote will stay active for 45 seconds past the last function is pressed
- The buttons in the black section of the remote are proportionally controlled
  - Softly pressing buttons will operate boom slowly
  - The harder the button is pressed the boom will operate quicker
- The buttons in the red section of the remote are on/off buttons
  - These buttons will activate when the button is half pressed



REMOTE CONTROLS – PAIRING

- The remote system works by setting all remotes connected to the receiver to a unique radio ID code and RF channel Sequence
- One remote will have to be synchronized to the receiver (considered the master remote). All other remotes will be cloned to the master remote

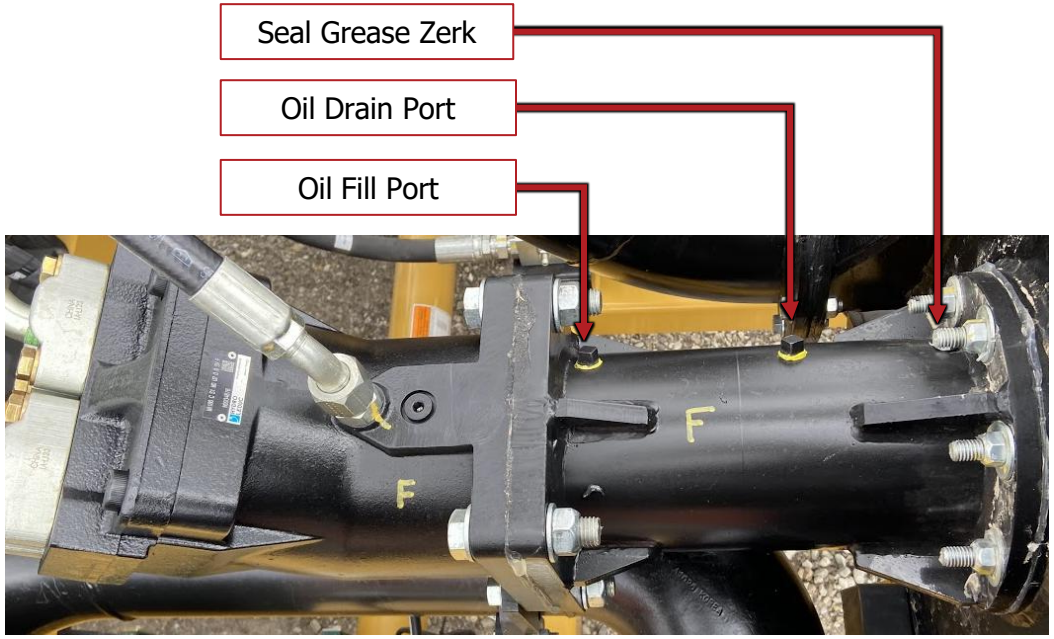
SYNCRONIZING REMOTES:

- Turn off all remotes and the receiver
  - Press and hold **POWER** button on the master remote for 10 seconds, until the LEDs begin to blink
  - Apply power to the receiver
  - When only the green LED is blinking on the transmitter the remotes are synchronized

CHARGING:

- A micro-USB cable charges the remote
  - Find the charging port on the top of the remote
- A red blinking light indicated low battery [2]
- Controller indicates active charging with a solid red LED light [2]
- When the controller is fully charged a solid green led light will activate [1]
- The bumper has a built-in toolbox with a dual USB port to store and charge remotes
- The electrical control box also has a USB port to charge your remote or personal items

