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USERS MANUAL P/N 29688
8045DX-30 WP DTCH.
30 FT BOOMS

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F2725-C
7/20/2022

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SECTION VI

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MODEL 8045 INSTALLATION INSTRUCTIONS

Read and understand these instructions completely before starting the work.

Before installing make sure you have all necessary parts. Please refer to the Owner's manual Section 6-1 for the list of parts required for installation. Report any shortages to Liftmoore, Inc. immediately.

1. The mounting surface for the crane must be capable of supporting the rated moment and maximum load of the crane listed below:

8045 CRANE	45,000 Ft.-Lbs.	8,000 Lbs.
------------	-----------------	------------

2. Layout the mounting holes for the crane as shown in the drawing No. 50653. Cut the center hole for the crane swivel as shown on this drawing. Mount the crane with four 7/8-14" Grade 8 quality.

3. A manual disconnect switch with mounting bracket and terminals is provided with the crane. This switch will act as the main electric power disconnect for the crane. Removing power from the crane during periods of non-use will increase the life of the crane's electrical components. The switch should be mounted as near as possible to the crane and in a position which will facilitate its use. Determine the appropriate mounting position for the switch and use the supplied terminals to splice into the crane's main power cable. Drawing No. 50948 illustrates how to install the disconnect switch and fuse.

4. Install the 30 Amp fuse, which is supplied with the crane, near the battery on the positive line. This fuse is to protect the wiring in event of an accidental grounding. Use a section of the wire and the terminals supplied to connect between the battery and the circuit breaker. See drawing No. 50948.

5. Run the 10 Ga. battery cables (red and black wires) along the inside of the chassis frame to the battery. Connect the (+ red wire) battery cable to the in-line fuse and the (- black wire) to the negative terminal with the terminals provided. See that the cable is protected. Avoid sharp edges and heat sources such as the muffler or catalytic converter. Use loom for protection whenever the cable passes through the body. On continuous rotation models, use the terminal supplied with the wires and connect the cables to the mating terminal underneath the crane located between the pipe nipples in the center of the swivel. See dwg No. 50948.

6. A good tight ground connection to the negative terminal power source must exist for the crane to work.

7. Hydraulic Component Installation: The following description applies to Liftmoore's Hydraulic Installation Drawing No. 50026.

These cranes require a pump driven by the vehicle's engine. Pumps can be either Power Take Off or Fan Belt drive. For best, smoothest operation the pump needs to supply 8 GPM at 3,000 PSI with the engine at 1,000 RPM.

Do not use pumps that will deliver more than 8 GPM at engine speed. 10 GPM is the maximum flow acceptable to the valves in the crane. If a larger pump is installed on the vehicle for other functions, use a pressure compensated flow control valve to restrict the flow to the crane as required above.

The Liftmoore WP crane transmitter has two switches designated engine start and stop, engaging high idle, and additional control of auxiliary equipment. An optional receiver is required that will enable these functions. Please see the Liftmoore Product List at www.liftmoore.com for additional information.

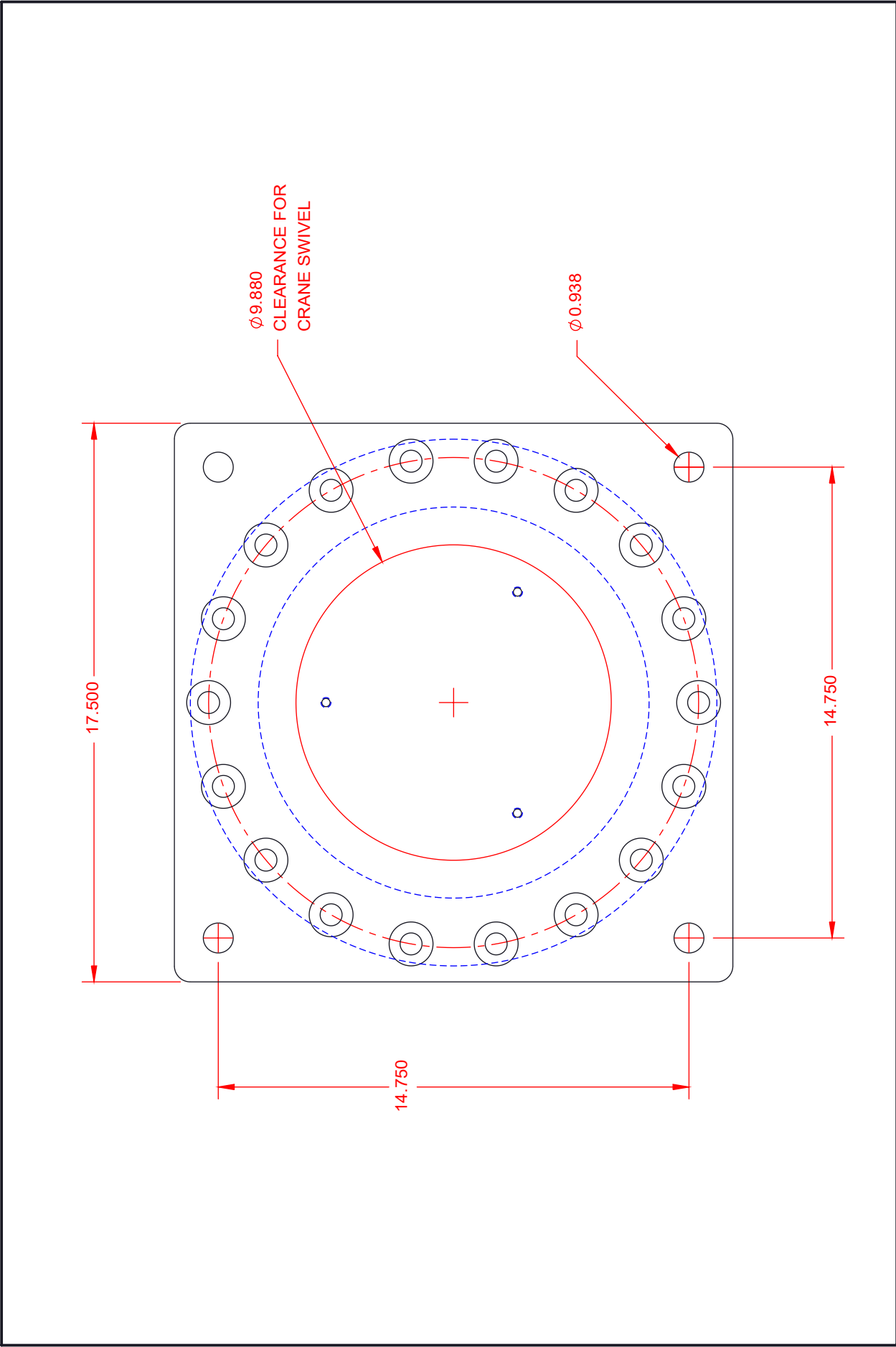
A reservoir capacity 12 gallon minimum is recommended. The reservoir capacity will need to be enlarged for increased running time. For run times of 15 minutes or less the 12 gallon capacity is adequate. For longer duty cycles the reservoir size should be increased and an oil cooler should be considered.



MODEL 8045 INSTALLATION INSTRUCTIONS, Cont.

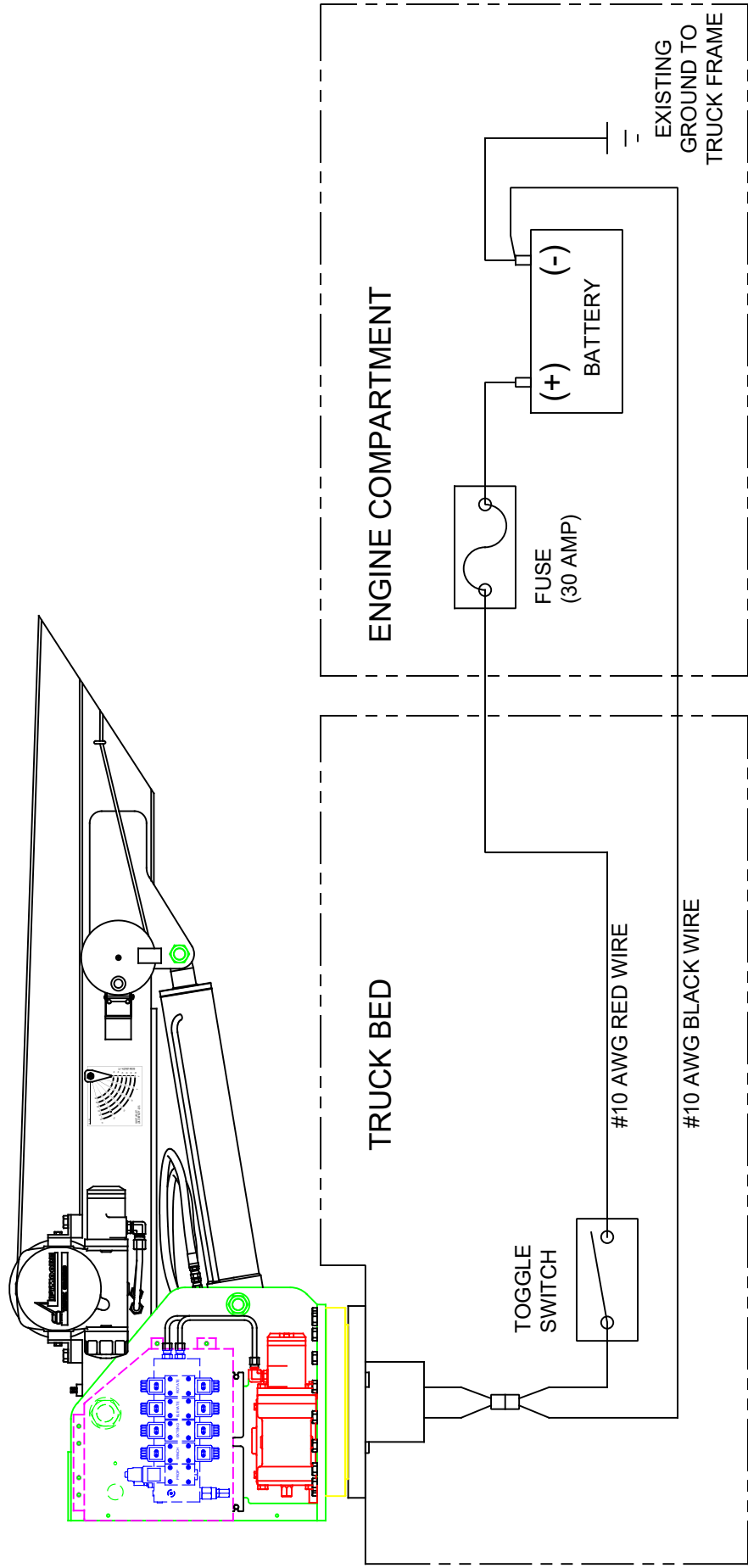
8. DO NOT RUN OIL THROUGH THE CRANE UNTIL THE OIL HAS BEEN FILTERED. An adapter union matching the crane fittings is included. Connect the supply and return lines together using this adapter, circulate the oil through the filter to insure a clean supply. After the pump has filtered 1.5 times the reservoir capacity, hook the hoses to the crane. It is now ready to run.
9. Connect the hydraulic hoses to the fittings projecting below the crane. The pressure hose must be connected to the port marked "P" (No. 8 size fitting). This is the smaller of the two fittings. The return line to the tank must be connected to the port marked "T" (No. 10 fitting). This is the larger of the two fittings. The port letters are stamped on the bottom of the swivel.
10. Verify that the anti two-block will stop extension out and winch up when the Bail arms device is lifted by either function. The Crane Assembly drawing in the owner's manual illustrates how the Bail arms should be installed on the crane.
11. READ AND UNDERSTAND OPERATORS MANUAL BEFORE OPERATING CRANE. Operate the crane through all its functions. Check that each switch operates the correct function. Verify speed of the unit.
12. A boom support is required for this crane. For bodies shorter than 132", place the support so that the traveling block hook is secured and does not block the truck cab door.
13. An outrigger rated at least that of the crane must be installed to keep the crane as level as possible under all expected working conditions. Keeping the crane level reduces the loads on the rotation gear. This will also protect the truck's springs, axle, and wheels when heavy loads are suspended from the crane. OSHA requirements require a stability test be performed on this installation.
14. Extra rear spring leaves or heavy coil springs may be needed to keep the truck level when the crane is mounted on corner or off center locations.
15. Place these instructions with the Operators Manual.
16. Load Chart and stability test decals are to be placed on the truck body for easy visibility by the user.





 Houston TX (713)-688-5533 www.liftmoore.com	DRWN BY: JC	BASE PLATE 4064/8045 FOR INSTALLATION MANUAL	DRAWING NO. 50653-A
	DATE: 3/29/07		

SUGGESTED WIRING SCHEMATIC FOR LIFTMOORE HYDRAULIC CRANE INSTALLATION



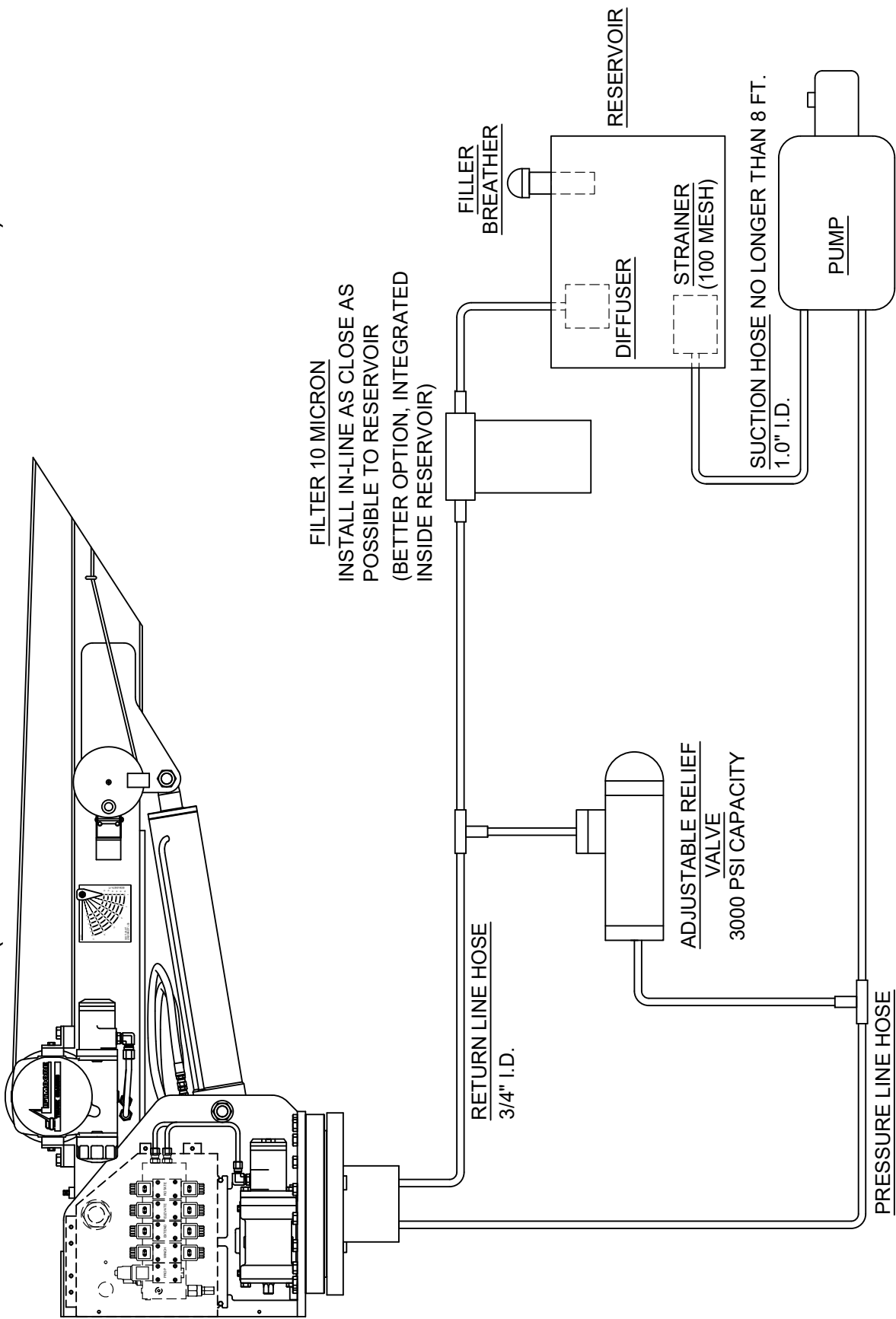
Houston TX
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www.liftmoore.com

DRWN BY: JE
DATE: 7/16/21

SCHEM, CRANE ELEC. INSTAL-HYDR
HYDRAULIC CRANES, DUAL SWIVEL

DRAWING NO.
50948-0

SUGGESTED HYDRAULIC DIAGRAM FOR LIFTMOORE HYDRAULIC CRANE INSTALLATION
(OTHER EQUIPMENT MAY REQUIRE LARGER HOSES)



OPTIONAL ENGINE CONTROL RECEIVER INSTALLATION

The engine control functions allow the user to start and stop the engine and also advance the idle, all from the crane remote pendant control.

The following instructions provide a general guideline for installing and wiring the receiver. Since engine controls vary from manufacture to manufacturer and even from year to year, it is impossible for Liftmoore to maintain specific information on your vehicle. You will have to contact the vehicle and/or engine manufacturer (contact information is provided below). Also, many new vehicles have a provisions for remote engine control built into the ECU, but these functions must be activated and/or programmed by a dealer or authorized service center.

MOUNTING THE RECEIVER

The receiver should be mounted vertically with the antenna up. For best reception, it should be mounted in cab in line of site of operator. Since interfacing connections will generally be inside the cab, a good mounting place is the inside, back the cab with the antenna visible through the back glass. The receiver can be mounted outside of the cab, however it should NOT be mounted inside the engine compartment because of interference generated by the engine.

ENGINE START

Engine start is accomplished by splicing the brown wire on the engine receiver control harness with the ECU start circuit.

WARNING!

Engine start may bypass some manufactures safety functions such as clutch or neutral interlock. It is the installer's responsibility to ensure safe and proper installation.

ENGINE STOP

If the ECU is not equipped with a remote engine kill circuit then a normally closed relay must be installed in the ECU power or engine run circuit. The gray wire on the engine control receiver harness is then connected to the solenoid coil. Activating the circuit will open the solenoid, killing the engine.

NOTE!

It is advisable to include a small jumper wire that can be installed to bypass the solenoid should it fail, otherwise the engine would not run.

ADVANCED IDLE

Many new diesel engines have an advanced idle control circuit built into the ECU. Some automatically advance the idle when the PTO is activated. This feature may have to be activated and/or programmed by the dealer.

NOTE!

Some engines also require activating a PTO circuit to prevent "Service Engine Soon" or other erroneous errors during PTO operation.

For gas engines or engines without this feature, an after-market throttle advance will have to be purchased separately.

CONTACT INFORMATION

Your truck or engine dealer should be able to provide you with further assistance. Also check the manufacturer's body builder manual (some provided online). Before calling, please have your vehicles make, model, year, engine and transmission size and manufacturer, and VIN if available.

Ford Body Builders Advisory Service	1.877.840.4338
GM Upfitter Integration	1.800.875.4742
Peterbilt	1.940.591.4000
Caterpillar	1.800.847.4986
Cummins	1.800.343.7357
RAM	
Navistar	1.800.365.0088

fordbbas.com/home
gmupfitter.com/body-builder-manuals

ramtrucks.com/ram-commercial/body-builders-guide
bodybuilder.navistar.com

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VEHICLE STABILITY TEST

OSHA (29CFR 1910.180c) requires a stability test be completed by the installer. A qualified person shall perform this test. Please call Liftmoore for any assistance required in completing this test.

TEST PREPARATIONS:

- Use as level of a test site as possible.
- Engage parking brake on vehicle.
- Set outriggers, jackstands, or other stability device in place.
 - Vehicle tires should remain in contact with the ground.
 - The vehicle should be level.

FILL OUT TEST FORM:

- Complete the Vehicle Information and Crane Information data at the top of Page 2 of this form.
- Use a known weight to determine the **Initial Testing Load Radius**. Write this number on all 3 locations on Page 2 of this form.

TEST PROCEDURE:**Determine Area Y Angle**

1. With the crane extended to the **Initial Testing Load Radius** over the rear of the truck, lift the load. Keep the load less than 4" off of the ground.
2. Rotate the load counterclockwise. Monitor all vehicle tires to ensure they remain in contact with the test surface.
3. When one of the vehicle's tires breaks contact with the ground, stop the rotation.
4. Use a protractor to determine this angle. Write this angle on the **Stability Test Results** as **Area Y**.

Determine Area W1 Length

5. Keeping the load off of the ground, retract or elevate the boom until all tires are in contact with the test surface.
6. Continue rotating the load counterclockwise while monitoring all vehicle tires.
7. When one of the vehicle's tires breaks contact with the ground, stop the rotation.
8. Keeping the load off of the ground, retract or elevate the boom until all tires are in contact with the test surface.
9. Repeat this procedure until either the vehicle prevents further rotation or a 180 degree rotation of the load is reached.
10. Record the load radius in feet at this point on page 2 of this form as **Area W1 Length**.
11. Calculate the **W1 % Rated Capacity**.
12. Write the **W1 % Rated Capacity** in the **Stability Test Results** on Page 2 of this form.

Determine Area Z Angle

13. Return the load to the rear of the vehicle and extend the load to the **Initial Testing Load Radius**. Keep the load less than 4" off of the ground.
14. Rotate the load clockwise. Monitor all vehicle tires to ensure they remain in contact with the test surface.
15. When one of the vehicle's tires breaks contact with the ground, stop the rotation.
16. Use a protractor to determine this angle and write this angle on the **Stability Test Results** as **Area Z**.

Determine Area W2 Length

17. Keeping the load off of the ground, retract or elevate the boom until all tires are in contact with the test surface.
18. Continue rotating the load clockwise while monitoring all vehicle tires.
19. When one of the vehicle's tires breaks contact with the ground, stop the rotation.
20. Keeping the load off of the ground, retract or elevate the boom until all tires are in contact with the test surface.
21. Repeat this procedure until either the vehicle prevents further rotation or a 180 degree rotation of the load is reached.
22. Record the load radius in feet at this point on page 2 of this form as **Area W2 Length**.
23. Calculate the **W2 % Rated Capacity**.
24. Write the **W2 % Rated Capacity** in the **Stability Test Results** on Page 2 of this form.

Record Stability Test Results on Placard

25. Record the information from the **Stability Test Results** on the **CRANE TRUCK STABILITY** plate (P.N. 18600) and install the plate in a visible position on the vehicle, preferably near the crane.

THIS TEST IS NOW COMPLETE

STABILITY TEST FORM

Operational limits of this vehicle

VEHICLE INFORMATION

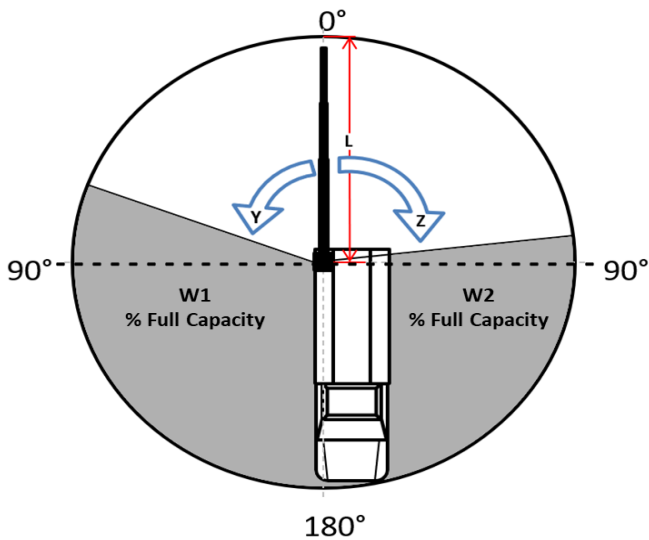
Year _____
 Make _____
 Model _____
 VIN _____

CRANE INFORMATION

Model _____
 Serial Number _____
 Moment Rating (ft-lbs.) _____

Determine the **Testing Load Radius** by using the following:

Moment Rating (ft-lbs.) _____
 Multiply by 1.18 x _____
 Divide by known weight , _____
Testing Load Radius (ft.) = _____



Area W1 Length _____
Testing Load Radius (ft.) _____
 Multiply by 100 _____
 W1 % Rated Capacity _____

Area W2 Length _____
Testing Load Radius (ft.) _____
 Multiply by 100 _____
 W2 % Rated Capacity _____

STABILITY TEST RESULTS

Area Y: _____ Degrees
 Area Z: _____ Degrees
 Area W1 Rated Capacity: _____ %
 Area W2 Rated Capacity: _____ %

Test Performed By: _____

Date: _____

CRANE SAFETY RULES

CAUTION!