HYDRAULIC OIL TANK



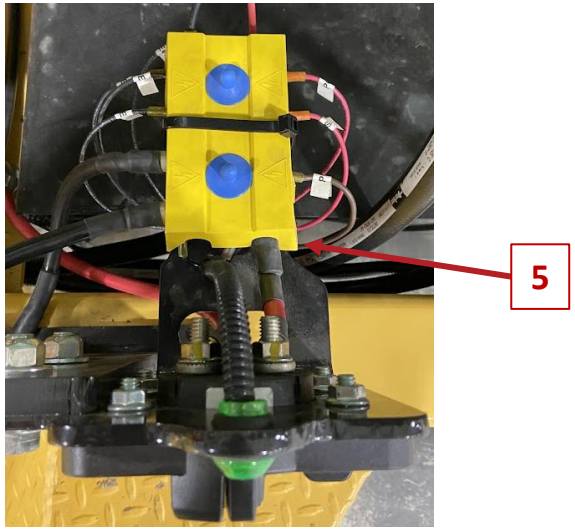
HYDRAULIC OIL TANK

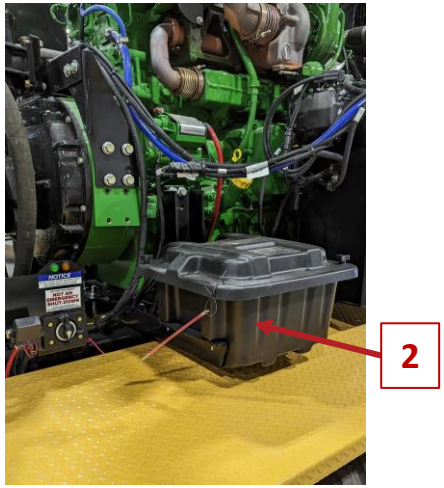
SUBMERSIBLE BEARING HOUSING

- Keep the hydraulic oil tank full of ISO 46 Anti-Wear (AW) Hydraulic Oil Only
- The submersible pump bearing housing is filled with 75W90 Gear Oil
  - Check oil in submersible housing weekly. Refill as necessary
  - Grease bearing housing daily and before storage
  - Drain oil and replace every season or 1000 hours, whichever comes first

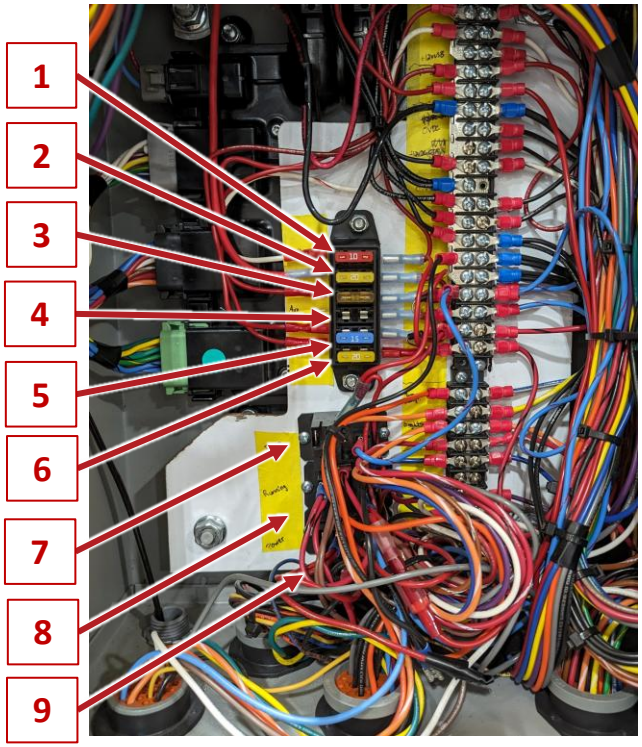
ELECTRICAL SYSTEM COMPONENTS

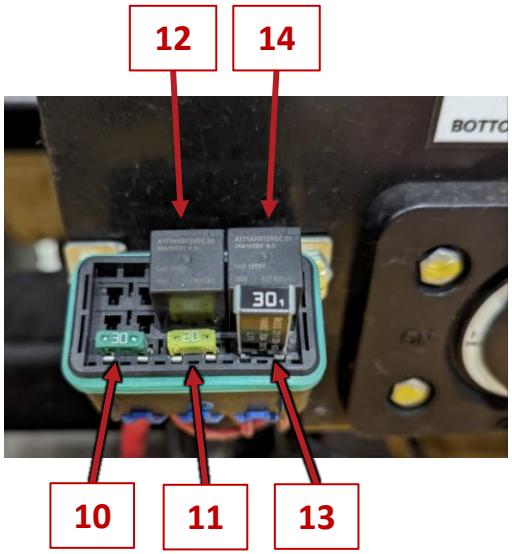
1. Master Disconnect Switch
2. Battery Box
3. Nexus Engine Controller and E-stop
4. Electrical Control Box
5. Buss Bar





ELECTRICAL SYSTEM – FUSE LOCATION





INSIDE ELECTRICAL CONTROL BOX (ATC/ATO FUSES)

1. USB Fuse – 10 AMP
2. PDM Fuse – 20 AMP
3. Kartech Fuse – 20 AMP
4. Aux Fuse – Only used with Aux function
5. Field Devices – 15 AMP
6. Electrical Box Controls – 20 AMP
7. 12VDC Pump Relay
8. Engine over 12VDC Pump Relay
9. Electrical Box Relay

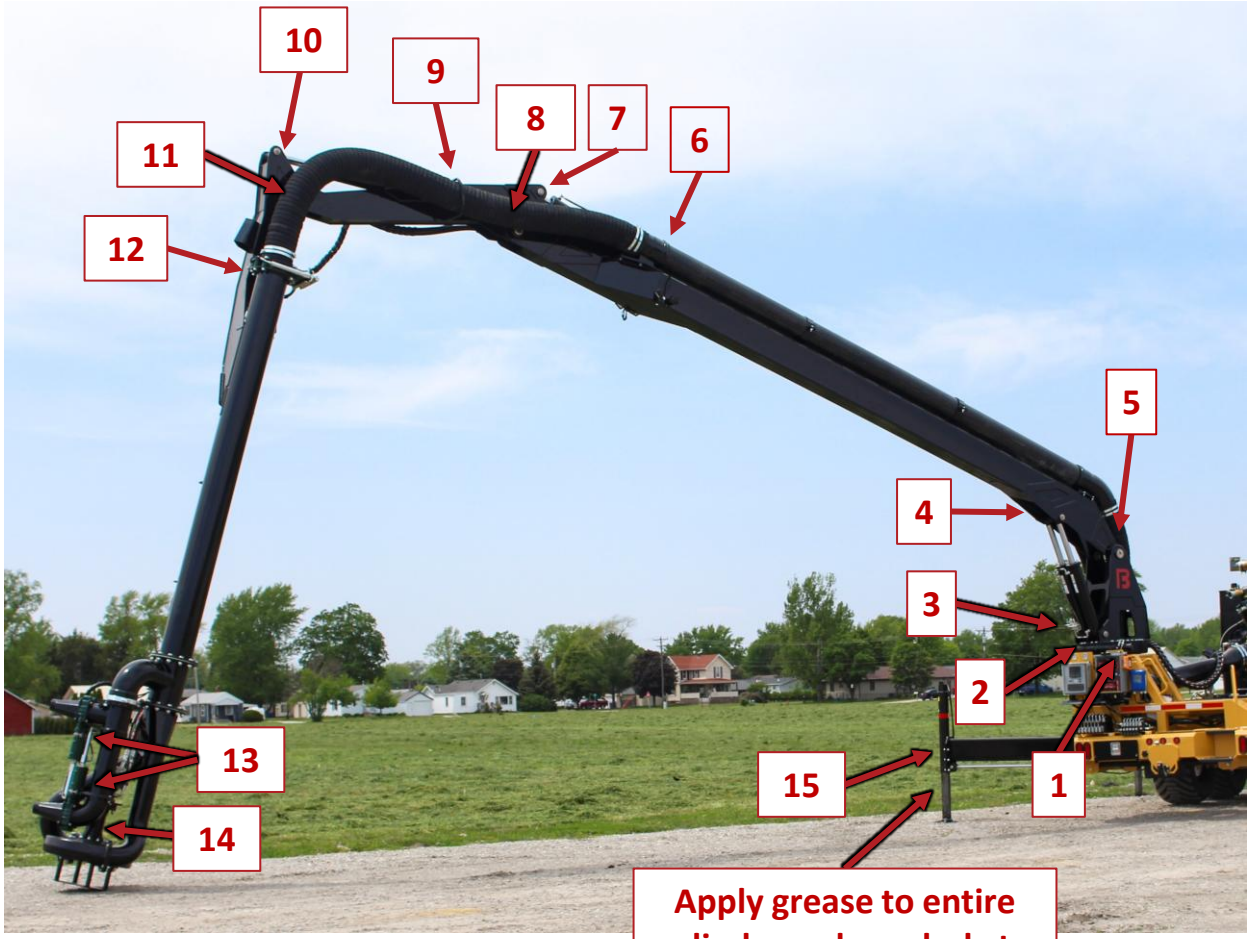
FUSE BOX BY BATTERY DISCONNECT (MICRO FUSES)