- 1. READ AND UNDERSTAND OPERATOR'S MANUAL.**
- 2. INSPECT VEHICLE AND CRANE INCLUDING ITS OPERATION BEFORE DAILY USE.**
- 3. USE THIS EQUIPMENT ONLY ON SOLID LEVEL GROUND WITH OUTRIGGERS OR JACKSTANDS PROPERLY SET.**
- 4. BEFORE OPERATING THE CRANE REFER TO MAXIMUM LOAD CHART ON CRANE FOR OPERATING LOAD LIMITS.**
- 5. BE SURE LOAD BEING LIFTED IS WITHIN SAFE WINCH CAPACITY AS WELL AS SAFE CRANE CAPACITY. MULTI-PART LINE OPERATION IS REQUIRED WHEN SINGLE LINE LOAD CAPACITY OF WINCH IS EXCEEDED.**
- 6. DO NOT OPERATE, WALK, OR STAND UNDER THE BOOM OR ANY SUSPENDED LOAD.**
- 7. ALWAYS PAY OUT LOAD LINE BEFORE EXTENDING BOOM. WIRE ROPE DAMAGE AND / OR BREAKAGE MAY OCCUR.**
- 8. BOOM TIP MUST BE DIRECTLY OVER THE LOAD BEFORE ANY LIFTING IS STARTED. DO NOT DRAG LOADS WITH THIS CRANE.**
- 9. BOOM MUST BE IN ITS BOOM REST BEFORE MOVING THE VEHICLE.**
- 10. MAINTAIN THIS CRANE AS REQUIRED IN THE OWNER'S MANUAL.**
- 11. DO NOT ALLOW PERSONNEL TO RIDE ON THE LOAD LINE, LOAD, OR BOOM OF THIS CRANE.**
- 12. IT IS UNLAWFUL TO OPERATE THIS EQUIPMENT WITHIN TEN FEET OF HIGH VOLTAGE LINES.**



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F1122-C
02/01/22

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INTRODUCTION

This crane is a powerful machine designed to lift and move heavy loads. There are many hazards associated with these operations. Liftmoore has designed this crane to be as safe as possible but -

IT IS THE OPERATOR'S RESPONSIBILITY TO PREVENT ACCIDENTS!

This takes pre-planning, attention, and knowledge of basic principles and rules. Even if you have used similar cranes, reading this manual in its entirety will help prevent damage, injury, or even loss of life; benefits well worth the short amount of time it takes to read these pages.

REGULATORY AUTHORITY

Use of this crane is governed by OSHA 29 CFR 1910.180 and may be governed by other federal, state, or local regulations.

IT IS THE OPERATOR'S RESPONSIBILITY TO UNDERSTAND AND COMPLY WITH ALL APPLICABLE REGULATIONS GOVERNING THE OPERATION, INSPECTION, AND MAINTENANCE OF THIS CRANE.

Personnel should be trained, tested, and certified, as recommended by OSHA and ANSI standards, before operating this crane.

USING THIS MANUAL

This manual assumes that the crane is mounted on a typical service body type or similar truck, which is powered by the vehicle electrical or hydraulic system, and is controlled by either the standard pendant control or FM radio control sold by Liftmoore, Inc.

This manual is supplied to provide basic guidelines for the safe use, routine maintenance, and general inspections of this crane.

This manual is supplied to provide basic guidelines for the safe use, routine maintenance, and general inspections of this crane.

Laws, regulations, standards, or policies may be more restrictive than this manual. If a conflict exists for any limit or condition, the safest or most prohibitive shall be used. Under no circumstances shall the load, moment, or stability ratings be exceeded.

Pay particular attention to the following:

WARNING! – Draws attention to hazards, conditions, or procedures that if not observed could result in injury or death.

CAUTION! – Draws attention to hazards, conditions, or procedures that if not observed could result in damage to the crane, load, or other equipment. Equipment failure could in turn lead to injury or death.

NOTE! – Draws attention to conditions or procedures that are essential to emphasize.

For questions, interpretations, or to report errors, please contact Liftmoore, Inc, Engineering Dept.



OPERATING RESTRICTIONS

DUTY CYCLE

For Electric Cranes the duty cycle time should be 5 minutes for every 30 minutes use cycle. This is recommended to increase lifespan of motors. This is limited by heat buildup in the motors and declining charge in the batteries. (Installing extra batteries near the crane helps keep the voltage at maximum.)

PERSONNEL

LIFTING OR MOVING OF PERSONNEL IS STRICTLY PROHIBITED! This crane was neither designed nor intended to lift personnel. Under no circumstances should anyone be allowed to ride on the crane, line, or load. All non-essential personnel must be kept away when using the crane. The load must never be moved over people, nor must anyone be allowed to pass or stand under a suspended load.

ELECTRICAL LINES

Consult ASME B30.5 for operating procedures, minimum safe distances, and prohibited zones when working around electrical lines or poles.

When operating near electrical power lines, the crane must be positioned so that the distance from the crane to the lines or poles is equal to or greater than the length of the fully extended boom plus the minimum safe distance required.

All parts of the crane, line, and load must be kept a minimum safe distance from electrical power lines and poles. This distance is 10 feet for electrical lines carrying 50kV or less.

UNDER NO CIRCUMSTANCES SHOULD A CRANE BE OPERATED UNDER ELECTRICAL POWER LINES.

OPERATING PRACTICES

SETUP

POSITION The vehicle must be positioned so that the load is kept as close to the crane base as possible to reduce the moment on the crane. Consideration must be given to starting and ending position as well as firmness and slope of the ground and any obstructions.

OUTRIGGERS The outriggers or jackstands must be firmly set and the vehicle as level as possible. This will reduce the stresses on the rotation drive and keep the load off the vehicle's suspension. Keep in mind that the weight on the vehicle will shift as the crane and load is rotated.

MANUAL BOOM EXTENSION If the manual extension part of the boom is needed, it must be extended and the boom pin placed in the required position. Insert the pin and replace the pin's hairpin keeper before attempting to lift any load.

LOAD LIMIT The operator must understand the crane load chart. The operator must ensure that the load is within the load limits over the entire range which it will be moved. Be sure to include the weight of any lifting devices including the travel block.

The load limit chart is attached to the side of the crane to aid the operator.

The boom angle indicator and chart aids the operator in determining the load capacity at various boom angles and extensions. It also gives the load limit at that configuration.

STABILITY A stability chart must be posted near the crane. The operator must understand the stability chart. The crane may be de-rated over some areas of its operating radius.



TRAVEL BLOCK The operator must determine if the load is within the single line compatibility of the winch or if a multi-part line configuration is needed.

REEVING Ensure the proper routing of the rope through the sheaves and travel block. The rope must lie in the sheave groove and must not rub against any metal objects.

Ensure the rope is correctly wound on the winch drum. The crane assembly drawing will indicate if the rope must be wound over the top or bottom of the drum. The rope must never contact any part of the winch mounting.

WARNING!

If the winch winding direction is reversed the brake will not work and the load will fall.

ATTACHING THE LOAD

POSITION The boom tip must be moved over the load before lifting so that it will be lifted straight up.

CAUTION!

Never drag a load with the crane. Dragging a load puts very high stresses on the crane for which it was not designed.

ROPE Check the rope condition to ensure it is not frayed or damaged. Ensure that the rope is not kinked and that it does not contact any sharp edges or make any sharp bends.

If using double line configuration, ensure that the lines are not twisted.

CAUTION!

Never wrap the hoist rope around the load! Serious damage to the rope WILL occur.

HOOK Always make sure the load is applied to the throat of the hook. Never use a bent hook.

CAUTION!

Always lift with the throat of the hook. Never lift with the load applied to the tip of the hook. Doing so will bend the hook.

SLINGS If the load does not have a lifting eye, use a nylon, chain, or other type of sling designed for lifting and rated for loads greater than that being lifted.

BALANCE Ensure the load will be secure and balanced when lifted. Ensure that the load cannot shift in the sling and that the sling cannot slide across the hook should the load become unbalanced.

LIFTING THE LOAD

Before lifting, ensure that the load is free from all mountings and is no way attached or stuck to anything.

Ensure that at least five full wraps remain on the winch drum at all times.

Test the winch brake by lifting the load a few inches and ensuring that it does not slip.



HOLDING THE LOAD

The operator must keep the load in sight at all times once it is lifted.

The operator must never leave the controls once the load is lifted.

The operator must ensure that no one is allowed to pass or stand under a suspended load.

CAUTION!

Never move the vehicle with a suspended load. Doing so will put dynamic loads on the crane for which it was not designed.

MOVING THE LOAD

Before moving the load, make sure the path is free of any obstructions or people.

Avoid sudden accelerations or stops. Speeds must be kept to a minimum, especially rotation, to keep the load from swinging.

Avoid sudden reversing of direction. Do not reverse direction while the load is still moving.

Make sure that no part of the crane, boom, or load makes contact with any obstruction or comes within a minimum of ten feet from any electrical line.

TRANSIT

While in transit, the crane must be stowed, preferably in a boom rest. The crane must be prevented from rotating and the hook prevented from swinging.



INSPECTION AND MAINTENANCE

OSHA and ASME require frequent and periodic inspections. Records of these inspections must be kept readily available. Liftmoore requires periodic maintenance to ensure proper operation and prolonged life of the crane.

INSPECTION

DAILY INSPECTION

OSHA 29CFR 1910.180 (d)(2)(i) requires the following be checked daily prior to use:

- All control mechanisms for maladjustment interfering with proper operation as well as for excessive wear of components and contamination by lubricants or other foreign matter.
- All safety devices for malfunction. This should include the anti-two block and pressure switch.
- Deterioration or leakage in air or hydraulic systems.
- Crane hooks with deformations or cracks. For hooks with cracks or having more than 15 percent in excess of normal throat opening or more than 10 deg. twist from the plane of the unbent hook.
- Electrical apparatus for malfunctioning, signs of excessive deterioration, dirt, and moisture accumulation. This should include the battery terminals, master disconnect switch, electrical swivel
- The wire rope shall be replaced if any of the following conditions are noted:
 - Kinking, crushing, bird-caging, or other damage
 - Reductions from nominal diameter of more than one-sixty-fourth inch for diameters up to and including five-sixteenths inch, one-thirty-second inch for diameters three-eighths inch to and including one-half inch.
 - Thimble is not in place or is damaged
 - Any evidence of heat damage
 - Six or more randomly distributed broken wires in 1 lay
 - Three or more broken wires in 1 strand in 1 lay

MONTHLY INSPECTION

A thorough inspection of all ropes in use shall be made at least once a month and a certification record which includes the date of inspection, the signature of the person who performed the inspection and an identifier for the ropes shall be prepared and kept on file where readily available. All inspections shall be performed by an appointed or authorized person. Any deterioration, resulting in appreciable loss of original strength shall be carefully observed and determination made as to whether further use of the rope would constitute a safety hazard. Some of the conditions that could result in an appreciable loss of strength are the following:

- Reduction of rope diameter below nominal diameter due to loss of core support, internal or external corrosion, or wear of outside wires.
- A number of broken outside wires and the degree of distribution of concentration of such broken wires.
- Worn outside wires.



- Corroded or broken wires at end connections.
- Corroded, cracked, bent, worn, or improperly applied end connections.
- Severe kinking, crushing, cutting, or unstranding.

PERIODIC INSPECTION

An Annual Inspection Form is included in this manual. OSHA 29CFR 1910.180 (d)(2)ii) requires periodic inspections of this crane. Liftmoore recommends an annual inspection using the included form.

MAINTENANCE PRECAUTIONS

The crane should be maintained monthly for safety reasons and to reduce stress on the crane.

WARNING!

Never perform any maintenance while the crane has any type of load on it. Use the manual operation procedure to lower the load if necessary.

WARNING!

Hydraulic cylinders may have high pressure stored in them even after hydraulic power is removed.

The counterbalance and pilot operated check valve in the cylinder will always hold some pressure in the cylinder. Slightly extending the cylinder then retracting a small amount will relieve most of the pressure in the cylinder. **DO NOT DEADHEAD THE CYLINDER!** This will store the maximum amount of pressure in the cylinder. Care should be taken when either valve is removed from the cylinder as some pressure will still remain.

After any maintenance has been performed the crane shall not be operated until all guards have been reinstalled, all safety devices reactivated, and maintenance equipment removed.

LUBRICATION Refer to the crane specification section for the periodic maintenance schedule and type of lubrication required.

BOLTS Bolts may loosen over time due to vibration; therefore, they should be checked periodically. If bolts need to be replaced, make sure they are replaced with bolts of equal or greater strength. Check the periodic maintenance schedule (Crane Specification Section) for bolt specification and torque.

NOTE!

Sheave and boom and cylinder pivot bolts are not standard bolts. The shank and thread length of these bolts have been modified so that they do not pivot on the threads. Consult the parts section of this manual for part numbers of these bolts.

OTHER MAINTENANCE

Refer to parts drawings for any specific maintenance or adjustment procedures such as hydraulic winch brake, rotation drive gear set adjustment, Etc.



MONTHLY INSPECTION REPORT

Crane Model No. _____ Serial Number _____

Are Boom Hitch Pins and Keepers in place?	Yes _____	No _____
Wire Line Hook with Safety Latch Working?	Yes _____	No _____
Is Hook OK, (Not bent)?	Yes _____	No _____
Is Thimble on Wire Rope OK?	Yes _____	No _____
Is Traveling Block in use?	Yes _____	No _____
Is Wire Rope OK, not kinked or frayed?	Yes _____	No _____
Are all Boom Sections straight?	Yes _____	No _____
Are Sheave Bolts in place and tight?	Yes _____	No _____
Do all Sheaves rotate easily?	Yes _____	No _____
Are Mounting Bolts tight?	Yes _____	No _____
Is Anti Two-Block functioning properly?	Yes _____	No _____
Is Boom Angle Indicator in place and functioning and is Chart legible?	Yes _____	No _____
Are Cylinder Mounting Bolts secure?	Yes _____	No _____
Are Winch Mounting Bolts tight?	Yes _____	No _____
When stopped does winch drift less than 1.0 Inches?	Yes _____	No _____
Is Load Chart in place and easily read?	Yes _____	No _____
Are functions on Pendant operating correctly?	Yes _____	No _____
Is Hydraulic Reservoir full?	Yes _____	No _____
Is Outrigger straight and functioning?	Yes _____	No _____
Any items checked 'No' must be repaired before using this crane.		



ANNUAL CRANE CERTIFICATION (29CFR1910.180)

OWNER_____

MODEL NUMBER_____SERIAL NUMBER_____

DATE_____

Check the following:

___Crane Mounting Bolts (Torque)

___Winch mounting Bolts (Torque)

___Boom mounting bolts

___Cylinder mounting bolts

___Cracks on boom (Check when extended)

___Extension Pads not worn excessively

___Cracks on housing

___Weld cracks on boom

___Weld cracks on housing

___Boom swing approximately one inch or less at boom tip when retracted

___Hydraulic leaks

___Hoses not chafed or cracked

Sheaves not cracked

___Boom Tip

___Traveling Block

___Sheaves not worn excessively

___Boom Tip

___Traveling Block

___Sheaves rotate freely

___Boom Tip

___Traveling Block

- ___ *Load Chart in place and legible*
- ___ *Boom angle chart in place and legible*
- ___ *Labels in place (See manufacturer's chart)*
- ___ *Crane Hook Throat Opening within 15% of standard*
- ___ *Crane Hook not bent more than 10 degrees from plane*
- ___ *Hook safety latch operating properly*
- ___ *Booms pin(s) and Keeper(s) in place (Manual Extension Section)*
- ___ *Wire Rope removed if the following occurs:*

Six randomly distributed broken wires in one lay or three broken wires in one strand in one lay.

Wear of one-third the original diameter of outside individual wires.

Kinking, crushing, bird-caging or any other damage.

Evidence of heat damage.

Reduction from nominal diameter of more than one sixty-fourth inch for diameters to five-sixteenths diameter and one-thirty-second inch for diameters three-eighths to one-half inch.

- ___ *Wire Line installed as manufacturer requires.*
- ___ *Protective covers in place*
- ___ *Grease crane as required*

Check fluid level

- ___ *Winch*
- ___ *Gearbox*
- ___ *Reservoir*

Control system for proper operation

___ *Winch Up and Down*

___ *Boom Up and Down*

___ *Boom In and Out*

___ *Rotation CW and CCW*

Anti Two-Block (Required on Power Extendible Cranes) interrupts:

___ *Boom Down*

___ *Boom Out*

___ *Winch Up*

___ *Boom Up stopped by Up Limit Switch*

___ *Outrigger or jackstand operable*

___ *Outrigger crushing decal in place*

___ *Outrigger and Jackstand operates properly*

___ *Boom rest in place and used*

___ *Load Sensor trips when overloaded*

___ *Winch Down does not overrun when stopped*

___ *Crane stability chart in place and visible.*

I certify that I have performed the above tests and that any deficiencies were corrected and now comply as above.

Signed _____

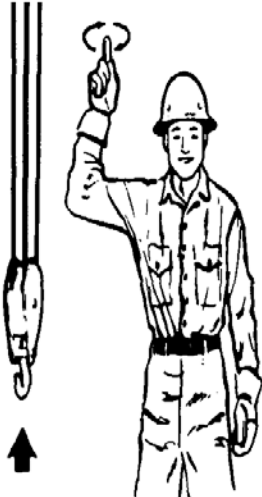
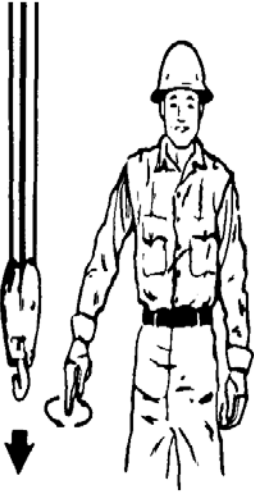



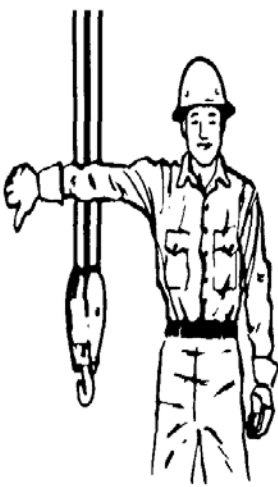
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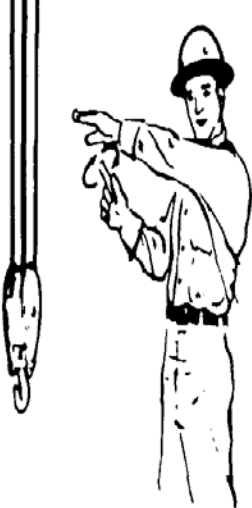
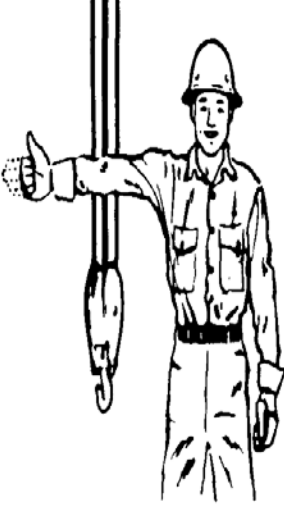
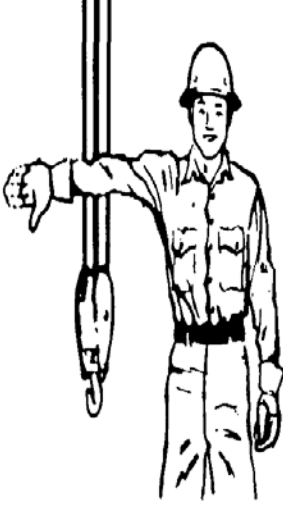
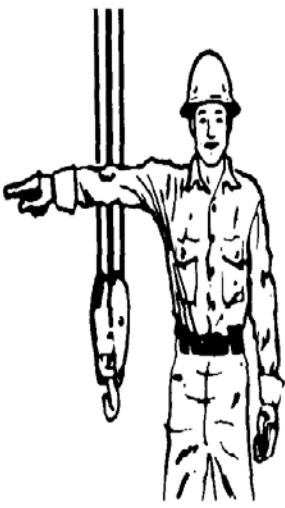
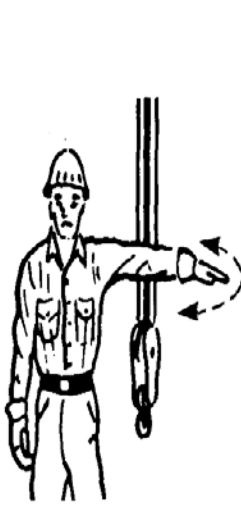

Company _____

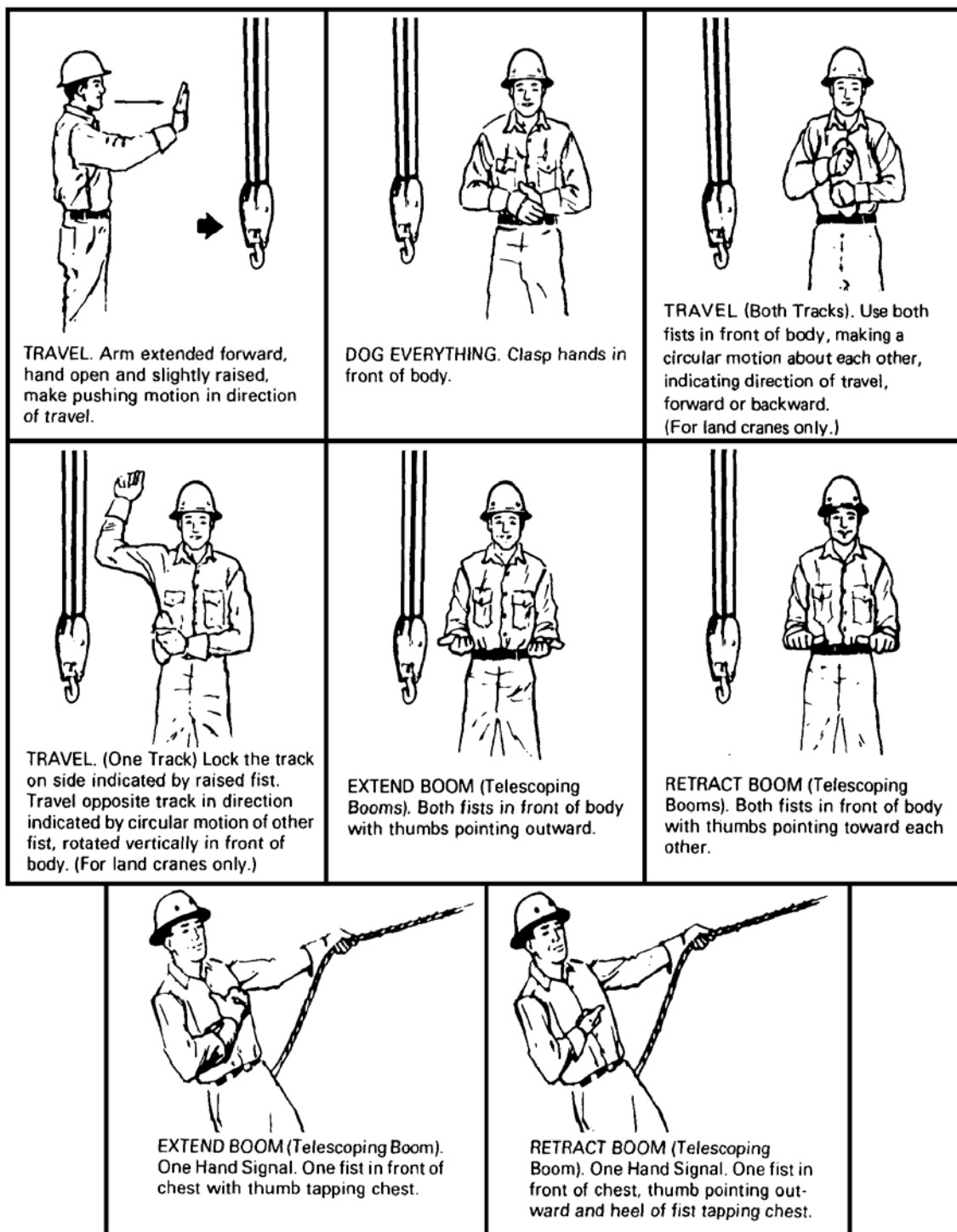
Address _____

City _____ *State* _____

STANDARD HAND SIGNALS FOR CONTROLLING CRANE OPERATIONS

 <p>HOIST. With forearm vertical, forefinger pointing up, move hand in small horizontal circle.</p>	 <p>LOWER. With arm extended downward, forefinger pointing down, move hand in small horizontal circle.</p>	 <p>USE MAIN HOIST. Tap fist on head; then use regular signals.</p>
 <p>USE WHIPLINE (Auxiliary Hoist). Tap elbow with one hand; then use regular signals.</p>	 <p>RAISE BOOM. Arm extended, fingers closed, thumb pointing upward.</p>	 <p>LOWER BOOM. Arm extended, fingers closed, thumb pointing downward.</p>

 <p>MOVE SLOWLY. Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal. (Hoist slowly shown as example.)</p>	 <p>RAISE THE BOOM AND LOWER THE LOAD. With arm extended, thumb pointing up, flex fingers in and out as long as load movement is desired.</p>	 <p>LOWER THE BOOM AND RAISE THE LOAD. With arm extended, thumb pointing down, flex fingers in and out as long as load movement is desired.</p>
 <p>SWING. Arm extended, point with finger in direction of swing of boom.</p>	 <p>STOP. Arm extended, palm down, move arm back and forth horizontally.</p>	 <p>EMERGENCY STOP. Both arms extended, palms down, move arms back and forth horizontally.</p>



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GUIDER

RADIO/CAN REMOTE CONTROL SYSTEM

INSTALLATION AND OPERATION MANUAL

LIFTMOORE
3B278DAJ.doc
December 12, 2019
BK

GUIDER REMOTE

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GUIDER REMOTE

DESCRIPTION

The GUIDER REMOTE is a state of the art microprocessor based Radio Frequency (RF) control system. It will provide the operator the ability to wirelessly operate equipment. The operator is required to follow all OSHA www.osha.gov and other applicable safety standards when operating the equipment. Do not use high power radio devices in close proximity of this product.