10. Electrical Control Box Fuse – 30 AMP
11. Lights Fuse – 20 AMP
12. Lights Relay – 30 AMP, 12VDC Ultra Micro Relay
13. Fan Auto Reset Circuit Breaker – 30 AMP
14. Fan Relay – 30 AMP, 12VDC Ultra Micro Relay

NEXUS PANEL (GLASS FUSES)

15. Nexus Main and Crank Fuses – 10 AMP – (front of Nexus panel)

MAINTENANCE – GREASE POINTS

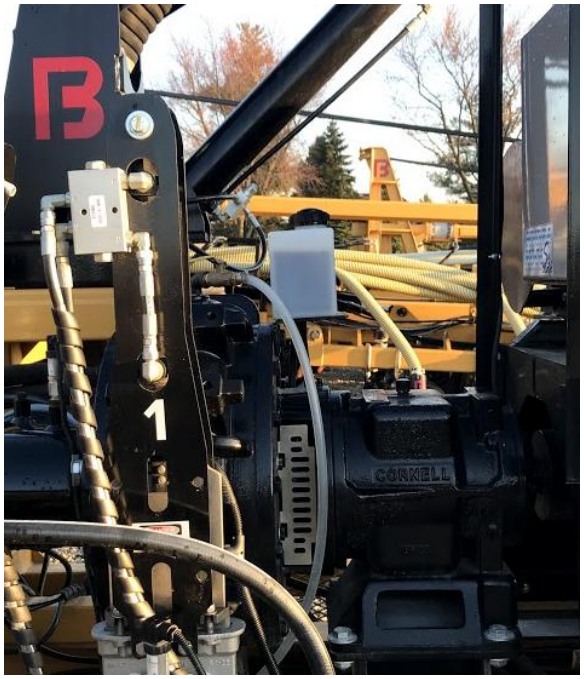


Grease all components below weekly unless otherwise noted

Lubricate all fittings with a good quality lithium soap compatible E.P. grease meeting the NLGI #2 specifications and containing no more than 1% molybdenum disulfide

1. Slew Ring outside (a), (b), (c)
2. Slew Ring inside (a), (b)
3. Base Cylinders Base End (x2)
4. Base Cylinders Rod End (x2)
5. Boom Rotation Bushing (x2)
6. Section 2 Cylinder Base End
7. Section 2 Cylinder Rod End
8. Section 2 Rotation Bushing
9. Section 3 Cylinder Base End
10. Section 3 Cylinder Rod End
11. Section 3 Rotation Bushing
12. Agitation Gate Valve
13. Nozzle Gate Valves (x2)
14. Submersible Pump Bearing Housing (**grease daily)**
15. Downriggers (x4)

MAINTENANCE – CORNELL PUMP RUN DRY



- Ensure that run dry reservoir is full of T32 hydraulic oil before operating Outlaw trailer
- Refer to Cornell pump maintenance manual for detailed pump and bearing housing maintenance

MAINTENANCE – WHEEL HUBS, BRAKES AND SHACKLES

⚠ WARNING

SAFETY ALERT! (1) FOLLOW ALL TORQUE REQUIREMENTS. (2) DO NOT USE ANY COMPONENT WITH VISIBLY WORN OR DAMAGED THREADS. FAILURE TO FOLLOW THESE SAFETY ALERTS CAN LEAD TO LOSS OF VEHICLE CONTROL, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY OR DEATH.

Hutchens Suspension Torque Requirements
9600-9700 Series (Decal Part Number 16086-01 Rev. J)

After an initial break in period, approximately 1000 miles, and at least every 4 months periodically thereafter, ALL bolts and nuts should be checked to insure that recommended torque values are being maintained.

Oiled torque values listed are for new fasteners with lubricated threads. It is recommended that new installations be performed with oiled fasteners. For dry threads which have been in service, use the higher torque values which are noted below.