The remote control system consists of: the radio transmitter, main receiver module, engine receiver module, and associated optional equipment such as wiring harnesses.

The transmitter is equipped with a trigger, twist to release E-stop

switch, and toggle switches for the various functions. It includes a port for wired control via the built-in Controller Area Network (CAN) system¹. This unit runs on a 3.7V rechargeable Li-Ion battery when in wireless mode. When in wired mode, the transmitter runs with power supplied by the CAN cable. This is useful if the battery power gets too low to operate the transmitter but continued operation is needed. The port is also used to charge the internal battery.

The system's radio receiver has both a proportional output and ON/OFF outputs to accommodate the functions available on the transmitter. All outputs are current-sourcing. It also includes a port for wired

¹ The CAN control will only work with the CRANE module. The ENGINE module only works on RF

GUIDER REMOTE

(CAN) and RS-232 communication for system diagnostics.

OPERATION

Power must be applied to the receiver module for the system to work.

Releasing the E-STOP will turn on the transmitter. Pressing the E-STOP button will turn off the transmitter. Pressing the E-STOP will turn off all outputs as a safety feature. If the transmitter goes out of range for more than 2 seconds, all the momentary outputs will turn off as a safety feature, the e-stop output will turn off after 10 seconds.

To operate a proportional output, toggle the switch of the desired function and pull the trigger to the level desired.

***Please note that if the trigger is pulled before the function is selected, the proportional output will not work as a safety feature.** Release the trigger and begin again in the proper sequence.

Once the Guider transmitter is on, the operating screen will be displayed. On the top left corner of the screen is transmitter battery display. Plug in the transmitter as soon as possible after seeing the battery symbol turn red. See BATTERY CHARGING below. The top middle of the screen shows the LINK status with the receiver (CAN, RF, or NO LINK), and the top right of the screen shows the system voltage. Load capacity and any errors (if present) are then shown below this when connected to the CRANE receiver. When connected to

GUIDER REMOTE

the ENGINE receiver, the display will show RUNNING ENGINE FUNCTIONS.

CONFIGURATION MENU

To navigate to the configuration menu turn the transmitter and receiver off. Press and hold the HORN button then turn on the transmitter. Keep holding the button for greater than 10 seconds until the menu is shown. There are the following options under the configuration menu: TEACH MODE, CLONE TX, SLEEP TIME, RESET TX, and EXIT. To select an option press the HORN button. To scroll down, use the AUX switch and to scroll up, use the RPM switch. To EXIT the configuration menu and go to the operating screen select EXIT.

TEACH MODE

Select this option to put the transmitter into teach mode and synchronize the receiver and transmitter. See transmitter and receiver synchronization below for more information.

SLEEP TIME

To save battery life, the transmitter will turn off after 60 minutes no buttons are pressed. The user must press and release the E-STOP at this point to restore transmitter operation. To change the sleep time, select this option and use the RPM and AUX switch to change the number of minutes the transmitter waits to go to sleep. Press the HORN button to save the selected sleep time and exit.

GUIDER REMOTE

RESET TX

Warning! If the transmitter is reset, the receiver will have to be re-synchronized to the transmitter for operation! To reset the transmitter select RESET TX then press any button.

CLONE TX

Warning! This feature can pose a safety hazard for operators if both transmitters are used simultaneously! Use with caution! Occasionally, it is desirable to have more than one transmitter work with a single receiver. This is accomplished by a process called cloning. See CLONING below for more information.

INDICATOR LEDs

The receiver module can identify problems with the system in the form of an error code (red LED will be blinking). Check the decal on the receiver to diagnose system problems. Then, refer to the ERROR CODE CHART in this manual for explanation of the error codes. The green LED indicator will blink on the receiver during active operation. It will turn on solid when the Gate is connected to Wi-Fi.

TRANSMITTER AND RECEIVER SYNCHRONIZATION

Each radio remote system is designed to operate with a unique radio ID code and RF channel sequence. Each receiver is programmed to respond *only* to the transmitter with the correct ID code/RF channel

GUIDER REMOTE

sequence for which it is set. This feature allows multiple systems to work in close proximity to one another without interference.

In the event that a transmitter becomes damaged and a new one is needed, the receiver can be reprogrammed to respond to the new transmitter. To teach the ID code to the receiver, use the following procedure. ***Please note that if this procedure is interrupted before it has completed, the system may have intermittent operation:**

For 3B2783A, Crane Receiver:

TEACH BY CAN CABLE

1. Plug the CAN cable into the CAN port on both the receiver and transmitter and operate a function on the transmitter until the LEDs on the front panel go from steady to flashing for at least 5 seconds. The

units will be synchronized at this point

TEACH BY RF

1. Turn the transmitter and both receivers off
2. On the transmitter, go to the configuration menu above then select TEACH MODE
3. Apply power to the receiver (engine or crane). The transmitter will display SUCCESFUL and go to operating screen
4. Teach complete

CLONING

Warning! This feature can pose a safety hazard for operators if both transmitters are used simultaneously! Use with caution! Occasionally, it is desirable to have more than one

GUIDER REMOTE

transmitter work with a single receiver. This is accomplished by a process called cloning. Cloning allows an additional transmitter (B) to have the same ID code as the original transmitter (A). If this feature is desired, use the following procedure:

1. Make sure transmitters and receivers are off
5. On transmitter A, go to the configuration menu above then select TEACH MODE
6. On transmitter B, go to the configuration menu above then select CLONE TX
2. Wait for a few seconds until the screen displays SUCCESFUL
3. Turn off both transmitters
4. Synchronize one of the transmitters to the receivers

If cloning feature has been

invoked and is no longer desired, the ID code of one of the transmitters needs to be changed. This will unclone the transmitters. If this is desired, use the following procedure:

1. Make sure the receiver and transmitters are OFF
2. On the transmitter, go to the configuration menu above then select RESET TX
3. Press any switch again to select a new ID
4. Uncloning complete
5. Use transmitter and receiver synchronization procedure above to link the uncloned transmitter to new receivers

BATTERY CHARGING

The transmitter is designed with a smart battery charger. The battery can be charged by

GUIDER REMOTE

connecting the CAN cable from the receiver module (powered on) to the port on the transmitter, or by plugging the AC wall charger or DC cigarette charger (minimum 2A @ 12.6VDC) into the port. Red and green LED indicators on the underside of the transmitter indicate the status of the charger: A red LED indicates that the battery is charging and a green LED indicates that the battery is fully charged.

IMPORTANT BATTERY INFO

When the battery is new, the run-time of the transmitter will be shorter until it has gone through the drain/charge cycle several times. After this point, the unit's current drain should allow at least 20 hours of run-time before a recharge is needed.

The temperature that the transmitter battery is exposed to affects performance and useful life. It is strongly recommended you keep within the following limits:

A. Charging: -4 to +86°F

B. Operating: -20 to +122°F

C. Storing: -4 to +86°F
(lower is better)

OUTPUTS

Each of the outputs from the receiver module is designed with built-in short circuit and overload protection. The outputs can also detect a no-load or broken wire condition.

These error conditions are evident by the alphanumeric display on the receiver module *or* the HISTOGRAM page on the optional Gate.

GUIDER REMOTE

The ON/OFF outputs will indicate an error under no load or broken wire status if NOT activated, and will detect a short IF activated. The proportional outputs will detect a no-load or short condition WHEN activated.

INPUTS

Digital inputs are available for ATB, BOOM LIMIT, and PRESSURE signals. They will function up to battery voltage levels. One analog input is available for a PRESSURE TRANSDUCER. This expects a signal from 4-20mA.

INSTALLATION

Refer to the WIRING CHART in this manual for hookup of the harness.

To install the receiver module, use the two mounting holes

provided on the enclosure to attach it in a vertical manner with the connectors facing down. Please take extra caution not to damage internal components while installing. For high vibration applications, use shock absorbing mounts. It is advised to mount the unit as high as possible, keeping clear of metal obstructions around the antenna which might affect RF performance. Antenna extension cables are available from Kar-Tech to aid in this, if needed.

The main power to the receiver should be connected through a switched, fused line capable of a minimum of 20 amps. For best results, connect power (+) to the receiver via an auxiliary terminal of the ignition switch, PTO switch, or ignition relay. Be sure that the ground (-) is connected securely to the

GUIDER REMOTE

chassis or battery with a star washer which digs into the base metal to insure good contact.

- Read the rest of this manual.

All connections must be properly insulated to protect against shorts.

Seal all connections with a non-conductive silicone grease to prevent corrosion.

BEFORE APPLYING POWER!

- Check power and ground for proper polarity.
- Check the wiring harness for possible shorts before connecting to output devices (i.e., valves and relays) by checking each mating pin terminal.
- Verify that the transmitter battery is fully charged.

GUIDER REMOTE

SYSTEM TROUBLESHOOTING USING ON BOARD GATE:

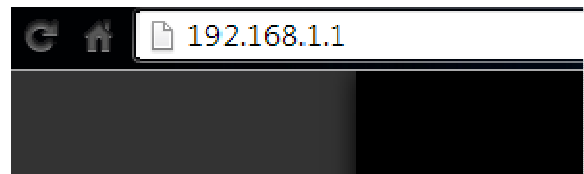
The GATE creates a Wi-Fi access point which allows you to connect to any device with Wi-Fi and web browser such as smart phones, pads or personal computers. It supports Google Chrome, Internet Explorer, Firefox and IOS Safari and allows user to configure, diagnose and troubleshoot the system.

ACCESSING THE CONTROL PANEL

1. Turn on the power to the receiver.
2. Use your device and look for the available WiFi networks. A network under the name of "LIFTMOOREXXXXXXXXXX" should be available at

this point. The "XXXXXXXXXXXX" should be the 10 digit numeric serial # on the crane WIFI receiver. Connect to the network, if required password is 3B2785A1.

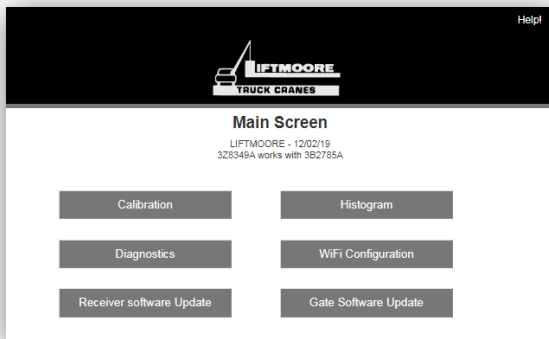
3. Once the connection is established, open a web browser on your device. The Chrome browser is recommended.
4. Enter the address `http://192.168.1.1` in the address bar



Address Bar

5. If the Gate is not used for 5 minutes after power up it will automatically turn off. Recycle power to the receiver to turn it back on.
6. The following options are available from the main screen.

GUIDER REMOTE

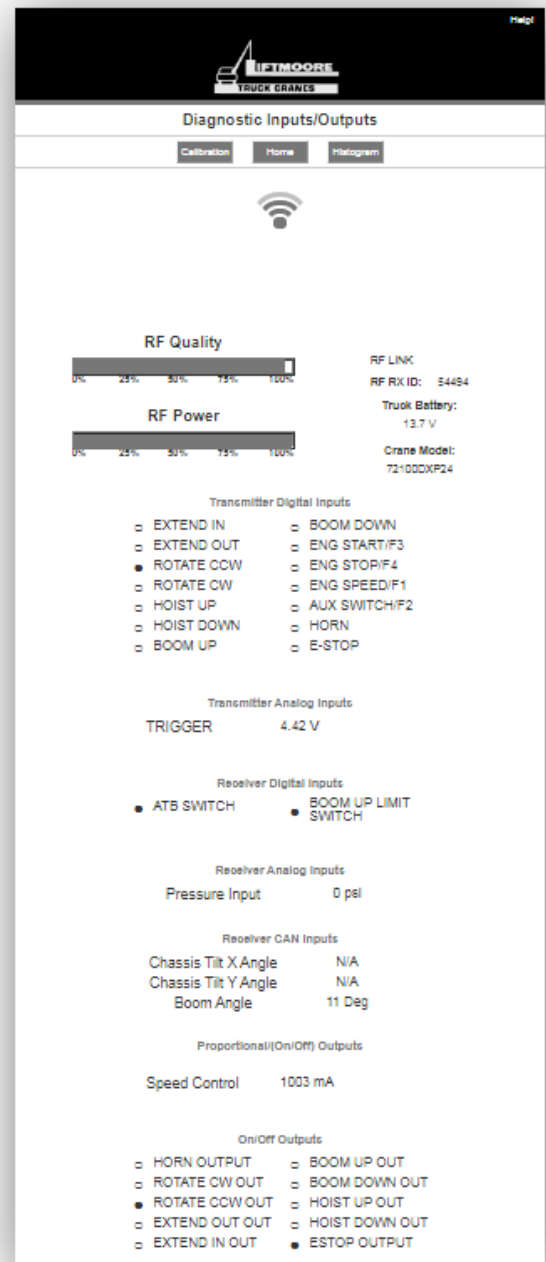


Main Screen

DIAGNOSTICS

Tap the **Diagnostics** button to see the diagnostic screens, which shows the present state of remote communications, and system I/O.

When the round circle next to a label is dark, the corresponding ON/OFF input or output is sensed to be active or ON.



Diagnostics

GUIDER REMOTE

CALIBRATION

To change the configuration of the unit, tap the Calibration icon.

Help!

IFTMOORE
TRUCK CRANES

Calibration

Diagnostic Home Histogram

Wi-Fi

☐ Chassis Angle(Dual Axis) Sensor

Save

Assign Boom Angle Sensor

Receiver CAN Inputs

Chassis Tilt X Angle	N/A
Chassis Tilt Y Angle	N/A
Boom Angle	N/A

Overload No.: 3

End user Calibration
Page Password = 1713

GUIDER REMOTE

HISTOGRAM

Tap the **Histogram** icon to see a set of screens that show which error codes are active and how many times the specific error code has been active.

This feature can be used to troubleshoot machine wiring and other problems. Tapping the `Reset` button resets the error code counts. The password to reset error codes is (*Contact Liftmoore Inc.*). Tap the `Home` button to return to the main menu.

Note: the GATE is not a precision measurement instrument. There may be delays.



Histogram Page

GUIDER REMOTE

Help

LIFTMOORE
TRUCK CRANES

Wi-Fi Configuration

Home

Wi-Fi Name (SSID) ▼

Current Value: LIFTMOORE3B2785

New Value:

☒ Broadcast SSID
☐ Not broadcast SSID

☒ Enable Multiple Connections
☐ Disable Multiple Connections

NOTE: 1. Wi-Fi Name limited to 32 characters
2. Wi-Fi Name can only use numbers and letters
3. Channel can be set from 1 to 11

Save Factory Settings Refresh

Gate Configuration Page

GATE CONFIGURATION

The password to gain access to the gate configuration page is (*Contact Liftmoore Inc.*).

This page allows you to change the name (SSID) of the Wi-Fi network you are connecting to. Factory settings will rename the Wi-Fi to its original name.

If Broadcast SSID option is

selected, the Wi-Fi name (SSID) is public and it will be visible to any other Wi-Fi devices. Otherwise, the Wi-Fi name (SSID) is hidden and it would require manual connection to the network.

If Enable Multiple Connections is selected, multiple connections up to 4 devices could be connected to the GATE. However, only one of the connected devices can use the GATE. If Single connection is enabled, only one device can be connected to the GATE.

NOTE: A reconnect to the new Wi-Fi connection is needed after each change. It is advised to keep a note of the Wi-Fi name in case if Not Broadcast SSID option is selected. Forgetting the Wi-Fi name after selecting this to be sent to KAR-TECH for RESET .

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WIRING CRANE RECEIVER

P1 - DEUTSCH DTM13-12PA, GRAY

PIN	DESCRIPTION
1	GROUND
2	CANH
3	CANL
4	N/C
5	N/C
6	BOOM PRESSURE 4-20mA INPUT
7	ANTI-TWO-BLOCK SWITCH INPUT
8	N/C
9	N/C
10	PROPORTIONAL SPEED CONTROL OUTPUT
11	HORN OUTPUT
12	POWER (9-30V)

P2 - DEUTSCH DTM13-12PB, BLACK

PIN	DESCRIPTION
1	ROTATION CW OUTPUT
2	ROTATION CCW OUTPUT
3	EXTEND OUT OUTPUT
4	EXTEND IN OUTPUT
5	BOOM UP OUTPUT
6	BOOM DOWN OUTPUT
7	HOIST UP OUTPUT
8	HOIST DOWN OUTPUT
9	N/C
10	E-STOP OUTPUT
11	N/C
12	BOOM UP LIMIT SWITCH INPUT

GUIDER REMOTE

WIRING ENGINE RECEIVER

DEUTSCH DTM13-12PA

PIN	DESCRIPTION
1	GROUND
2	N/C
3	N/C
4	N/C
5	ENGINE SPEED SELECT DIGITAL INPUT
6	N/C
7	N/C
8	AUXILIARY OUTPUT
9	ENGINE START OUTPUT
10	ENGINE STOP OUTPUT
11	ENGINE SPEED OUTPUT
12	POWER (9-30V)

TRANSMITTER PORT

- A POWER**
- B GROUND**
- C CAN HIGH**
- D CAN LOW**
- E NO CONNECTION**

WIRING TILT AND ROTATIONAL SENSOR

DT04-4P-E008 CON/ KT PN: 055-157-0402	
PIN	DESCRIPTION
1	POWER 9-30V
2	GROUND
3	CAN HIGH
4	CAN LOW

GUIDER REMOTE

ROUTINE MAINTENANCE

Clean transmitter regularly with a damp cloth and mild detergent.

Inspect electrical wiring for wear points or other damage. Repair as required.

Inspect all connections for looseness or corrosion. Tighten and/or "seal" as necessary.

Guider pendants that include a trigger control should be cleaned periodically by blowing air around the trigger area to remove any debris that would prevent proper operation. Apply a light machine oil to the point of rotation when clean.

MAINTENANCE PRECAUTIONS

When performing any inspection

or maintenance work on the remote system, always exercise care to prevent injury to yourself and others or damage to the equipment. The following are general precautions, which should be closely followed in carrying out any maintenance work.

Do not have hydraulic power available to the valves when performing electrical tests.

Never operate or test any function if any person is in an area where they could be hurt by being hit or squeezed by the hydraulic equipment.

Turn power off before connecting or disconnecting valve coils or other electrical loads.

TROUBLESHOOTING

This next section provides basic operator level troubleshooting for the GUIDER REMOTE system. If, after following these instructions, the system still does not function, contact your sales representative for further instructions or servicing.

GUIDER REMOTE

TROUBLESHOOTING CHART

<i>PROBLEM</i>	<i>SOLUTION</i>
No functions work	<ol style="list-style-type: none">1. Verify transmitter power source – battery, CAN cable, external supply, etc2. Verify that receiver control module power source is present at its input connector3. Check for proper system ground4. Check the receiver or control module LED status display for functionality or errors3. Check the hydraulic system4. Check to see if the crane receiver has sufficient cooling.
Certain functions do not work	<ol style="list-style-type: none">1. Check the wiring and connections from the receiver control module to the control module to the valve coil for the particular function that does not work2. Check the receiver control module LED status display for possible fault or error indication3. Check the hydraulic system4. Check the electrical system5. Check to see if the crane receiver has sufficient cooling.
Functions operate intermittently	<ol style="list-style-type: none">1. Check for loose connections at the valve coil2. Check the receiver control module LED status display for functionality or errors3. Check the receiver antenna for damage

GUIDER REMOTE

	<p>and possible obstructions</p> <ol style="list-style-type: none">1. Check the hydraulic system2. Check to see if the crane receiver has sufficient cooling.
--	--

GUIDER REMOTE

ERROR CODES CRANE RECEIVER

Receiver Display	Error Code	Transmitter Display
NOLK	RF Communication Error	RF signal will show red x
WiFi	WiFi Linked to Device	N/A
RLV	Low Truck Battery Error	Truck low batt err
ESTP	E-STOP Condition	E-STOP mode err
XDCR	Transducer Error	Transducer err
OVLD	Overload Condition	Overload err
ATB	ANTI-TWO-BLOCK Condition	ANTI-TWO-BLOCK
BLMT	BOOM UP LIMIT Condition	Boom limit err
BSNS	BOOM (Rotate) Sensor Error	Boom angle sens err
CSNS	CHASSIS (Tilt) Sensor Error	Tilt sensor err
EC01	ROTATE CW Output Error	Rotate CW err
EC02	ROTATE CCW Output Error	Rotate CCW err
EC03	EXTEND OUT Output Error	Extend out err
EC04	EXTEND IN Output Error	Extend in err
EC05	BOOM UP Output Error	Boom up err
EC06	BOOM DOWN Output Error	Boom down err
EC07	HOIST UP Output Error	Hoist up err
EC08	HOIST DOWN Output Error	Hoist down err
EC09	E-STOP Output Error	E-STOP out err
EC10	HORN Output Error	Horn err
EC11	SPEED Output Error	Speed out err
EC12	TRIGGER Input Error	Trigger err
EC13	TRIGGER before Switch Error	Trigger start err
N/A	N/A	Chassis tilted

Error code explanations:

NOLK Transmitter is off
Transmitter went to sleep mode
Interference in RF communication link

RLV System voltage is below 11V (12V system)

ESTP E-STOP button is pressed on the transmitter

GUIDER REMOTE

XDCR	No voltage present at pressure input or voltage is out of specified range (4-20mA)
OVLD	Overload condition based on Gate setting is present
ATB	Anti-Two Block condition present, ATB input is low
BLMT	Boom Limit input active, BOOM LIMIT input is low
CSNS	No CAN messages are being received from Tilt sensor. Check wiring
BSNS	No CAN messages are being received from Rotational sensor. Check wiring
EC1-10	Short or open load/coil on output
EC11	Current at SPEED output is above rated current, output will turn off
EC12	No voltage present on trigger in transmitter
EC13	Trigger was pulled on transmitter before switch was activated

Chassis tilted - If the chassis is tilted over five degrees, all functions are reduced to slow speed. The following outputs will also be disabled: Boom Down, Hoist Up, and Extend Out.

GUIDER REMOTE

ERROR CODES ENGINE RECEIVER

EC	POSSIBLE CAUSE
1	RF COMMUNICATION ERROR
2	ENGINE SPEED OUTPUT ERROR

Error code explanations:

- 1** Transmitter is off
Transmitter went to sleep mode
Interference in RF communication link
- 2** Short or open load/coil on output

GUIDER REMOTE

PARTS LIST

PART NUMBER	DESCRIPTION
28790	RADIO TRANSMITTER
28792	CRANE RADIO RECEIVER
28793	ENGINE RADIO RECEIVER
28796	CAN ADAPTOR CABLE 25'
28794	SENSOR, PRESSURE, 5K PSI, 4-20, 1/4-18 NPT, DT04-3P
20186	CHARGER, 12 VDC CIGARETTE LIGHTER PLUG
24510	FAST CHARGER SUPPLY, 110V AC WALL
28795	TILT SENSOR
28853	ROTATIONAL SENSOR

There are no user-serviceable parts inside the transmitter or the receiver. Return the units for service.

Note: For operation with negative ground systems only.

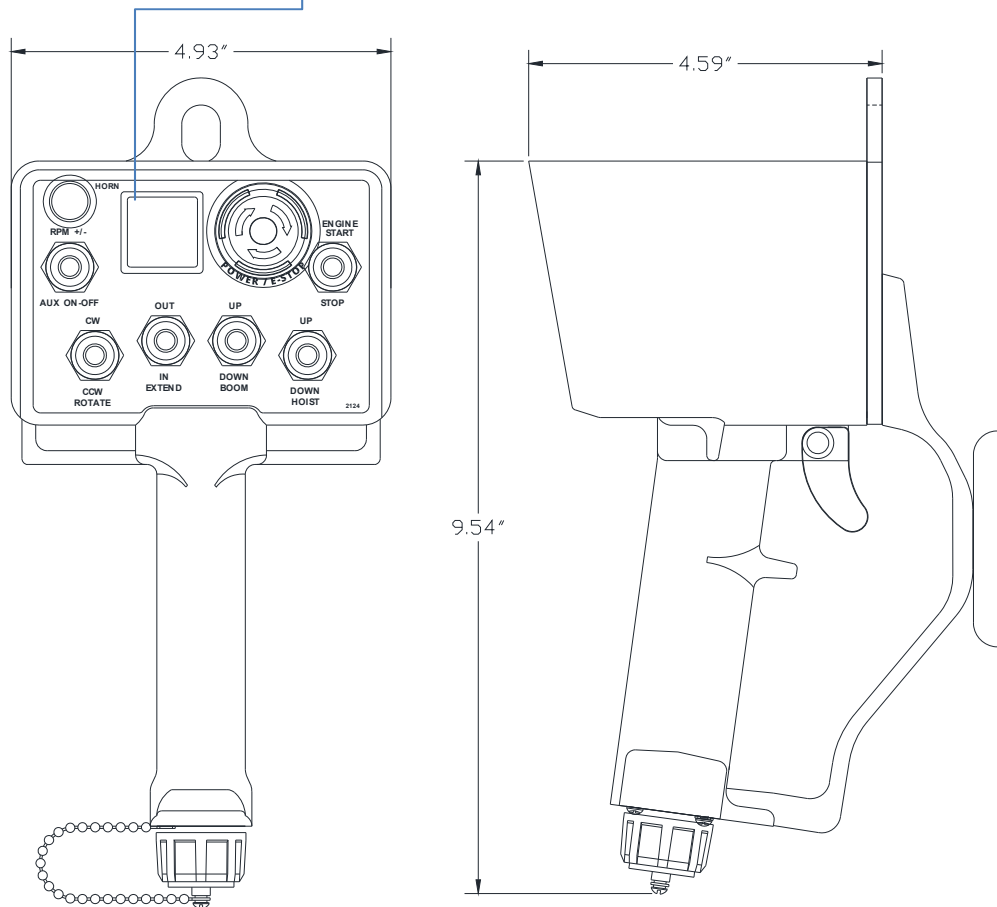
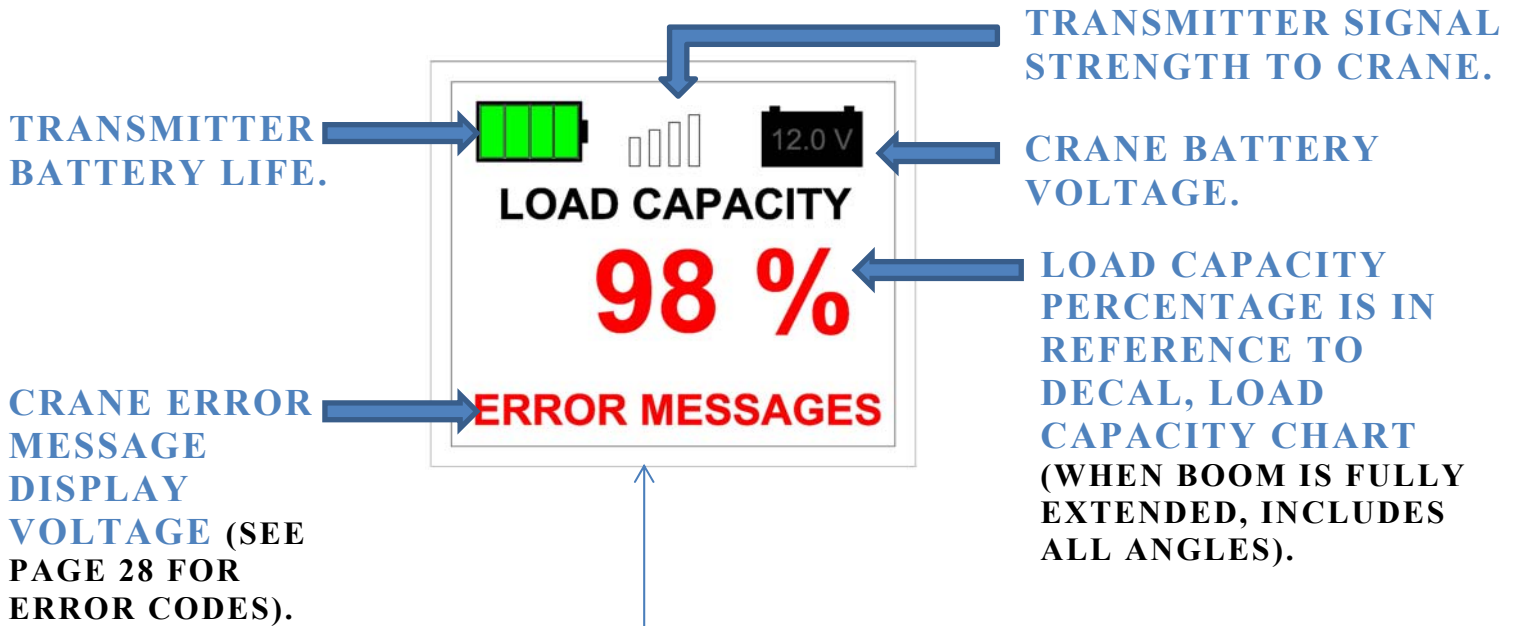
WARNING:

The GUIDER REMOTE must be operated in compliance with all applicable safety regulations, rules, and practices. Failure to follow required safety practices may result in death or serious injury.

The information, specifications, and illustrations in this manual are those in effect at the time of printing. We reserve the right to change specifications or design at any time without notice.

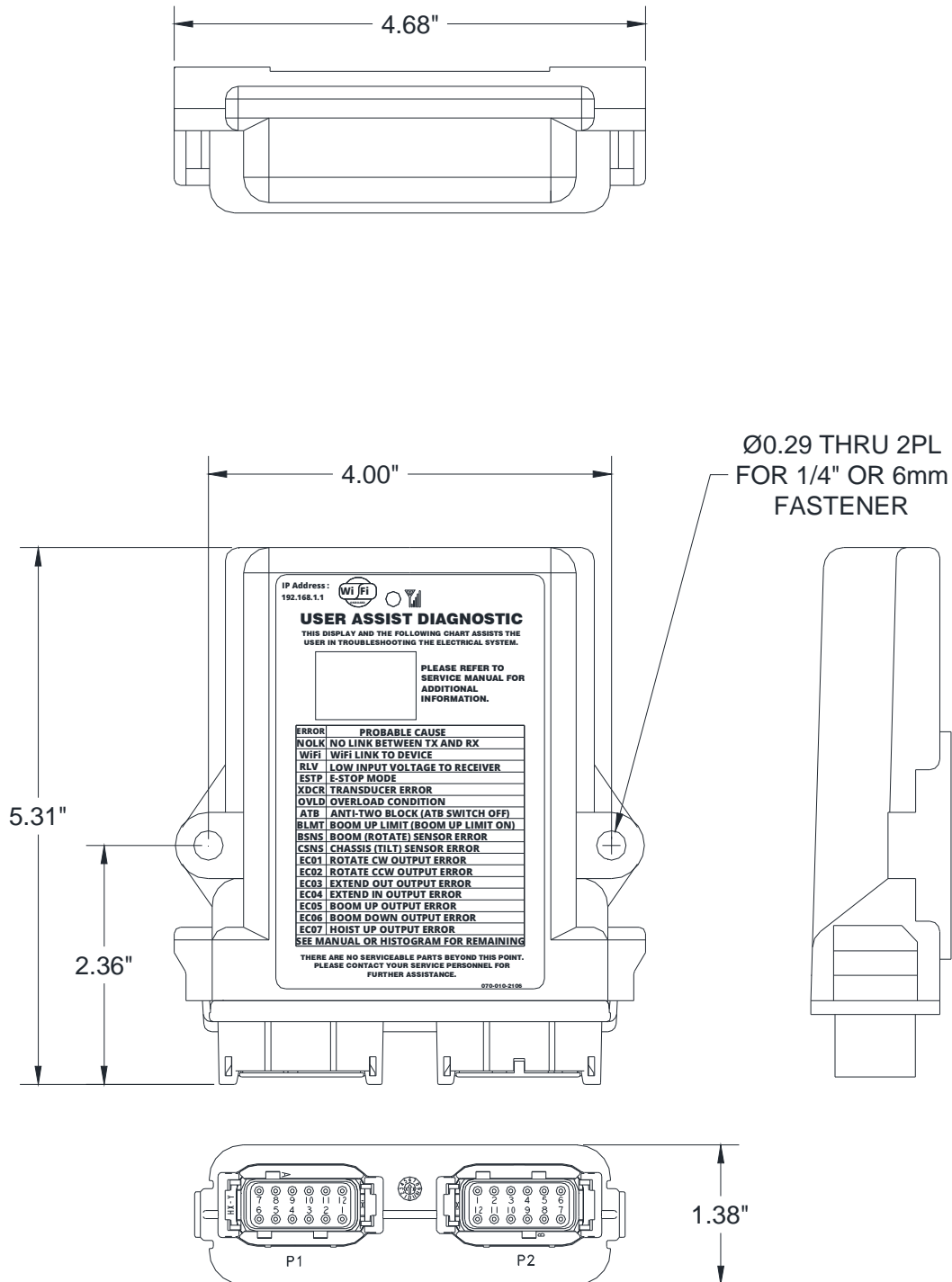
GUIDER REMOTE

TRANSMITTER PICTORIAL



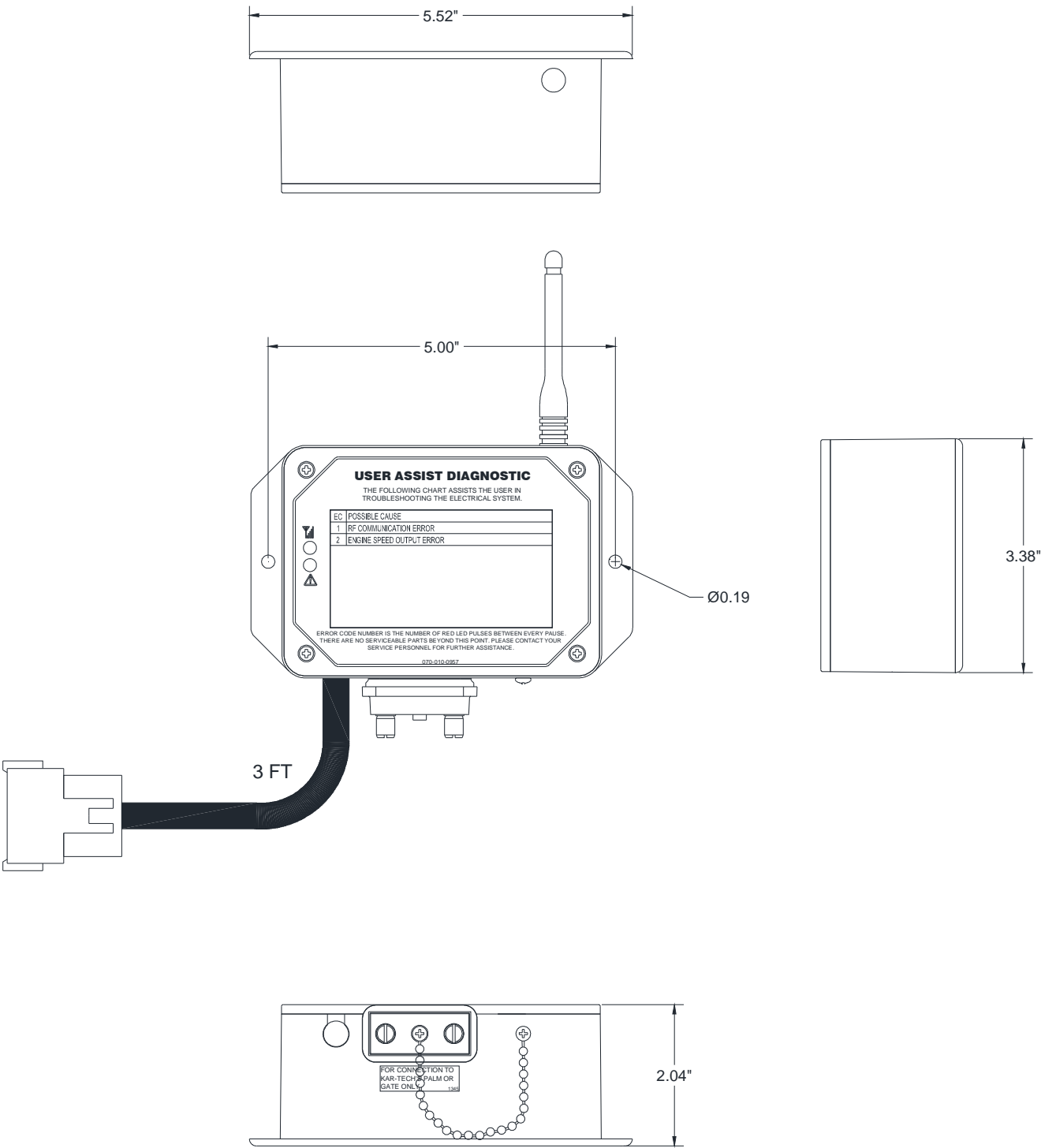
GUIDER REMOTE

CRANE RECEIVER PICTORIAL



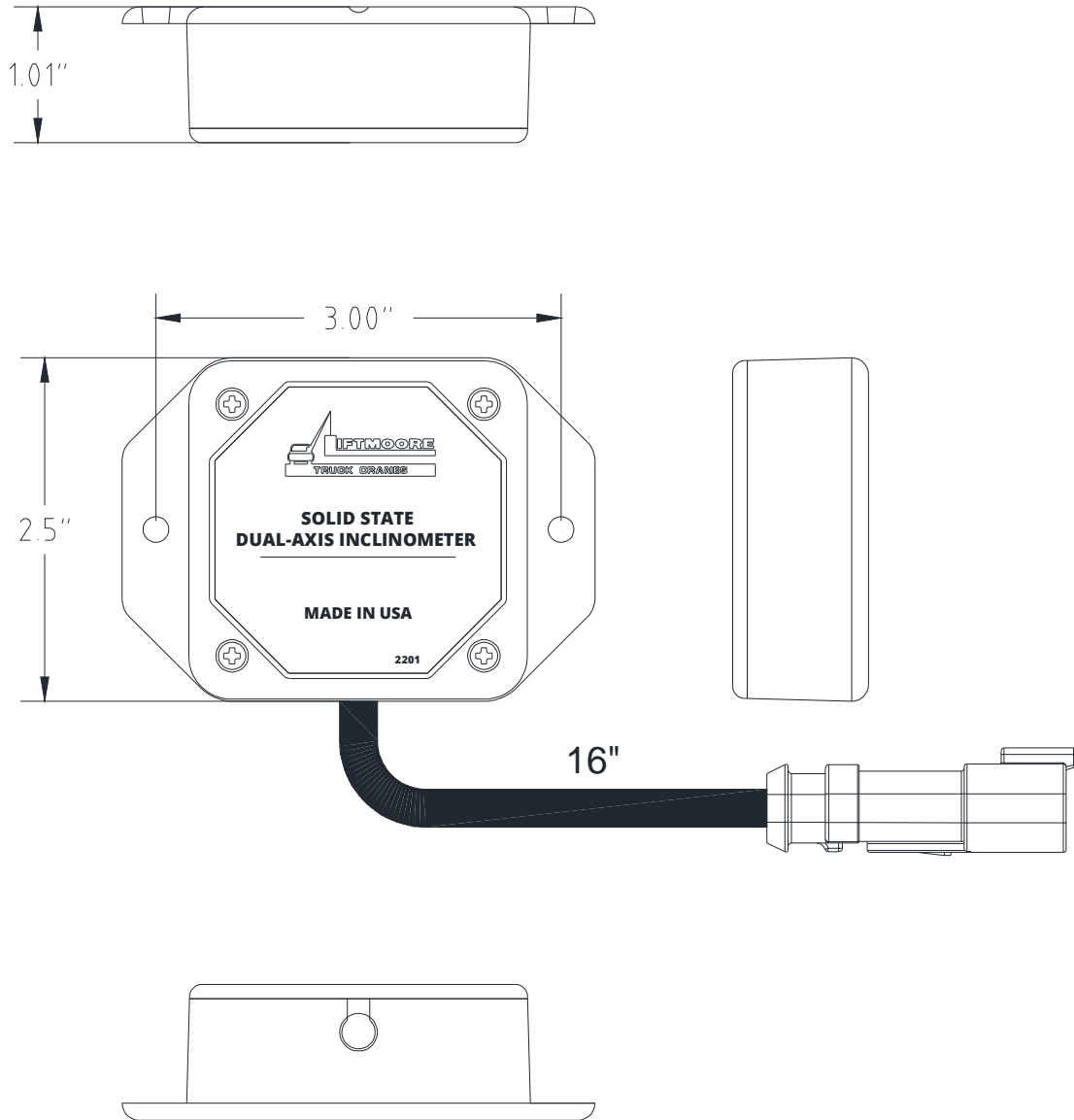
GUIDER REMOTE

ENGINE RECEIVER PICTORIAL



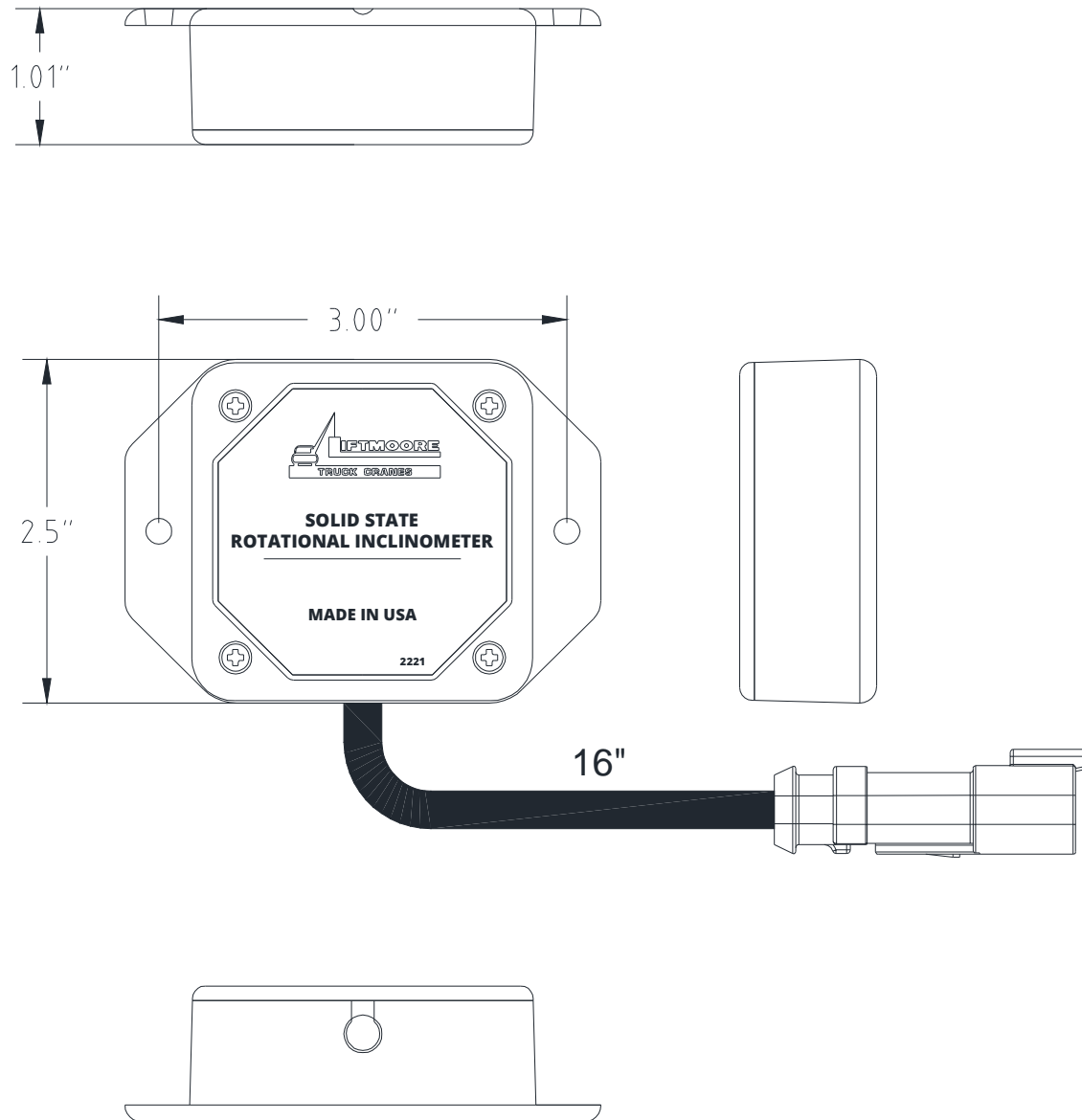
GUIDER REMOTE

TILT, CHASSIS SENSOR PICTORIAL



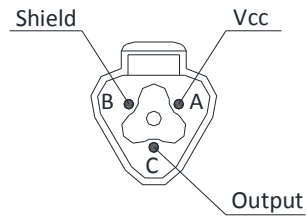
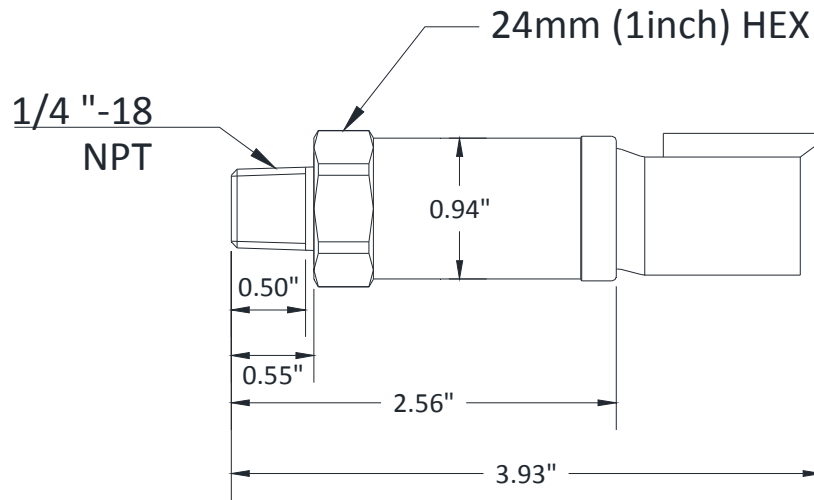
GUIDER REMOTE

ROTATIONAL, BOOM SENSOR PICTORIAL



GUIDER REMOTE

PRESSURE SENSOR PICTORIAL



Parameter	
Pressure Range	0~5000psi
Pressure Connection Type	NPT1/4
Electrical Connection	DT04-3P
Supply Voltage	10~36VDC
Output Signal	4~20mA
Accuracy	±0.5%F.S
Pressure cycle	>10 ⁸
Overload Pressure	2X
Burst Pressure	10X
Long-term stability	±0.25F.S/Year
Working Temperature	-40~125°
Ingress protection	IP65

GUIDER REMOTE

SPECIFICATIONS

FCC ID: P4U-MOD164

Industry Canada Certification Number: 4534A-MOD164

EQUIPMENT CLASS: PART 15 SPREAD SPECTRUM TRANSMITTER

TRANSMITTER

Power supply 3.7V Li-Ion Rechargeable Battery
Fast charger temperature range +5°C to +60°C
Operating temperature - Radio -40°C to +85°C
Storage temperature..... -40°C to +100°C
RF Frequency 902-928 MHz
RF Transmit power (EIRP)..... 100 mW
LCD display operating range (if equipped) -20°C to +70°C
Vibration 3G to 200Hz
Shock..... 50G
NEMA 12

RECEIVER

Power supply voltage 9-30VDC
Operating temperature -40°C to +85°C
Storage temperature..... -40°C to +100°C
Outputs..... 5.0A max each, sourcing, 20A system max
Digital Inputs (when equipped) supply voltage
Analog Inputs (when equipped) 0-5VDC/4-20mA
RF Frequency 902-928 MHz
Vibration 3G to 200Hz
Shock..... 100G
NEMA 4X

GUIDER REMOTE

INSTRUCTION TO THE USER

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and receiver.
- * Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- * Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

WP RECEIVER LATEST SOFTWARE DATES CODES

To make sure receiver has latest updates hook up to your crane WIFI. Once in the home page select "DIAGNOSTICS" and scroll down to the bottom of the screen and you should see the dates listed below. If you do not see these dates contact Liftmoore Cranes (see contact info below).

Receiver Software: 3Z8349BX Date: 06/02/22

Gate Software: 3Z834ABX Date: 05/11/22



F2795-0
6/3/22

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SAFETY SYSTEM

The safety system is designed to help prevent damage to the crane that would be caused by overload or two-blocking. The system consists of a load sensor, anti-two block device (optional on smaller, electric cranes), and limiting system control board.

When the applicable switch detects an overload or two-block condition, the limiting system will prevent activation of winch up, boom down, and extend out since these directions would cause damage. Winch down, boom up, extend in, and power rotation will still function so that the crane can be moved to a safe configuration.

CAUTION!

Never de-activate or override safety functions. Doing so can result in serious damage to the crane and possibly injury or death.

OVERLOAD PROTECTION

A pressure activated switch in the elevation cylinder acts as a load sensor. This switch is normally closed and opens at the preset pressure corresponding to the load rating of the crane.

CAUTION!

The load sensor will not function when the elevation cylinder is fully retracted and is inaccurate when the boom is below horizontal.

CAUTION!

The operator must never rely strictly on the load sensor to determine overload conditions. The load and load limits must always be known and adhered to.

ANTI-TWO BLOCK

The anti-two block device (optional on smaller electric cranes), mounted on the boom crown plate, consists of a normally open switch actuated by a lever. A pickle weight or bail arms are attached to the lever

and holds the switch closed. If the pickle weight or the bail arms are lifted by the hook or travel block the switch opens.

The power and signal wires are wired through the cord reel, which is in turn wired to the ATB switch.

LIMITING SYSTEM CONTROL

The limiting system control prevents output of winch up, boom down and extend out if it is not receiving a signal from either the ATB or load sensor.

The ATB does not trip boom down when winch is mounted on the boom.

There is a one second delay before deactivation of boom down when the load sensor is tripped to prevent false readings caused by pressure spikes.

MISCELLANEOUS

UP LIMIT SWITCH

The up limit switch prevents the elevation cylinder from reaching full extension. If the elevation cylinder were to "dead-head", the resulting pressure would activate the load sensor, preventing boom down. The boom would then have to be lowered using the manual operation buttons on the solenoid valves.

CIRCUIT BREAKER, FUSE

For electric cranes a 150 Amp circuit breaker is supplied with the crane. It should be installed as close to the battery as possible. For hydraulic cranes a 30 Amp blade type fuse is supplied.

DISCONNECT SWITCH

A power disconnect switch is supplied with the crane. Power to the crane should be turned off whenever not in use. This is to prevent inadvertent or unauthorized use and will help prevent corrosion at electrical connections.