	OILED	DRY
1 1/8-7 (9600 / 9700 Rocker Bolt)	590 lb-ft	790 lb-ft
1-14 or 1-8 (9700 Radius Rod Bolt)	540 lb-ft	720 lb-ft
7/8-14 (Axle U-Bolts & 9600 Radius Rod Bolt)	350 lb-ft	470 lb-ft
3/4-16 (Axle U-Bolts)	310 lb-ft	420 lb-ft
5/8-18 (Radius Rod Clamp Bolt)	130 lb-ft	170 lb-ft
5/8-18 (Spring Retainer Bolt)	35 lb-ft	50 lb-ft

HUTCH Hutchens Industries — Hutchens Industries, Inc., P.O. Box 1427, Springfield, Missouri 65801-1427 Toll Free 1 (800) 654-8824

Hutchens Shackles Torque Specs

HUB MAINTENANCE:

- After 1,000 hours of service, verify the hub, while unloaded, can rotate freely without making a knocking noise
  - Verify there is minimal end play on the hub
  - Replace the bearings, seal, and gasket or replace the hub if either of these checks fail

BRAKE MAINTENANCE:

- Brake fluid reservoir is in the gooseneck. Check brake fluid level before moving trailer.
  - Use DOT 3 brake fluid from a sealed container
- Brake system uses rotors and pads. Inspect brake pads regularly for wear and replace as needed

WHEEL FASTENER INSTRUCTIONS:

- Wheel fasteners should be torqued to 420 ft-lbs before first use and after each wheel removal
  - Start all bolts or nuts by hand to prevent cross threading
  - Use the star pattern when tightening the lug nuts
- Re-torque all wheel fasteners after the first 50 miles of use and again after 100 miles
- After the first 100 miles of use, wheel fasteners should be checked and re-torqued every 3 months or 3,000 miles

SHACKLE MAINTENANCE:

- After the first 1,000 miles re-check the trailer alignment and correct, if required
- Check the suspension prior to every trip to make sure it is operational
- Inspect all decals to ensure they are legible and intact
  - Clean with a terry cloth towel, soap, and water
- Perform visual inspection and appropriate maintenance of suspension every six months or 25,000 miles
- All fasteners, especially U-bolts, should be regularly inspected and retorqued to the proper specifications

MAINTENANCE – TIRES

SUPER SINGLE TIRES

- 385/65R22.5
- Maximum speed 68 MPH
- Inflation pressure – 120 PSI

550 FLOTATION TIRES

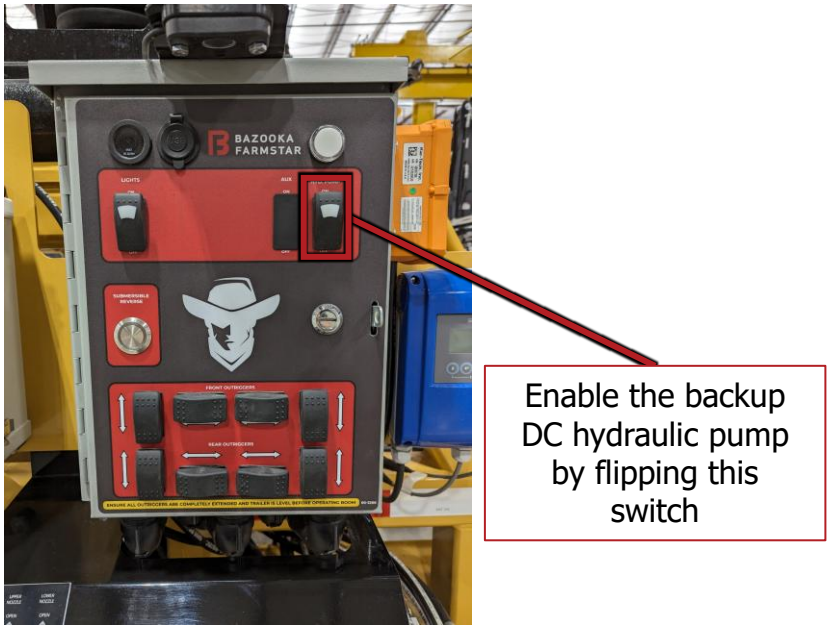
- 550/45-22.5
- Maximum speed 40 MPH
- Inflation pressure – 45 psi