HYDRAULIC SYSTEM

Sterling HYD Proportional

The hydraulic system consists of the hydraulic swivel, manifold with solenoid valves, and actuators (cylinders, motors). Hydraulic power is received from an external hydraulic source, typically a PTO driven pump attached to the vehicle transmission. The hydraulic manifold is plumbed in series and uses open center valves so that more than one function can be operated simultaneously.

SWIVEL

The hydraulic swivel is a two-port swivel that allows continuous, unlimited rotation. Refer to drawing for more information.

MANIFOLD

The hydraulic manifold contains the system relief valve, proportional flow control valve, and a directional control valve for each function.

The system relief valve prevents damage that would be caused by over pressurizing the system. It is a cartridge type valve located at the pump port of the manifold.

The proportional valve is an electrically operated flow control valve. Regulated flow is directed to the manifold while excess flow is returned to tank. Before activation, all flow is returned directly to tank, minimizing heat build up. During operation the flow is regulated proportionally to the input voltage⁽¹⁾ allowing the operator to control the speed of the crane. The valve cracks at approximately 2V and allows approximately 6-8 GPM at 6V Depending on crane model. A screw on top of the valve is used to manually operate the valve.

(1) Technically, flow is directly proportional to amperage. Since the resistance is essentially constant, voltage is proportional to amperage. Within the accuracy required for this application, it can be said that the flow is directly proportional to the voltage

Each hydraulically operated function is controlled by a 4 way, 3 position open center solenoid valve. It is electrically operated and spring biased to center. A manual operation feature is also incorporated.

CYLINDERS

Hydraulic cylinders are double acting cylinders with integrally mounted counterbalance valves. This valve performs 3 functions:

- Controls the rate of decent when lowering the load.
- Keeps load from falling in the event of sudden loss of system pressure, such as when a hose bursts.
- Acts as a relief valve to prevent damage from induced load or thermal expansion.

It allows free flow to extend, then blocks flow until opened by pilot pressure to the retract port or when the relief pressure is reached.

Some cylinders utilize a pilot operated check valve on the retract port to prevent the cylinder from creeping out under no load conditions. This valve allows flow into, but prevents flow from the retract port, thus hydraulically locking the cylinder until opened by pilot pressure to the extend port.

MOTORS

The hydraulic motors used by the rotation drive and hydraulic winch are high torque, low speed constant displacement motor.



MANUAL VALVE OPERATION

If electrical problems occur the proportional valve and function valves may be operated manually. Refer to the manifold drawing for valve location and directions.

To operate the crane, both the function valve and the proportional valve must be opened. If only the proportional system is not functioning, it will be easiest to manually set the proportional valve and operate the function with the pendant control. If the functions are not operating, it will be easiest to operate both the function valves and proportional valve manually.

To operate the function valves, pull the locking collar back to unlock it. The manual operation button may then be pushed or pulled depending on desired direction. The valve is spring bias to center so the function will stop when the manual operation button is released.

The proportional valve must also be opened for the crane to operate. It uses a screw type manual override that allows precise control of the speed. To set, operate a function valve, then turn knurled knob on the proportional valve counter-clockwise until the crane begins moving. Adjust until the desired speed is reached. When finished be sure to reset the valve by screwing the knob all the way in (clockwise).

CAUTION!

If the proportional valve is not reset the crane will operate without trigger input. This may result in unexpected motion of the crane, resulting in equipment damage or personal injury.

MANUAL LOWERING OF LOAD

WARNING!

The following procedure should be used in extreme cases only. Improper application of this procedure could result in injury or death.

WARNING!

The following procedure requires adjusting a safety valve. If the valve is not returned to the correct setting it may fail to hold a load, resulting in injury or death.

If hydraulic power is lost while a load is suspended, the load may be lowered by decreasing the setting on the counterbalance valve. This should only be done in extreme cases. The valve must be reset and tested before the crane is returned to normal use.

WARNING!

When the valve setting is decreased, the boom and cylinder may come down suddenly. Do not position yourself under the boom or position any part of your body between the cylinder and boom or between the cylinder and housing.

To decrease the setting, loosen the locknut on the valve, then **SLOWLY** turn the adjustment stem **CLOCKWISE** until the load begins to lower. Count the number of turns so that the valve can be immediately returned to its approximate setting.

Before the crane is returned to regular service, the valve must be precisely set and tested. Contact Liftmoore for exact setting and procedure information. The setting may be tested by lifting a known load near the moment rating.



BASIC TROUBLESHOOTING

The following chart gives a quick reference to help identify and correct problems. Refer to the following pages for more detailed information.

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
NO FUNCTIONS WORK	Not receiving electrical power	Check all connections Check all fuses and circuit breakers Check for electrical power at first electrical connection and trace back to crane
	Not receiving hydraulic power	Check flow from pump Deadhead cylinder and check pressure at pump
	Control problem	See control section
FUNCTION NOT WORKING		
winch up, extension out not working	No signal from ATB or Load sensor (switch tripped, bad switch, bad wiring or not receiving power)	Check input signal to relay board if no signal, trace back to switch
	Relay card malfunction	Check LEDs on board for error codes and outputs
Boom down, winch down, extension in not working	Not receiving enough pressure	Deadhead cylinder and check pressure at pump Check differential pressure valve for contamination Check relief valve for proper setting and possible contamination
Other function not working	Faulty wiring	Check all wiring for breaks or shorts Check all ground wires for good connection
	Valve coils bad	Check coil resistance
ALL FUNCTIONS SLOW	Not receiving enough flow	Check fluid levels Check all filters and any other restrictions
* These items only apply to cranes with proportional control systems.	Low battery voltage Check with engine running	Charge battery (BATTERY MAY BE BAD)
	* Proportional valve problem	Try manual operation of proportional valve Check voltage at valve for approx. at min and max(see troubleshooting form for specific valves)
	* Control problem	See control section



TROUBLESHOOTING THE PROPORTIONAL SYSTEM

If no functions work or if all functions are slow when controlled by the pendant, but work correctly when the manual operation button is pressed on the proportional valve then the problem is with the proportional electronic control system.

Proportional Valve Parameters

Cracking voltage	2.6V
Full open voltage	7.75V
Coil Resistance	3.66 Ω

CHECK VOLTAGE AT VALVE

Have the engine running to generate sufficient voltage (13-14V). As the trigger is pulled the valve voltage should start near zero, jump to the valve cracking voltage after slight trigger travel, increase steadily as the trigger is pulled, reaching the full open voltage.

If the voltages are correct, check the resistance across the coil. If the resistance differs significantly from the nominal resistance replace the coil.



DEUTSCH CONNECTIONS & PINS

P/N 30908
PLUG CONTROL 4-PIN



P/N 30635
4 PIN POLLACK

P/N 18753
PLUG 14 PIN DTCH



P/N 18751
SOCKET 14 PIN DEUTSCH

P/N 19916
DTCH 1P PLUG



P/N 19917
DTCH 1P RECPT

P/N 20322
DTCH 5P RECPT PLUG



P/N 20185
DTCH 5P RECPT PLUG
W/ 25' WIRE



FEMALE'S



P/N 19915 CONT. DTCH 20GA

P/N 18757 CONT. DTCH 16 GA

P/N 19918 CONT. DTCH 12 GA

P/N 19935
SEALING PLUG DTCH 20GA



P/N 21285
BUSS DTCH 12P RECPT 12PB



P/N 19854
WEDGE DEUTSCH 12P PLUG



P/N 19853
DTCH 12P-B PLUG



MALE'S



P/N 20771 CONT. DTCH 20GA

P/N 18756 CONT. DTCH 16 GA

P/N 19919 CONT. DTCH 12 GA

P/N 18758
SEALING PLUG DTCH 16GA



P/N 19846
WEDGE, DEUTSCH 2P PLUG

P/N 19847
DTCH 2P PLUG



P/N 19909
WEDGE DTCH DTM
12P-A PLUG



P/N 19857
DTCH 6P RECPT BUSS



P/N 19850
WEDGE DTCH 6P PLUG



P/N 19848
WEDGE, DEUTSCH 2P RECPT

P/N 19845
DTCH 2P RECPT



P/N 19908
DTCH DTM 12P-B PLUG



P/N 19907
DTCH DTM 12P-A PLUG



P/N 19849
CONNECTOR, DTCH 6P PLUG



RED RING INSUL
P/N 18770 22-18GA #10



BLU RING INSUL
P/N 15802 14-16GA #8
P/N 15736 14-16GA #10
P/N 21478 14-16GA 0.25
P/N 15871 14-16GA 0.31



YEL RING INSUL
P/N 16781 10-12GA #8
P/N 16111 10-12GA 0.25
P/N 15771 10-12GA 0.31
P/N 26725 14-16GA .437



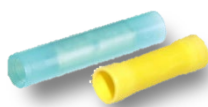
BRAZED RING
P/N 15837 4GA 0.31
P/N 15563 6GA 0.25
P/N 15148 6GA 0.31
P/N 15737 1/0GA 0.31



LUG RING
P/N 16915 #1GA 0.25
P/N 17063 #1GA 0.37
P/N 16922 #4GA 0.25
P/N 17064 #4GA 0.37
P/N 16923 #1/0GA 0.25
P/N 17062 #1/0GA 0.37



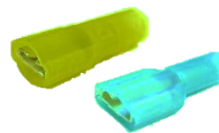
QUICK SPLICE
P/N 31407 14-18GA (TAN)
P/N 32141 18-22GA (RED)



BUTTED CONN
P/N 15565 14-16GA (BLU)
P/N 16110 10-12GA (YELW)



FUSE CONN.
P/N 19921 HOLDER 16GA
P/N 18456 15AMP BLADE



FEMALE TERM
P/N 15797 10-12GA (YELW)
P/N 15566 14-16GA (BLU)



MALE TERM
P/N 15838 10-12GA (YELW)
P/N 32118 14-16GA (BLU)

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SECTION V

CRANE SPECIFICATIONS

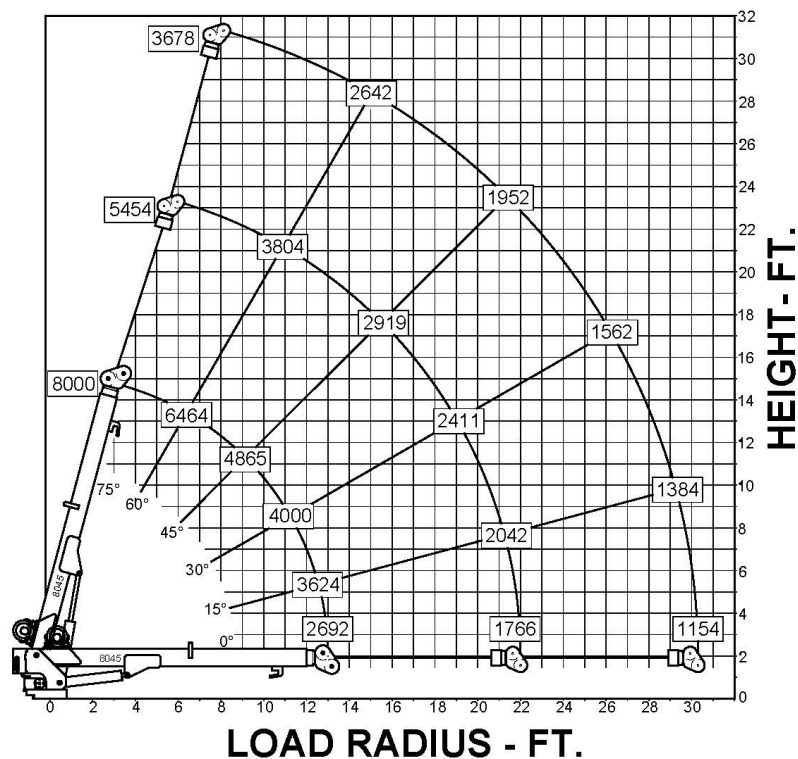
MODEL 8045DX-30 CRANES

MOMENT RATING 45,000 FT-LBS

MAX SINGLE LINE LOAD 4,000 LBS

MAX DOUBLE LINE LOAD 8,000 LBS

LIFTING CAPACITIES AT VARIOUS LOAD RADII



POWERED FUNCTIONS AND EXPECTED TIMES

WINCH	UP: 3.3s	DOWN: 3.8s	1 REVOLUTION
BOOM ELEVATION	UP: 20s	DOWN: 20s	
BOOM EXTENSION	OUT: 41s	IN: 33s	
ROTATION	90° 15s		

HYDRAULIC REQUIREMENTS

PRESSURE	2,800 PSI
FLOW	8 GPM

ELECTRICAL REQUIREMENTS

VOLTAGE	12 VDC
FUSE	15 AMP

NOTE: FUNCTION TIMES ARE BASED ON THESE INPUT VALUES



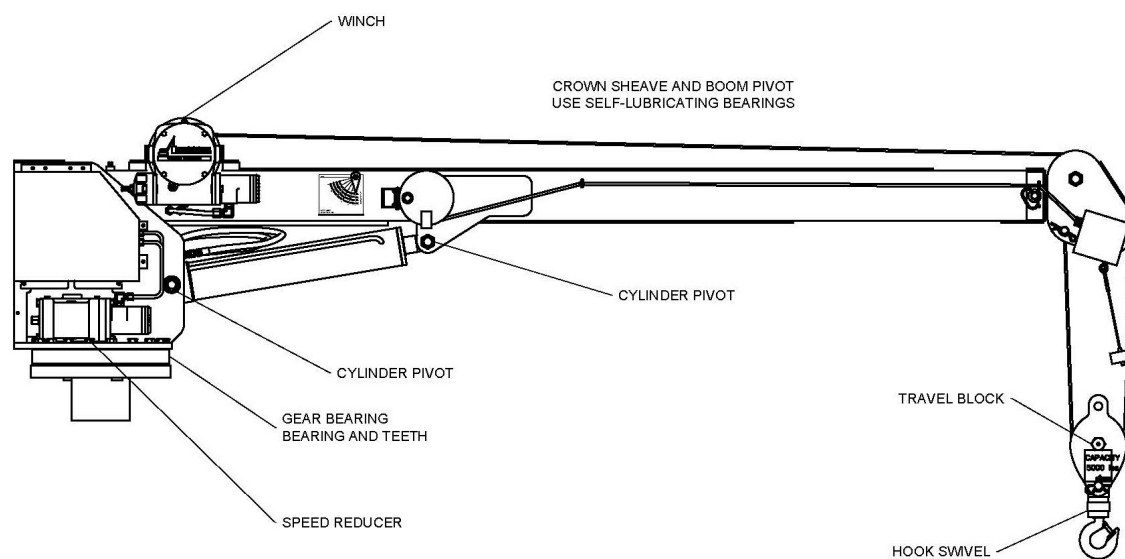
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PERIODIC MAINTENANCE SCHEDULE MODEL 8045 CRANES		
BOLTS		
MOUNTING BOLTS	7/8-14 GRADE 8 TORQUE 600FT-LBS DRY	EVERY 4 MONTHS
BEARING BOLTS (REFER TO BASE-HOUSING ASSEMBLY)	5/8-11 GRADE 8 TORQUE 170FT-LBS DRY	EVERY 4 MONTHS
LUBRICATION		
GREASE FITTINGS	SEE DRAWING 50048	EVERY OTHER WEEK
HYDRAULIC FLUID	STANDARD Chevron AW Hydraulic Oil 46 or equivalent SAE 15 weight oil COLD WEATHER AW 32 or equivalent SAE 10 weight oil	CHECK DAILY, FILL AS NEEDED
WINCH GEARBOX	HLP ISO VG 46	EVERY MONTH
ROTATION GEARBOX	EP 01 Grease	EVERY MONTH
BEARING (ZERK AND TEETH)	Oil Center Research PM 600 Military grease or equivalent Benton Based Grease NLGI Grade 2	EVERY 6 HOURS OF OPERATION



CRANE LUBRICATION POINTS



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LIST FOR BOX, CRANE PARTS 8045XP WP

Items with * have detailed DWG's.

P/N 29689 - BOX, CRANE PARTS 8045DX-30

- 1) P/N 29688 - MANUAL, CRANE 8045DX-30 WP.....1pc
- 2) P/N 29884 - EWH, DUAL SWIVEL PWR WIRES.....1pc
- 3) P/N 16110 - TERMINAL, BUTT 10-12 GA.....1pc
- 4) P/N 15771 - TERMINAL, RING 10-12 GA 0.31.....2pcs
- 5) P/N 18457 - FUSE, HOLDER, ATO 12 GA SEALED.....1pc
- 6) P/N 21154 - FUSE, 30AMP BLADE.....1pc
- 7) P/N 32613 - ADAPTER, 8MJ-10MJ.....1pc
- 8) P/N 17012 - SWITCH, TOGGLE SPST MAINT. /S.....1pc
- 9) P/N 17011 - BRACKET, SWITCH MNT. HYD. GRN.....1pc
- 10) P/N 16781 - TERMINAL, RING 10-12 GA #8.....2pcs
- 11) P/N 17013 - PLATE, ON/OFF FOR TOGGLE SWCH.....1pc
- 12) P/N 18600 - PLATE, CRANE-TRUCK STABILITY CHART.....1pc
- 13) P/N 29574 - DECAL, LOAD CAPACITY 40,000.....1pc
- 14) P/N 23144 - LEVEL AND TAPE ASSEMBLY1pc
- 15) P/N 28836 - WIRE, GROUND #6 X 60" W/TRM.....1pc
- 16) P/N 30675 - COVER, TOGGLE SWITCH.....1pc
- 17) P/N 70053 - NUT, TOGGLE SWITCH.....1pc
- 18) P/N 70054 - WASHER, LOCK TOGGLE SWITCH.....1pc
- 19) P/N 70055 - SCREW, MH FH 6-32 X 0.25.....2pcs



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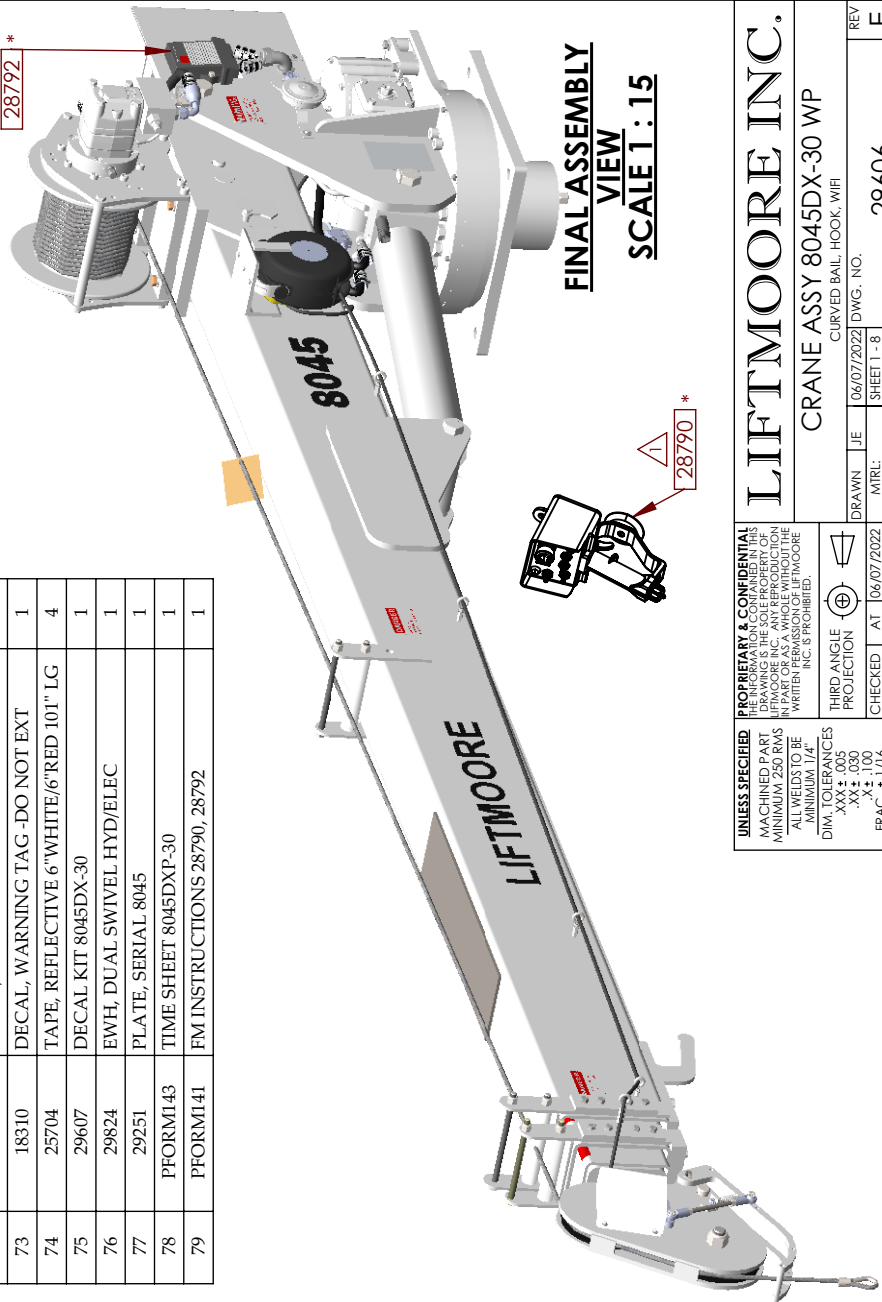
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ITEM	PART NUMBER	DESCRIPTION	QTY	ITEM	PART NUMBER	DESCRIPTION	QTY
1	29545	BOOM-BODY ASSY 4075DX-30	1	52	25128	ALL THREAD STUD 3/8-24 X 5.75"	1
2	29547	EWB, DTCH HYD 4075DX WP	1	53	25152	SCREW, SHOULDER 0.313 X 2.25	1
3	29405	WASHER, FLAT 0.25 SS 316	3	54	33353	WASHER, FLAT 0.31 SAF SS304	1
4	28705	SCREW, HHC 0.25-20 X 1.00 SS	3	55	25151	SPRING, COMPRESSION, 76LBS.	1
5	31408	WRAP, 3/4" BLACK SPIRAL CUT 4"	2	56	25142	SPACER, LEVER	1
6	31017	SCREW, SHOULDER 0.31-18 X 0.75	2	57	26045	NUT, HEX 0.37-24 SS	2
7	22394	PENDULUM, LOAD RADIUS DIA. HD	2	58	22386	SPACER, ELEV SWITCH MACH	1
8	30989	SCREW, HWHMS #8 X 0.50	1	59	20413	SWITCH, LIMIT UP 2WNC-22 DTCH	1
9	32499	ADAPTER, CAPNUT #8	1	60	29415	NUT, HEX NYLOC 10-24 SS	2
10	32500	ADAPTER, CAPNUT #10	1	61	22392	SCREW, SOC HD 10-24 X 2.50 SS	2
11	24511	SCREW, SOC HD 10-32 X 3/8	2	62	28794	TRANSDUCER, PRESSURE 5000 PSI	1
12	20212	CLIP, MOUNTING DEUTSCH CONNECT	2	63	22390	NUT, HEX JAM 0.25-20 SS	1
13	29299	WASHER, LOCK 0.25 STAR SS	1	64	22391	SCREW, S WALK 0.25-20 X 1.0 SS	1
14	28690	WASHER, LOCK 0.25 316 SS	5	65	23123	PRESSURE GAUGE, 0-3000 PSI	1
15	34069	SCREW, HHC 0.25-20 X 0.50 SS	3	66	23135	ADAPTER, 4FP-6FJ SWIVEL	1
16	28703	NUT, HEX NYLOC 0.25-20 SS	3	67	28126	SCREW, SOC HD 0.25-20 X 0.25SS	4
17	70052	BRACKET, CORD REEL ZECA	1	68	28853	INCLINOMETER, BOOM ANGLE CAN	1
18	29549	REEL, CORD 34 FT ASSY 4 WIRE	1	69	28963	SCREW, SOC HD 8-32 X 0.37 SS	2
19	19845	CONNECTOR, DTCH 2P RECPT	1	70	17882	WASHER, LOCK #8 GR2 PLATED	2
20	19848	WEDGE, DEUTSCH 2P RECPT	1	71	24349	ROPE, WIRE 0.37 X 115" W/THMBL	1
21	24960	CLAMP, HOSE SUPPORT 0.25 ID	6	72	32589	SCREW, HWHMS 0.25-20 X 0.75	4
22	26582	SCREW, SOC HD 0.25-20 X 0.37SS	2	73	18310	DECAL, WARNING TAG -DO NOT EXT	1
23	19846	WEDGE, DEUTSCH 2P PLUG	1	74	25704	TAPE, REFLECTIVE 6"WHITE/6"RED 101" LG	4
24	19847	CONNECTOR, DTCH 2P PLUG	1	75	29607	DECAL KIT 8045DX-30	1
25	30835	NUT, HEX NYLOC 0.50-13 GRADE 8	6	76	29824	EWB, DUAL SWIVEL HYD/ELEC	1
26	21631	ROLLER, ROPE 4064 NYLON	2	77	29251	PLATE, SERIAL 8045	1
27	21634	SCREW, HHC 0.50-13 X 8.50 GR5	4	78	PFORMI43	TIME SHEET 8045DXP-30	1
28	30818	SCREW, HHC 0.50-13 X 7.50 GR8	2	79	PFORMI41	FM INSTRUCTIONS 28790, 28792	1
29	26668	ROLLER, ROPE 2550/4064 NYLON	1				
30	34468	SCREW, SHEAVE SINGLE 1-8 3.25	2				
31	31258	WASHER, FLAT 1.00 SAE GRADE 8	2				
32	30838	NUT, HEX NYLOC 1.00-8 GRADE 5	2				
33	32658	PIN, CLEVIS 0.87 X 3.50 PLATED	1				
34	31948	CLIP, HAIRPIN 0.187 - 1.00	1				
35	20541	SHEAVE ASSY 6.58PD X 0.37 ROPE	2				
36	27132	SWITCH, LIMIT ATB ASSY 2W DTCH	1				
37	17164	SCREW, SOC HD 10-24 X 0.62 SS	10				
38	32639	WASHER, LOCK #10 GR2 PLATED	2				
39	27192	COVER, BAIL ATB	1				
40	26909	SCREW, SOC HD 10-24 X 0.37	4				
41	26910	WASHER, FLAT #10 316SS	4				
42	25138	SCREW, SHOULDER 0.375 X 3.25	1				
43	34256	NUT, HEX NYLOC 0.31-18 SS 304	1				
44	32368	WASHER, FLAT 0.37 SAE SS GR304	4				
45	27882	LEVER, ATB BAIL 14.75" RT MACH	1				
46	27883	LEVER, ATB BAIL 14.75" LT MACH	1				
47	27885	LEVER, BAIL SUPPORT - MACH	2				
48	33424	BUSHING, 0.37 X 0.50 X 0.50L N	5				
49	25130	SCREW, SHOULDER 0.375 X 0.625	3				
50	25129	BALL JOINT ROD END	2				
51	25144	LEVER, ATB ANTI-TWO BLK MACH.	1				

ITEM	PART NUMBER	DESCRIPTION	QTY
52	25128	ALL THREAD STUD 3/8-24 X 5.75"	1
53	25152	SCREW, SHOULDER 0.313 X 2.25	1
54	33353	WASHER, FLAT 0.31 SAF SS304	1
55	25151	SPRING, COMPRESSION, 76LBS.	1
56	25142	SPACER, LEVER	1
57	26045	NUT, HEX 0.37-24 SS	2
58	22386	SPACER, ELEV SWITCH MACH	1
59	20413	SWITCH, LIMIT UP 2WNC-22 DTCH	1
60	29415	NUT, HEX NYLOC 10-24 SS	2
61	22392	SCREW, SOC HD 10-24 X 2.50 SS	2
62	28794	TRANSDUCER, PRESSURE 5000 PSI	1
63	22390	NUT, HEX JAM 0.25-20 SS	1
64	22391	SCREW, S WALK 0.25-20 X 1.0 SS	1
65	23123	PRESSURE GAUGE, 0-3000 PSI	1
66	23135	ADAPTER, 4FP-6FJ SWIVEL	1
67	28126	SCREW, SOC HD 0.25-20 X 0.25SS	4
68	28853	INCLINOMETER, BOOM ANGLE CAN	1
69	28963	SCREW, SOC HD 8-32 X 0.37 SS	2
70	17882	WASHER, LOCK #8 GR2 PLATED	2
71	24349	ROPE, WIRE 0.37 X 115" W/THMBL	1
72	32589	SCREW, HWHMS 0.25-20 X 0.75	4
73	18310	DECAL, WARNING TAG -DO NOT EXT	1
74	25704	TAPE, REFLECTIVE 6"WHITE/6"RED 101" LG	4
75	29607	DECAL KIT 8045DX-30	1
76	29824	EWB, DUAL SWIVEL HYD/ELEC	1
77	29251	PLATE, SERIAL 8045	1
78	PFORMI43	TIME SHEET 8045DXP-30	1
79	PFORMI41	FM INSTRUCTIONS 28790, 28792	1

NOTES

- 1 - ITEM WITH (*) IS LOCATED IN BOX PARTS.
- 2 - RUN CORD REEL AND INCLINOMETER WIRES THRU CLAMPS.
- 3 - APPLY VIBRA-TITE VC-3 TO THREADS.
- 4 - HAND TIGHT USING APPROPRIATE TOOL.
- 5 - TORQUE TO 5 FT-LBS.
- 6 - SEE PAGE 8 SCHEMATIC.
- 7 - APPLY TEFLON TAPE ON THREADS.
- 8 - INSTALL ITEMS # (74) ON TOP CORNERS OF 1ST & 2ND INNER BOOMS ON BOTH SIDES 3.25" & 1.00" RESPECTIVELY AWAY FROM THE BOOM EDGE.
- 9 - CONNECT GROUND WIRES.
- 10 - HAND TIGHT AND MAKE SURE SHEAVE SPINS FREELY.
- 11 - WIRE SEQUENCE: BROWN ↔ PIN1
BLUE ↔ PIN2
- 12 - TERMINATE TO DESIGNATED GROUNDING SCREW ON CRANE BODY.
- 13 - TERMINATE TO WIRING HARNESS FUSE.



FINAL ASSEMBLY
VIEW
SCALE 1:15

UNLESS SPECIFIED

MACHINED PART

DRAWING IS THE SOLE PROPERTY OF

LIFTMOORE INC. AND REPRODUCTION

WITHOUT WRITTEN PERMISSION OF LIFTMOORE

INC. IS PROHIBITED.

THIRD ANGLE

PROJECTION

DIM. TOLERANCES

XXX ± .005

XX ± .030

X ± .116

FRAC. ± .1/16

XX° ± .5°

PROPERTY & CONFIDENTIAL

DRAWING IS THE SOLE PROPERTY OF

LIFTMOORE INC. AND REPRODUCTION

WITHOUT WRITTEN PERMISSION OF LIFTMOORE

INC. IS PROHIBITED.

CHECKED

AT

ENG APPR

DF

DRAWN

JE

MTRL

SHEET 1 - 8

WEIGHT: 2044.098 Lbs

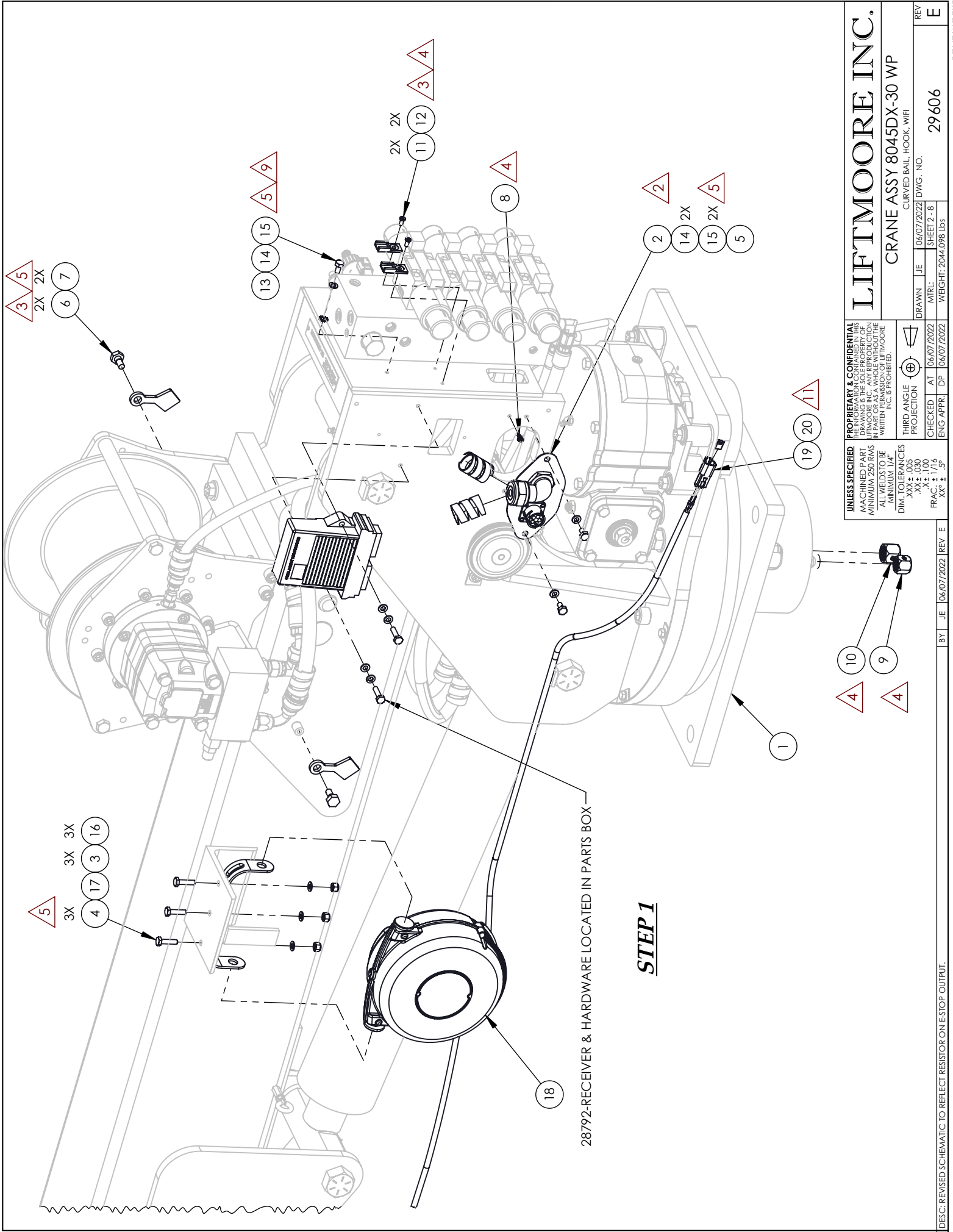
REV

E

CRANE ASSY 8045DX-30 WP

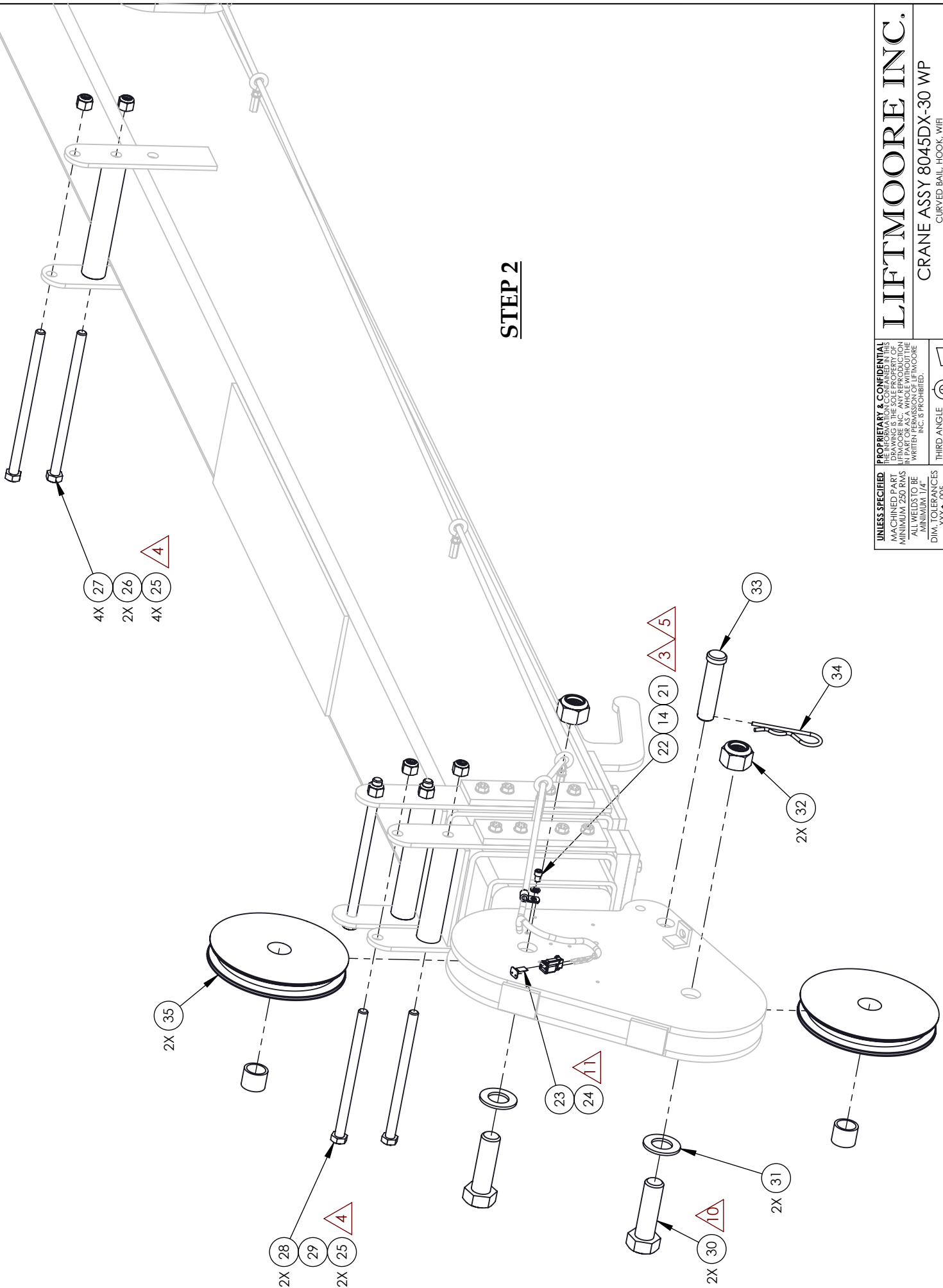
CURVED BAIL, HOOK, WFI

LIFTMOORE INC.



UNLESS SPECIFIED				PROPRIETARY & CONFIDENTIAL			
DRAWING IS THE SOLE PROPERTY OF				LIFTMOORE INC. AND REPRODUCTION			
ALL WELDS TO BE				WRITTEN PERMISSION OF LIFTMOORE			
MINIMUM 1/4"				INC. IS PROHIBITED.			
DIM. TOLERANCES				THIRD ANGLE			
XXX ± .005				PROJECTION			
.XX ± .030				CHECKED			
.X ± .100				AT			
FRAC. ± 1/16				DF			
XX° ± .5°				ENG APPR			

LIFTMOORE INC.				CRANE ASSY 8045DX-30 WP			
CURVED BAIL, HOOK, WIFI				DWG. NO.			
DRAWN				REV			
JE				06/07/2022			
MTRL:				SHEET 2 - 8			
29606				WEIGHT: 2044.098 Lbs			
E				REV			
				06/07/2022			

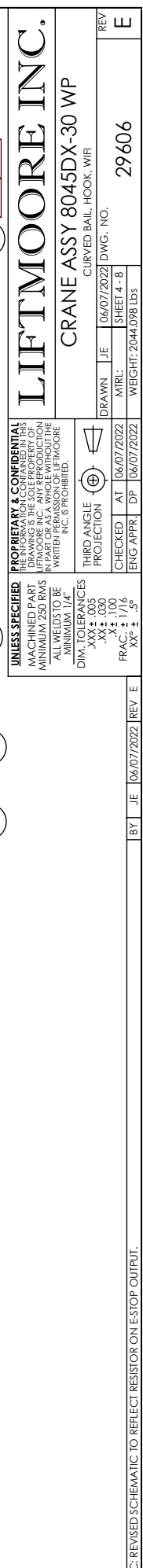


STEP 2

UNLESS SPECIFIED				PROPRIETARY & CONFIDENTIAL			
MACHINED PART				DRAWING IS THE SOLE PROPERTY OF			
ALL WELDS TO BE				LIFTMOORE INC. AND REPRODUCTION			
MINIMUM 1/4"				WITHOUT WRITTEN PERMISSION OF LIFTMOORE			
DIM. TOLERANCES				INC. IS PROHIBITED.			
XXX ± .005				THIRD ANGLE			
.XX ± .030				PROJECTION			
X ± .100				CHECKED AT			
FRAC ± 1/16				ENG APPR DF			
XX° ± .5°				DRAWN JE			

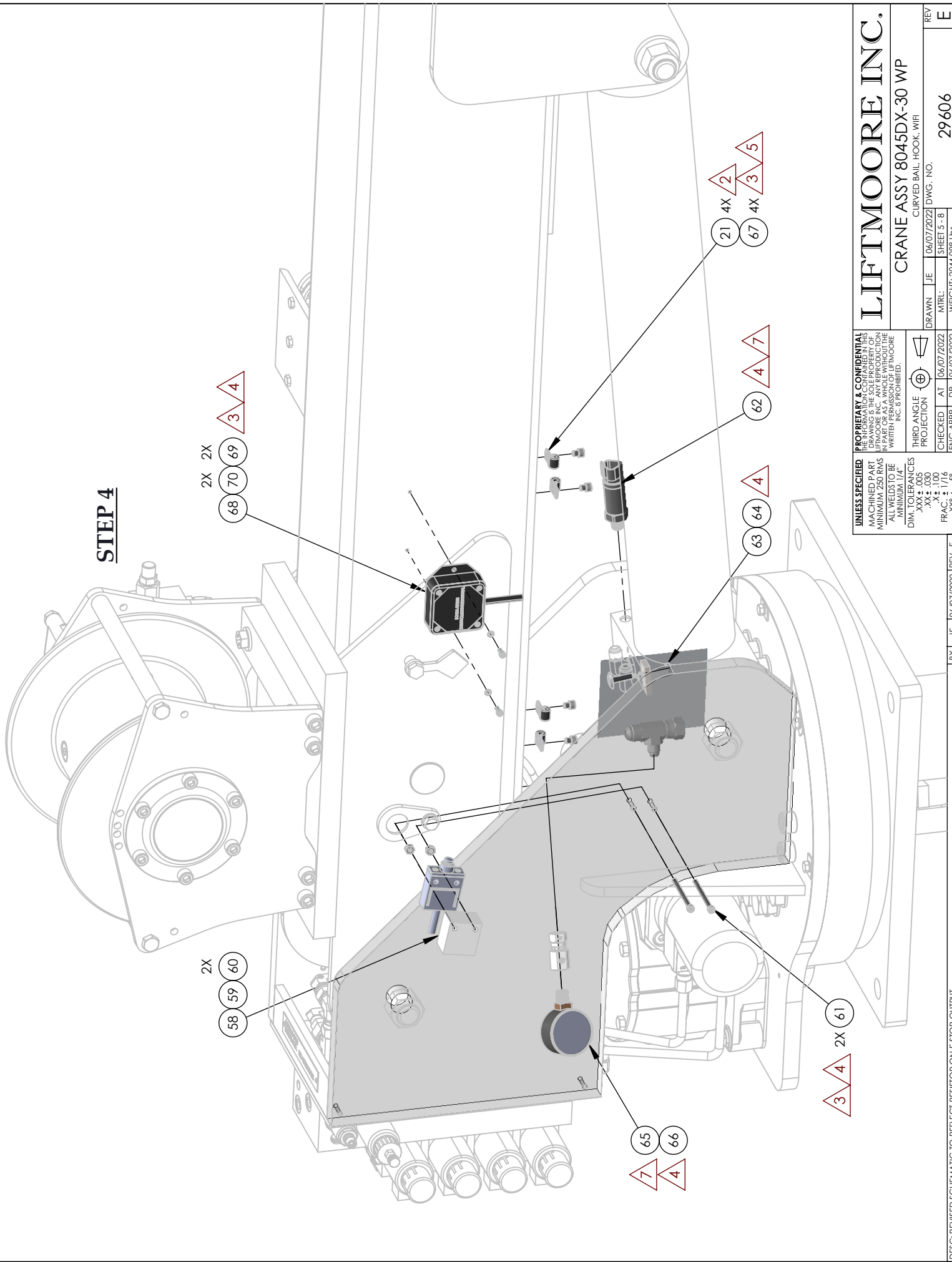
LIFTMOORE INC.				CRANE ASSY 8045DX-30 WP			
				CURVED BAIL, HOOK, WIFI			
				DWG. NO.			
				SHEET 3 - 8			
				WEIGHT: 2044.098 Lbs			
				29606			
				REV E			

ATB ASSEMBLY



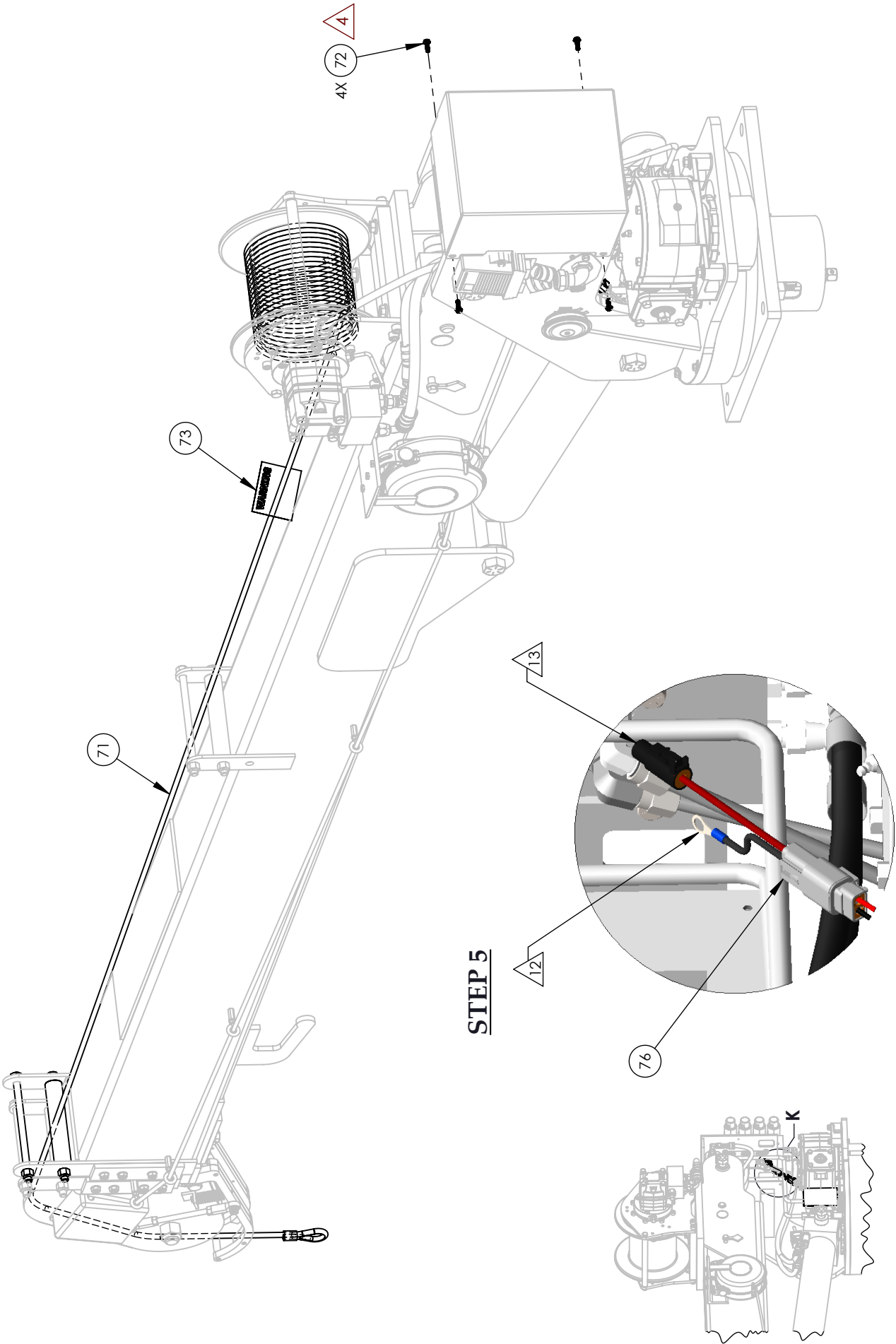
DESC: REVISED SCHEMATIC TO REFLECT RESISTOR ON E-STOP OUTPUT.