WARNING

- Regularly inspect tires for wear, checking, and tire pressure
- Always order and install tires and wheels with appropriate capacity to meet or exceed the anticipated weight to be placed on the equipment
- Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should be called to service and/or mount tires

OUTLAW EMERGENCY HYDRAULIC SETUP

In case of engine failure, use these instructions to enable boom with the backup 12VDC pump



- The 12VDC pump automatically operates the pig launcher, discharge gate valves, and all outriggers when the engine is not running
- The backup function is intended for use if the engine is inoperable, or the engine driven hydraulic pump fails
- The motor can run continuously for 7 minutes and then will require a cool down period
- The motor is protected from overheating by a temp sensor

OTHER NOTES

- Do not obstruct air flow in front of the engine radiator. Maintain at least 18” of clearance in front of the radiator
- Refer to Engine manual for proper maintenance procedures
- Many purchased components installed on this machine have their own dedicated maintenance manual from the manufacturer, many of which can be found online. It is the owner’s responsibly to ensure all manuals are reviewed and proper to operation of this equipment. Please contact Bazooka Farmstar if you haven’t received a component manual and are unable to find one on the web.

BAZOOKA FARMSTAR WARRANTY POLICY

This warranty document contains the sole explanation of any and all warranty coverage and is subject to the provisions expressed below.

Customer Responsibility

It is the customer's responsibility to maintain the equipment in accordance with the instructions provided in the operations manual.

If a failure in the product occurs, it is the customer's responsibility to cease operation until the proper repairs have taken place. *Damage which occurs from continued operation after a failure may not be covered by warranty.*

Limited Warranty Coverage

New manufactured equipment comes standard with a 1-year limited warranty, beginning at the date the equipment was invoiced to the original purchaser of use, or from the date the equipment was first put into use. We guarantee the manufactured product to be free of material defects or workmanship issues. Limited Warranty Coverage is only valid on registered equipment.

In the event a failure occurs during normal operational use, Bazooka Farmstar will replace, repair, or credit the product or part at our discretion. Labor costs for the dealer and/or customer to install or assemble the replacement will be determined by Bazooka Farmstar at the time the claim in submitted.

Bazooka Farmstar has the right to inspect the customer's equipment to determine if a defect in materials or workmanship exists, as well as the labor hours required, prior to repairs made by the dealer and/or customer.

Certain products sold by Bazooka Farmstar are covered under their original manufacturer's warranty. These include but are not limited to engines and pumps.

Our dealers do not have authority to access, evaluate, or administer warranty on behalf of Bazooka Farmstar.

We do not guarantee our products to meet local municipal, state, or national laws or regulations.

BAZOOKA FARMSTAR WARRANTY POLICY

This warranty does not cover used equipment or failures caused by:

- Accidents
- Alterations or modifications
- Abusive operation
- Improper repairs
- Misuse or neglected maintenance
- Use beyond original design intention (as specified in the Operation's Manual)
- Unapproved attachments or accessories
- Natural wear and tear

Submitting a Claim

Contact your Account Manager to begin the warranty process. **To be considered for approval, claims on registered equipment must be submitted within 30 days of the date the issue occurred.**

If you need replacement parts to repair the failure, your Account Manager will ship them out as soon as possible. After your replacement parts have shipped, you will receive an invoice with 60-day terms*.

If your Account Manager informs you that parts need to be returned as part of your warranty evaluation, a Return Material Authorization (RMA)** will be sent to you and you will have 30 days to return the items.

Upon receipt of the failed replacement parts, a warranty evaluation will be performed to determine a disposition. If approved, a credit will be issued in full.

Bazooka Farmstar will send your approval or denial via email for your records.

** We understand that evaluation, especially when involving a third party, may extend past 60 days. However, if the claim is in process and the items were returned by the expected return date on the RMA, no finance charges will be assessed.*

**This change is only applicable to warranty orders that require parts to be shipped when warranty coverage is not clearly approved, or the problem is not easily identified. Manufactured products containing material defects or workmanship issues, or instances where Bazooka Farmstar is undeniably at fault for the problem, will continue to be processed with no additional charges.*

***Issuance of an RMA does not guarantee credit or approval of warranty coverage.*