STEP 4



UNLESS SPECIFIED		PROPRIETARY & CONFIDENTIAL	
MACHINED PART		DRAWING IS THE SOLE PROPERTY OF	
ALL WELDS TO BE		LIFTMOORE INC. AND REPRODUCTION	
MINIMUM 1/4"		WITHOUT WRITTEN PERMISSION OF LIFTMOORE	
DIM. TOLERANCES		INC. IS PROHIBITED.	
XXX ± .005		THIRD ANGLE	
.XX ± .030		PROJECTION	
FRAC ± 1/16		CHECKED AT	
XX° ± .5°		ENG APPR DF	
		DRAWN JE	
		MTRL:	
		SHEET 5 - 8	
		WEIGHT: 2044.098 Lbs	

LIFTMOORE INC.		CRANE ASSY 8045DX-30 WP	
		CURVED BAIL, HOOK, WIFI	
		DWG. NO.	
		REV	
		29606	
		E	



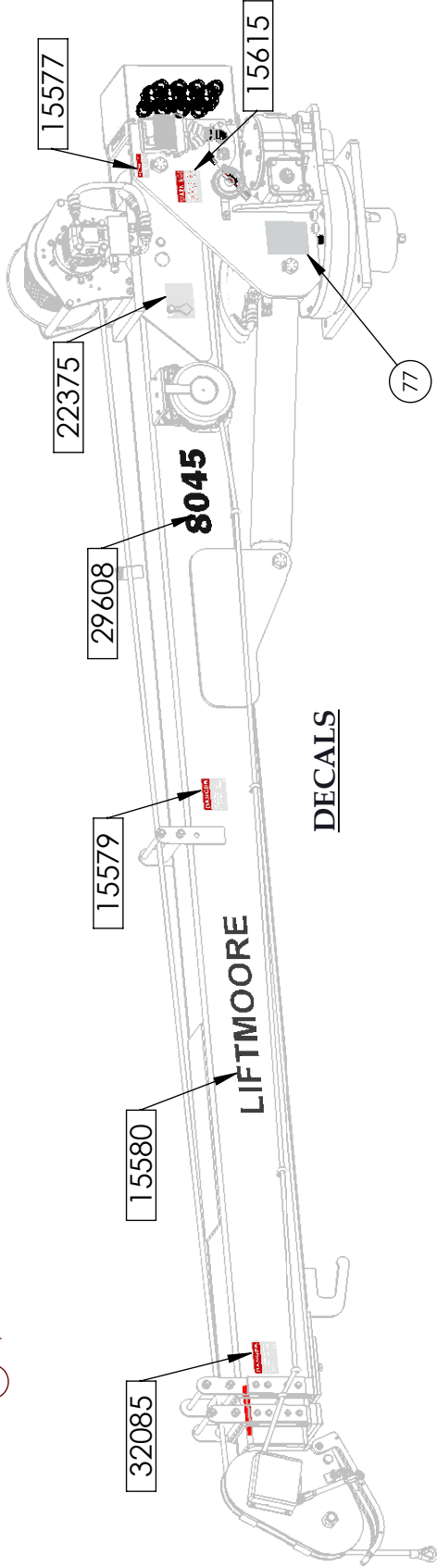
STEP 5

DETAIL K

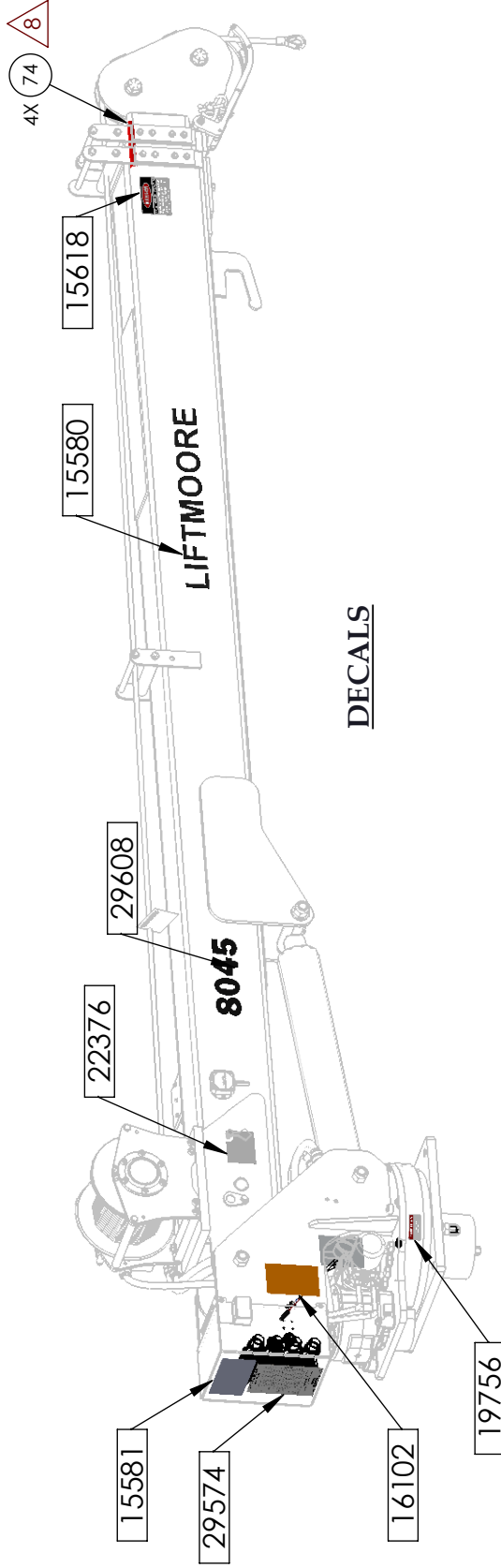
STEP 6

UNLESS SPECIFIED				THIRD ANGLE PROJECTION			
MACHINED PART				CHECKED			
MINIMUM .250 RMS				AT			
ALL WELDS TO BE				DF			
MINIMUM 1/4"				ENG APPR			
DIM. TOLERANCES				DRAWN			
XXX ± .005				JE			
XX ± .030				MTRL			
X ± .116				SHEET 6 - 8			
FRAC ± 1/16				WEIGHT: 2044.098 Lbs			
XX° ± .5°				REV			
PROPRIETARY & CONFIDENTIAL				CURVED BAIL, HOOK, WIFI			
DRAWING IS THE SOLE PROPERTY OF				DWG. NO.			
LIFTMOORE INC. AND REPRODUCTION				29606			
WITHOUT WRITTEN PERMISSION OF LIFTMOORE				REV			
INC. IS PROHIBITED.				E			

DECALS ARE LOCATED IN ITEM # 75 P/N 29607 - DECAL KIT 8045



DECALS



DECALS

UNLESS SPECIFIED				PROPRIETARY & CONFIDENTIAL			
MACHINED PART				DRAWING IS THE SOLE PROPERTY OF			
MINIMUM .250 RMS				LIFTMOORE INC. AND REPRODUCTION			
ALL WELDS TO BE				WRITTEN PERMISSION OF LIFTMOORE			
MINIMUM 1/4"				INC. IS PROHIBITED.			
DIM. TOLERANCES				THIRD ANGLE			
XXX ± .005				PROJECTION			
.XX ± .030				CHECKED AT			
.X ± .100				DF			
FRAC ± 1/16				ENG APPR			
XX° ± .5°							

LIFTMOORE INC.

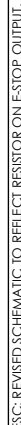
CRANE ASSY 8045DX-30 WP

CURVED BAIL, HOOK, WIFI

DRAWN	JE	06/07/2022	DWG. NO.	REV
MTRL:				
SHEET 7 - 8				E
WEIGHT: 2044.098 Lbs				
29606				

DESC: REVISED SCHEMATIC TO REFLECT RESISTOR ON E-STOP OUTPUT.

BY JE 06/07/2022 REV E





UNLESS SPECIFIED
MACHINED PART
MINIMUM .250 RMS

PROPRIETARY & CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS
DRAWING IS THE SOLE PROPERTY OF
LIFMOORE INC. ANY REPRODUCTION
IN PART OR AS A WHOLE WITHOUT THE
WRITTEN PERMISSION OF LIFMOORE
INC. IS PROHIBITED.

LIFTMOORE INC.

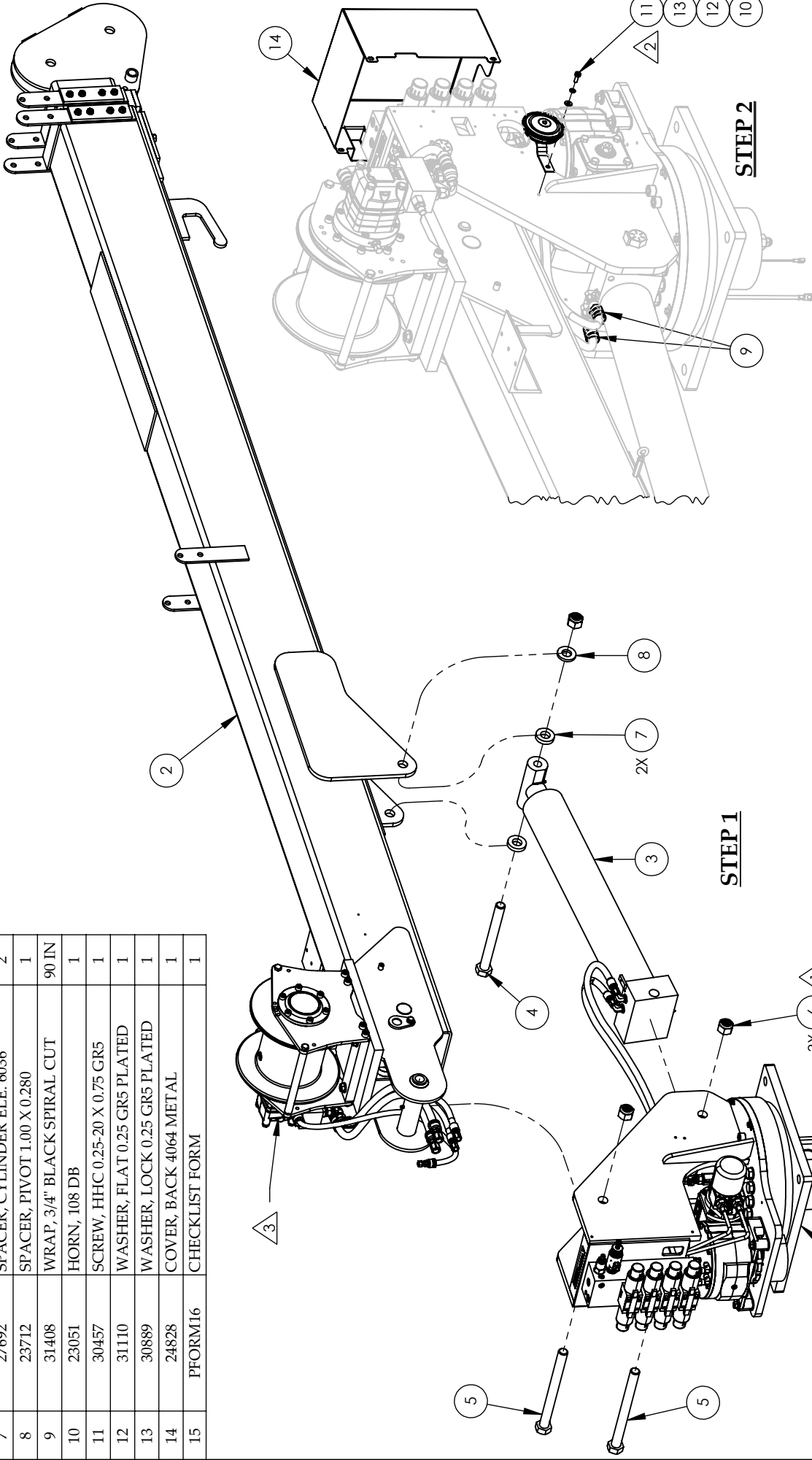
CRANE ASSY 8045DX-30 WP

 THIRD ANGLE PROJECTION	CHECKED	AT	06/07/2022	DRAWN	JE	06/07/2022	DWG. NO.	29606 CURVED BAIL. HOOK. W/IF	REV E
	WENG APPR.	DP	06/07/2022	MTRL:			SHEET 8 - 8		

 THIRD ANGLE PROJECTION	CHECKED	AT	06/07/2022	DRAWN	JE	06/07/2022	DWG. NO.	29606 CURVED BAIL. HOOK. W/IF	REV E
	WENG APPR.	DP	06/07/2022	MTRL:			SHEET 8 - 8		

NOTE	DESCRIPTION
1	USE IMPACT GUN SET ON SETTING 2 W/115 PSI TO TIGHTEN & ENSURE SCREW CAN BE TURNED WITH A WRENCH AFTER TIGHTENING TO AVOID OVER TIGHTENING
2	TORQUE TO 5 FT-LBS
3	MAKE SURE WINCH HAS OIL

ITEM	PART NUMBER	DESCRIPTION	QTY
1	29541	BODY ASSEMBLY 4075DX	1
2	29235	BOOM ASSEMBLY 4075DXP-30	1
3	21521	CYLINDER ASSY 4064XP ELEV DTCH	1
4	21194	SCREW, HHC 1.00-8 X 9.50 GR8	1
5	21195	SCREW, HHC 1.00-8 X 11.25 GR8	2
6	30838	NUT, HEX NYLOC 1.00-8 GRADE 5	3
7	27692	SPACER, CYLINDER ELE. 6036	2
8	23712	SPACER, PIVOT 1.00 X 0.280	1
9	31408	WRAP, 3/4" BLACK SPIRAL CUT	90 IN
10	23051	HORN, 108 DB	1
11	30457	SCREW, HHC 0.25-20 X 0.75 GR5	1
12	31110	WASHER, FLAT 0.25 GR5 PLATED	1
13	30889	WASHER, LOCK 0.25 GR5 PLATED	1
14	24828	COVER, BACK 4064 METAL	1
15	PFORM16	CHECKLIST FORM	1



UNLESS SPECIFIED

MACHINED PART

MINIMUM 250 RMS

ALL WELDS TO BE

MINIMUM 1/4"

DIM. TOLERANCES

XXX ± .005

XX ± .030

X ± .100

FRAC. ± 1/16

XX° ± .5°

PROPRIETARY & CONFIDENTIAL

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INC. IS PROHIBITED.

THIRD ANGLE

PROJECTION

CHECKED JE 02/04/2021

ENG APPR DF 04/01/2021

LIFTMOORE INC.

BOOM-BODY ASSY 4075DX-30

DYNAMIC OIL WINCH

DRAWN NA 02/04/2021

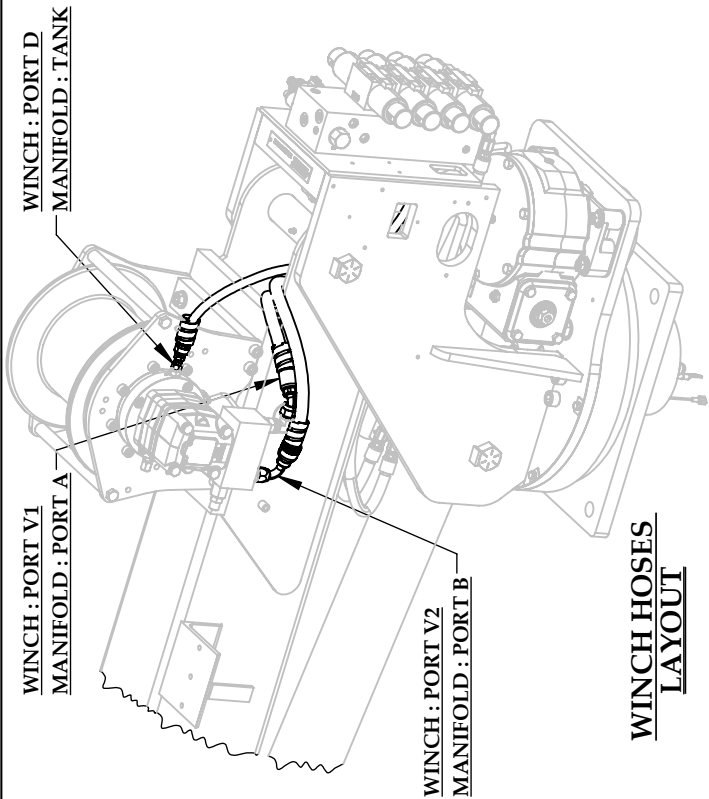
MTRL: SHEET 1 - 2

WEIGHT: 2017.379 Lbs

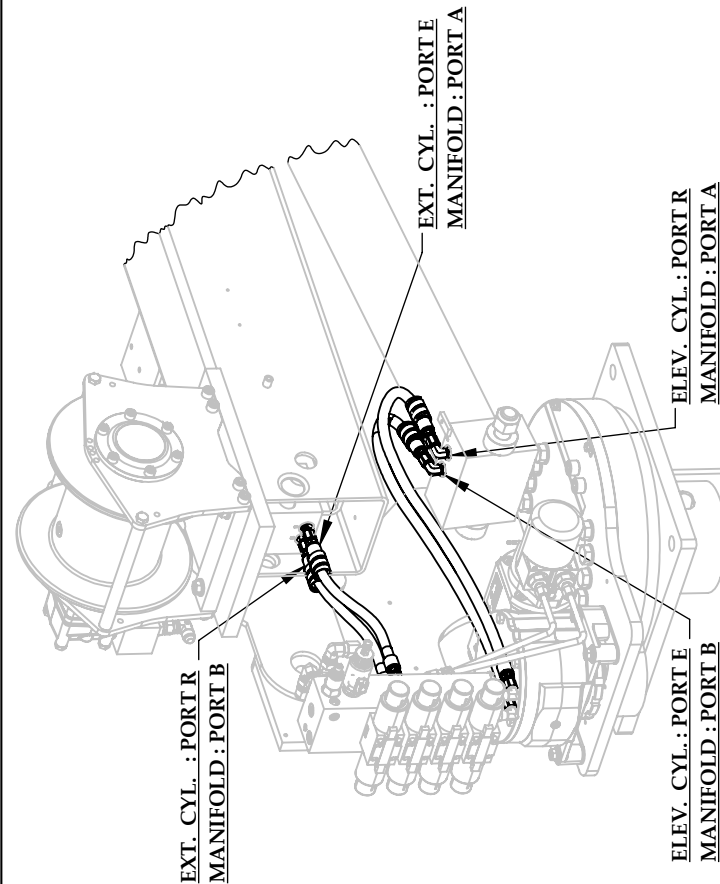
REV B

29545

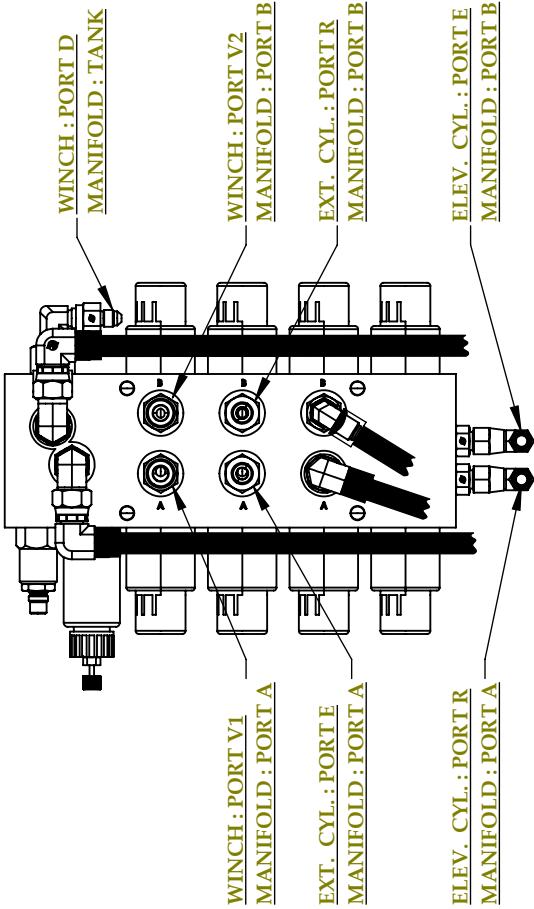
SOLIDWORKS



WINCH HOSES
LAYOUT



EXTENSION & ELEVATION CYLINDERS
HOSES LAYOUT



MANIFOLD - HOSES LAYOUT
INSIDE BODY VIEW

UNLESS SPECIFIED		PROPRIETARY & CONFIDENTIAL	
MACHINED PART		DRAWING IS THE SOLE PROPERTY OF	
MINIMUM .250 RMS		LIFTMOORE INC. AND REPRODUCTION	
ALL WELDS TO BE		WITHOUT PERMISSION OF LIFTMOORE	
MINIMUM 1/4"		INC. IS PROHIBITED.	
DIM. TOLERANCES		THIRD ANGLE	
XXX ± .005		PROJECTION	
.XX ± .030		CHECKED JE	
.X ± .100		DRAWN NA	
FRAC ± 1/16		DATE 02/04/2021	
XX° ± .5°		DWG. NO.	
		SHEET 2 - 2	
		WEIGHT: 2017.379 Lbs	

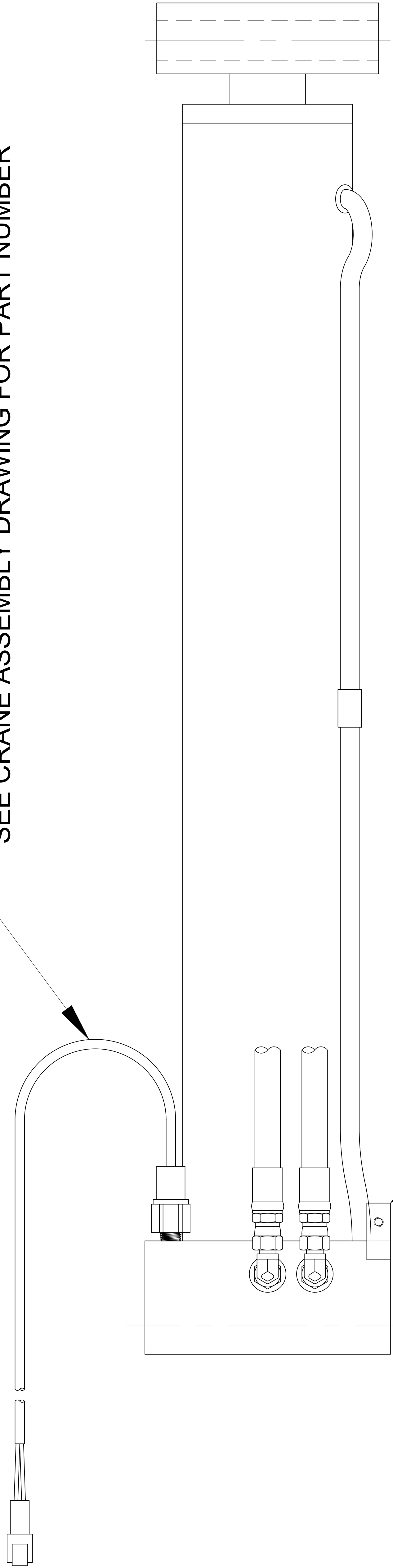
LIFTMOORE INC.

BOOM-BODY ASSY 4075DX-30

DYNAMIC OIL WINCH

REV	B
29545	
02/04/2021	
02/04/2021	
04/01/2021	

SWITCH, PRES ASSY
(NOT PART OF ASSEMBLY).
SEE CRANE ASSEMBLY DRAWING FOR PART NUMBER



P/N 22388
BRACKET, ELEV SWITCH ADJ. MACH

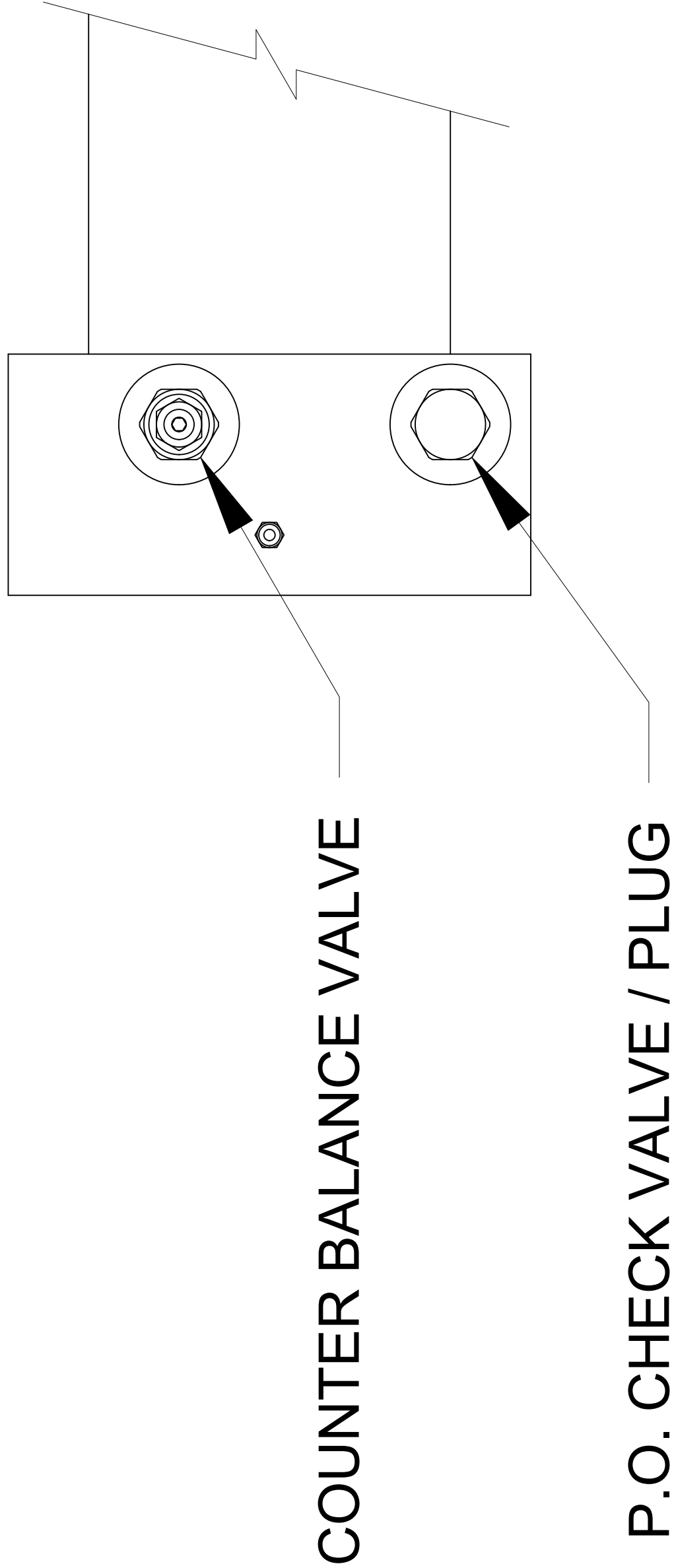
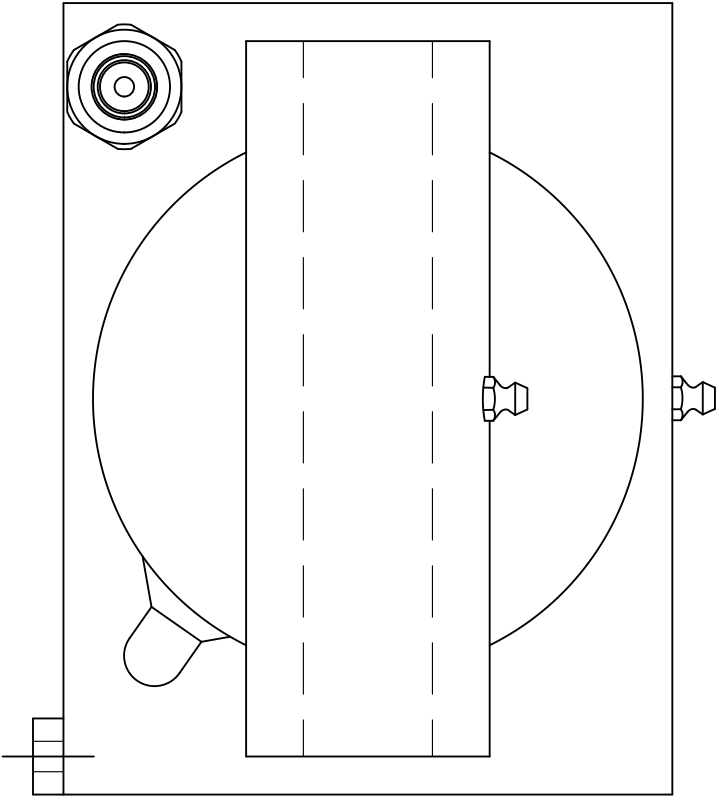
P/N 31413
HOSE, HYD #6 31.00"
2 PLCS

P/N 31064
ADAPTER, 90° 6MJ-6MO
2 PLCS

P/N 31408
WRAP, 3/4" BLACK SPIRAL CUT

P/N 31224
COVER, ZERK
2 PLCS

P/N 22387
CYLINDER WELDMENT ELEV. 4064

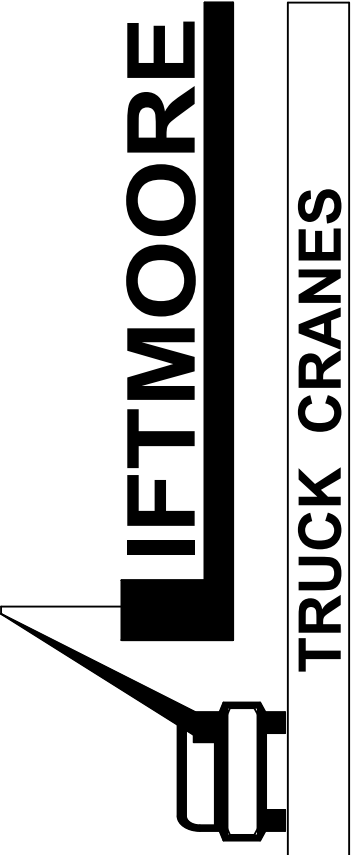


COUNTER BALANCE VALVE

P.O. CHECK VALVE / PLUG

REPLACEMENT PARTS FOR CYLINDER	
DESCRIPTION	PART NUMBER
SEAL KIT	TM*SK-00271
COUNTER BALANCE VALVE	18577
P.O. CHECK VALVE PLUG	TM*PP00482
CYLINDER, 4.5 X 24.0 X 2.0 POC	18301

Houston TX
(713)-688-5533
www.liftmoore.com



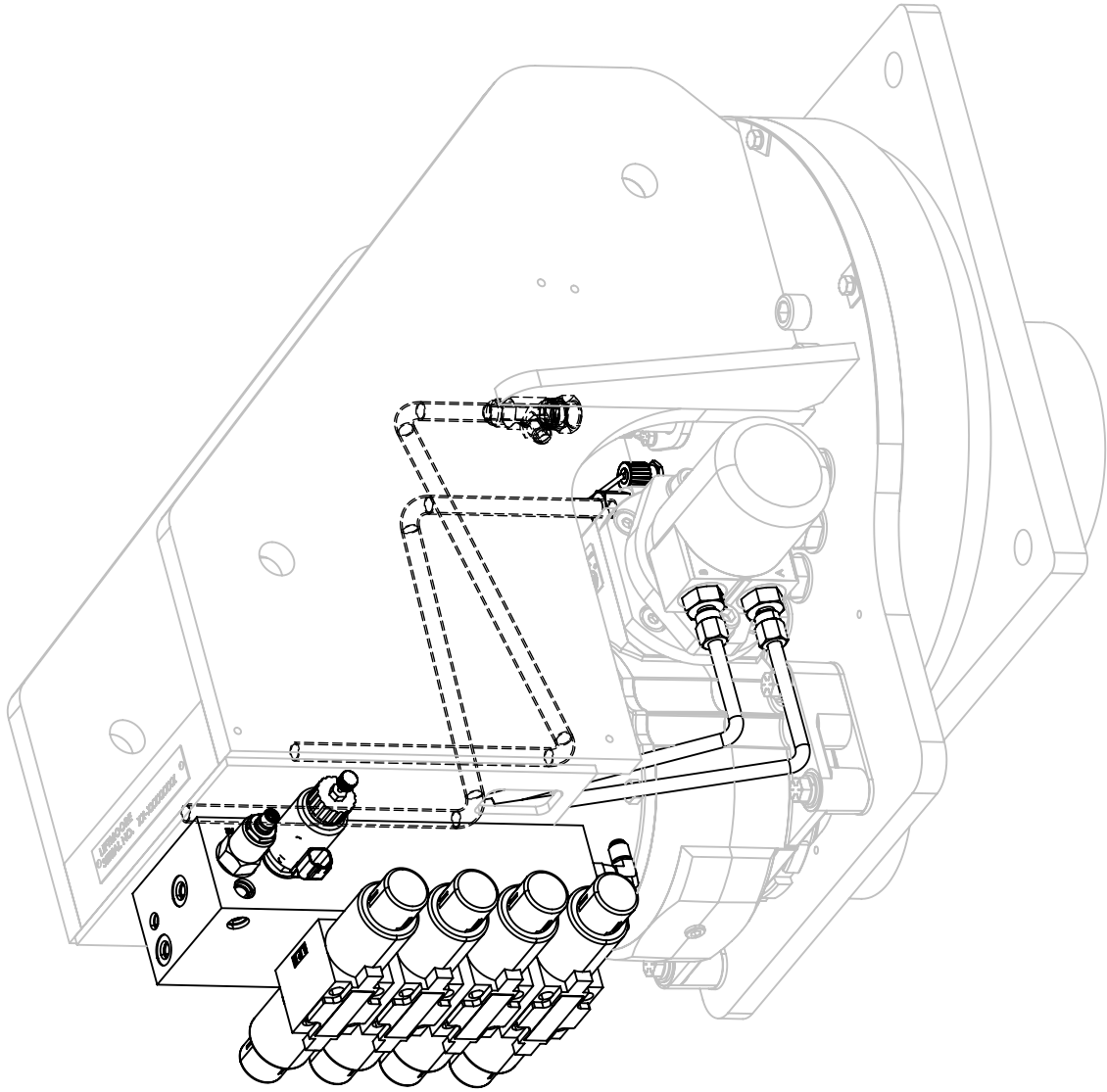
CYLINDER ASSY 4064XP ELEV DTCH

CYL 18301,35.50" HOSE,DTCH LS

DRAWING NO.

21521-E

ITEM	PART NUMBER	DESCRIPTION	QTY
1	29880	BASE-HOUSING ASSY 8045	1
2	29575	MANIFOLD ASSY 8045 DTCH	1
3	24817	TUBE, HYD 4064 PRESS	1
4	24818	TUBE, HYD 4064 TANK RZ	1
5	24923	ADAPTER, TEE 8MJ-6MJ-8F-JX	1
6	29543	TUBE, HYD ROT 4075 PORT B	1
7	29544	TUBE, HYD ROT 4075 PORT A	1
8	30459	SCREW, HHC 0.37-16 X 0.75 GR8	4
9	30473	WASHER, LOCK 0.37 GR5 PLATED	4
10	31527	ADAPTER, 6MJ-10MO	2



UNLESS SPECIFIED

MACHINED PART

MINIMUM .250 RMS

ALL WELDS TO BE

MINIMUM 1/4"

DIM. TOLERANCES

XXX ± .005

.XX ± .030

.X ± .010

FRAC. ± 1/16

XX° ± .5°

THIRD ANGLE

PROJECTION

⊕

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INC. IS PROHIBITED.

LIFTMOORE INC.

BODY ASSEMBLY 4075DX

DRAWN

JE

07/15/2021

DWG. NO.

29541

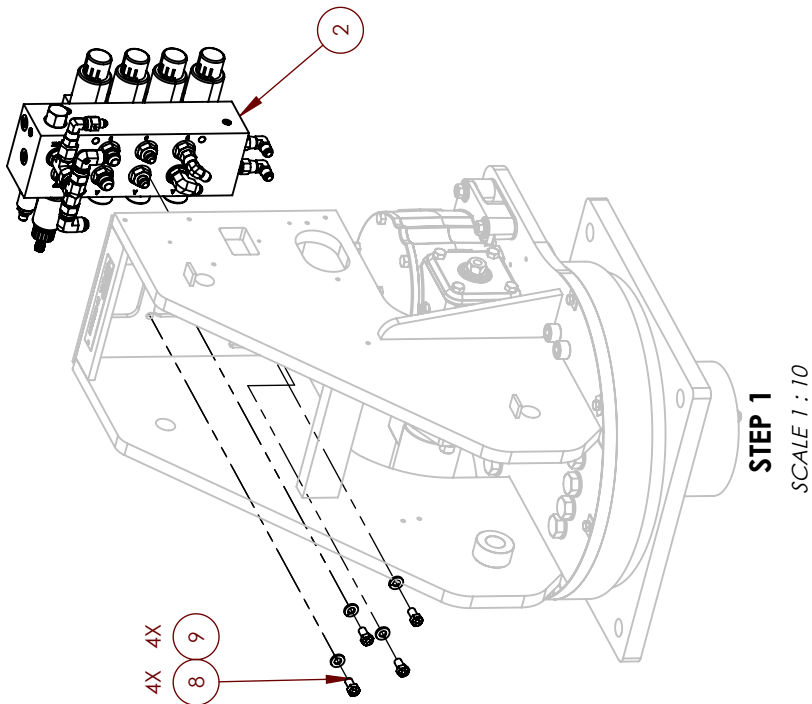
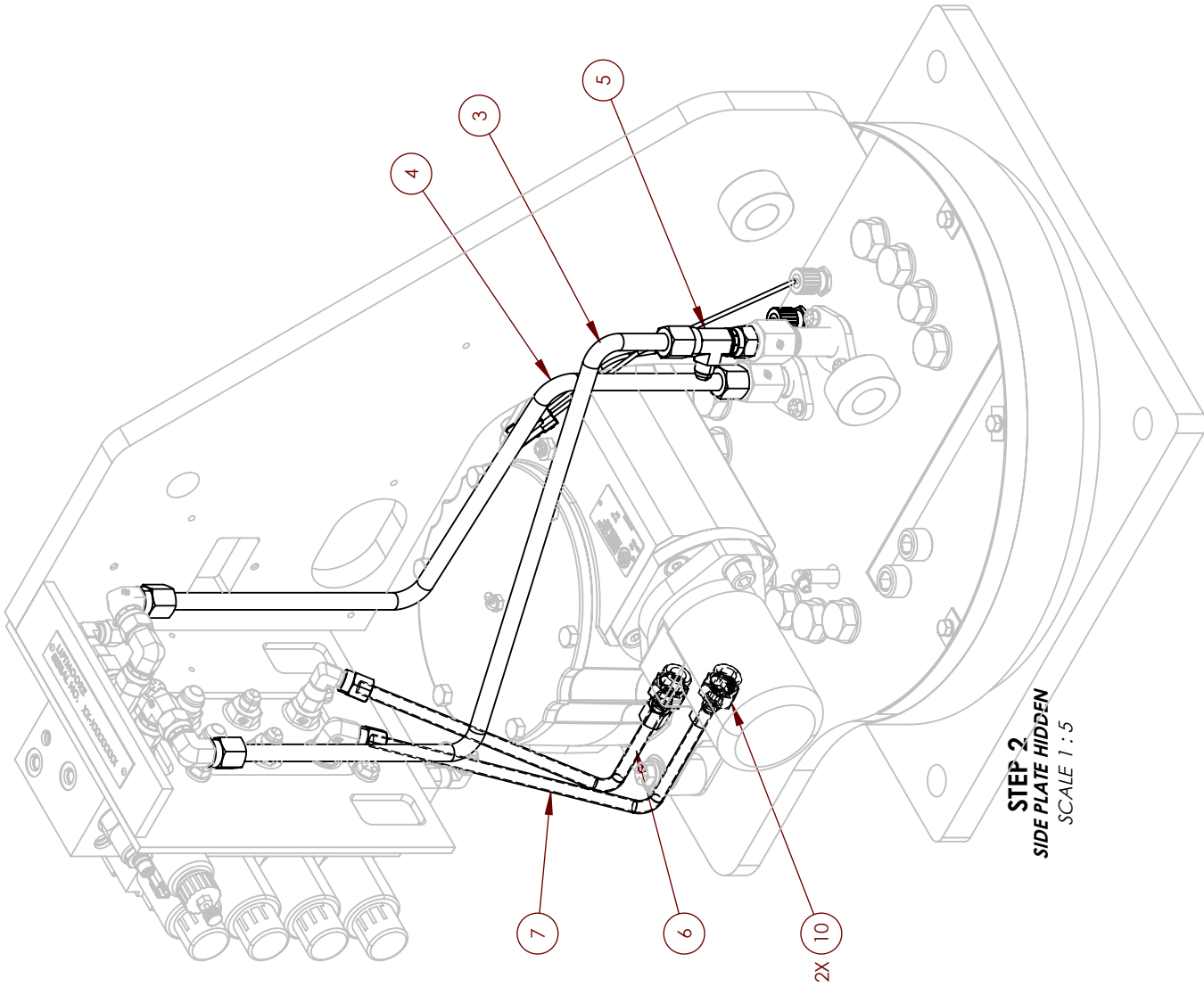
REV

B

MTL

SHEET 1 - 2

WEIGHT: 511.804 Lbs



UNLESS SPECIFIED
MACHINED PART
MINIMUM 250 RMS
ALL WELDS TO BE
MINIMUM 1/4"
DIM. TOLERANCES
XXX ± .005
.XX ± .030
X ± .100
FRAC. ± 1/16
XX° ± .5°

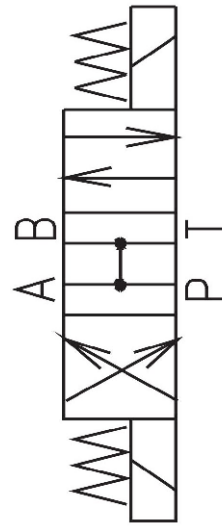
THIRD ANGLE
PROJECTION

PROPERTY & CONFIDENTIAL
DRAWING IS THE SOLE PROPERTY OF
LIFTMOORE INC. AND REPRODUCTION
WITHOUT WRITTEN PERMISSION OF LIFTMOORE
INC. IS PROHIBITED.

LIFTMOORE INC.			
BODY ASSEMBLY 4075DX			
DRAWN	JE	07/15/2021	DWG. NO.
CHECKED	NA	07/15/2021	SHEET 2 - 2
ENG APPR	DF	07/22/2021	WEIGHT: 511.804 Lbs
REV			
B	29541		

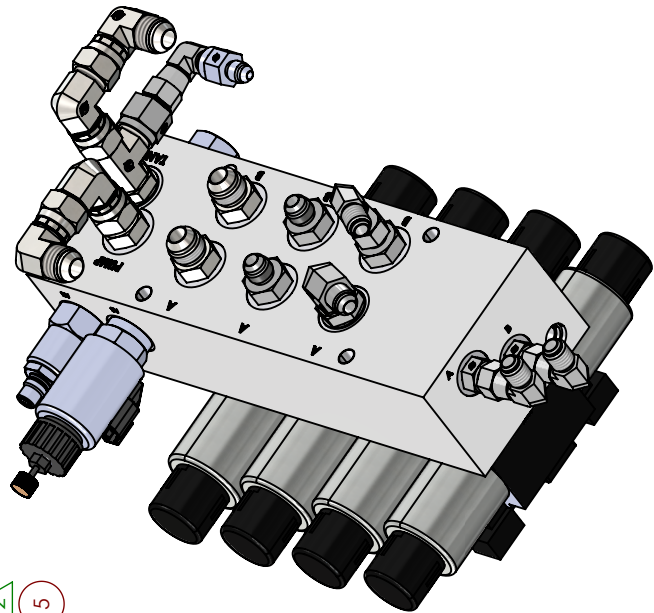
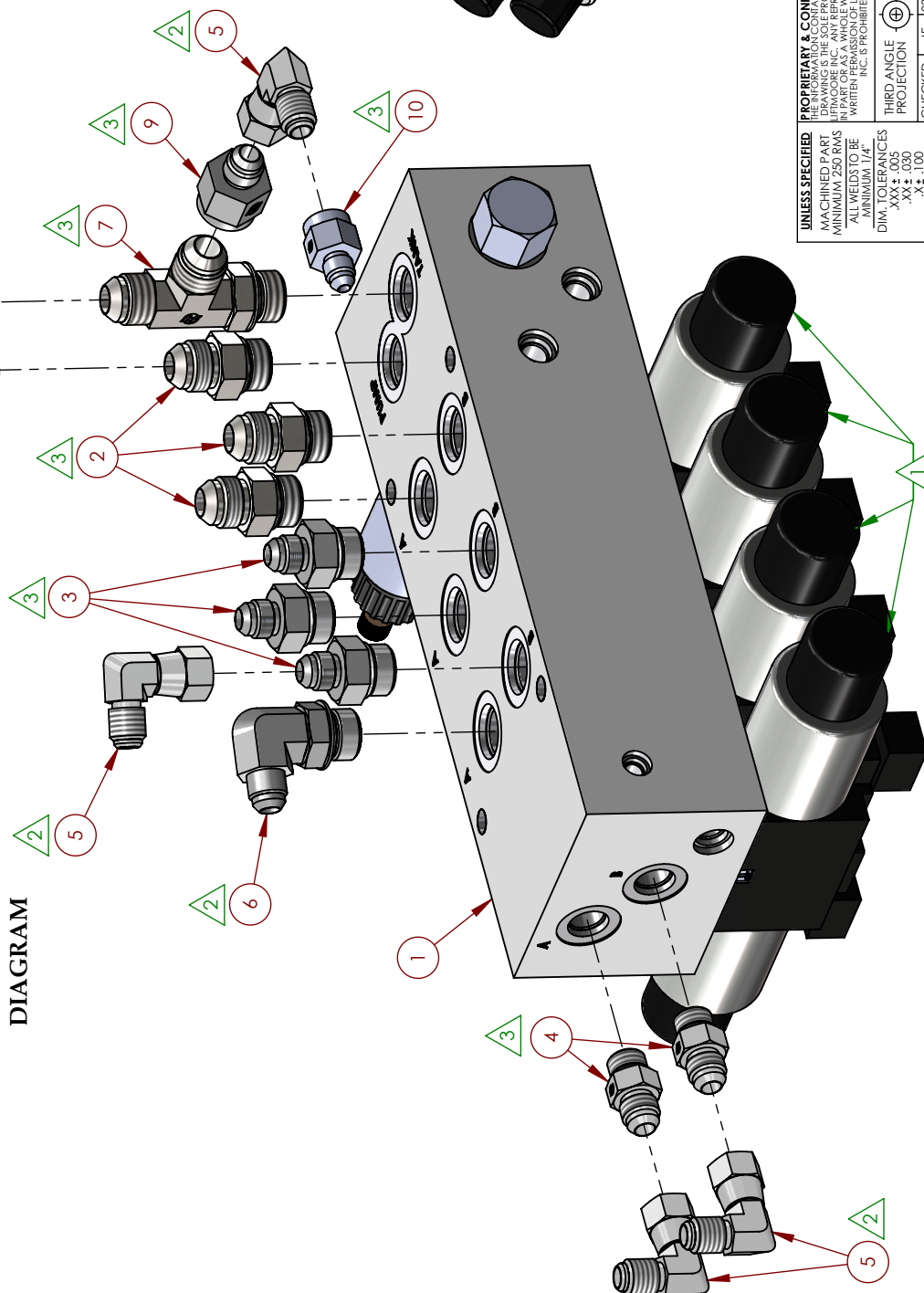
NOTES

- 1 - 4X P/N 34528 KIT, VALVE OC 4W/3P/12V DTCH - CHECK OPEN CENTER VALVES (FOR REF. ONLY)
- 2 - HAND TIGHTEN (LEAVE LOOSE, TO BE ADJUSTED IN FUTURE ASSEMBLIES)
- 3 - HAND TIGHTEN USING WRENCH



OPEN CENTER VALVES
DIAGRAM

ITEM	PART NUMBER	DESCRIPTION	QTY
1	24993	MANIFOLD PRE-ASSY XP DTCH	1
2	31908	ADAPTER, 8MJ-8MO X 1.48	3
3	30898	ADAPTER, 6MJ-8MO	3
4	31063	ADAPTER, 6MJ-6MO	2
5	31513	ADAPTER, 90° 6MJ-6FJX	4
6	31135	ADAPTER, 90° 6MJ-8MO	1
7	32544	ADAPTER, TEE 8MJ-8MJ-8MO	1
8	32547	ADAPTER, 90° 8FJX-8MJ	4
9	20864	ADAPTER, 6MJ-8FJ	1
10	33166	ADAPTER, 6FJ-4MJ	1



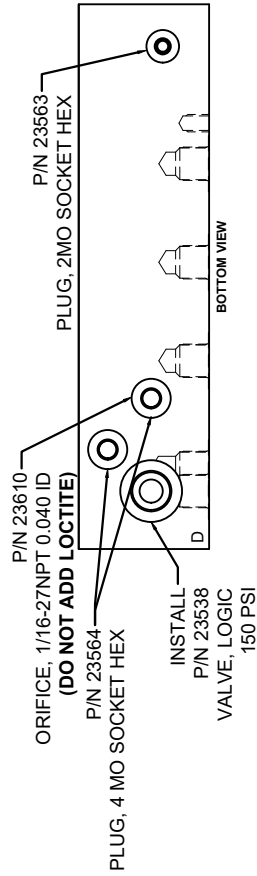
UNLESS SPECIFIED
MACHINED PART
MINIMUM 250 RMS
ALL WELDS TO BE
MINIMUM 1/4"
DIM. TOLERANCES
XXX ± .005
XX ± .030
X ± .100
FRAC. ± 1/16
XX° ± .5°

THIRD ANGLE
PROJECTION

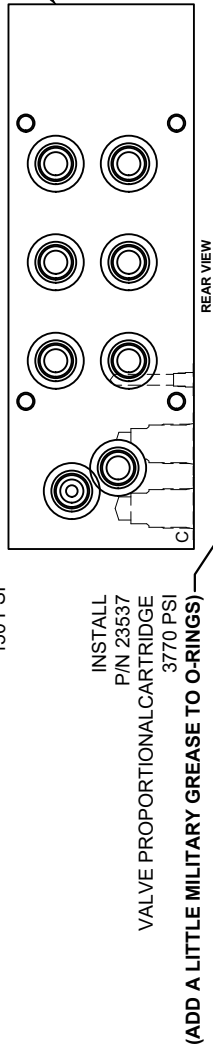
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WITHOUT WRITTEN PERMISSION OF LIFTMOORE
INC. IS PROHIBITED.

CHECKED JE 03/08/2022
ENG APPR NA 03/08/2022

LIFTMOORE INC.			
MANIFOLD ASSY 8045 DTCH			
OPEN CENTER VALVES			
DRAWN NA	03/08/2022	DWG. NO.	REV
MTRL:			
WEIGHT: 33.08 Lbs			
		29575	C
			SHEET 1 - 1



P/N 24541
MANIFOLD, XP MACH HYDRAQUIP



NOTES

1- ON THE SIDE OF THE VALVE MAKE SURE
A IS ON TOP & **B** ON THE BOTTOM.

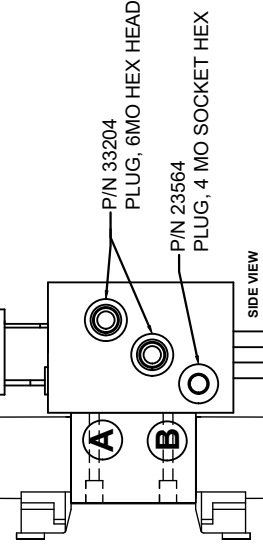
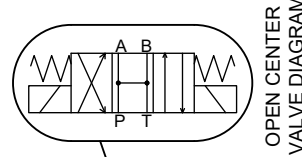
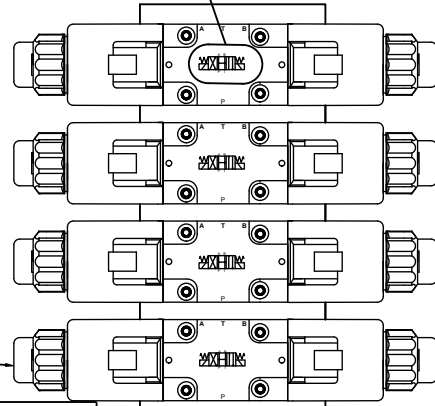
2- SEE OPEN CENTER VALVE DIAGRAM AND ORIENTATION

TOP VIEW

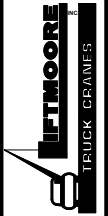
4x P/N 34528
KIT, VALVE OC 4W/3P/12V DTCH
SEE NOTES

P/N 28450
VALVE, SPS MANUAL OVERRIDE KIT

P/N 23537
VALVE, PROPORTIONAL CARTRIDGE



Houston TX
(713)-688-5533
www.liftmoore.com



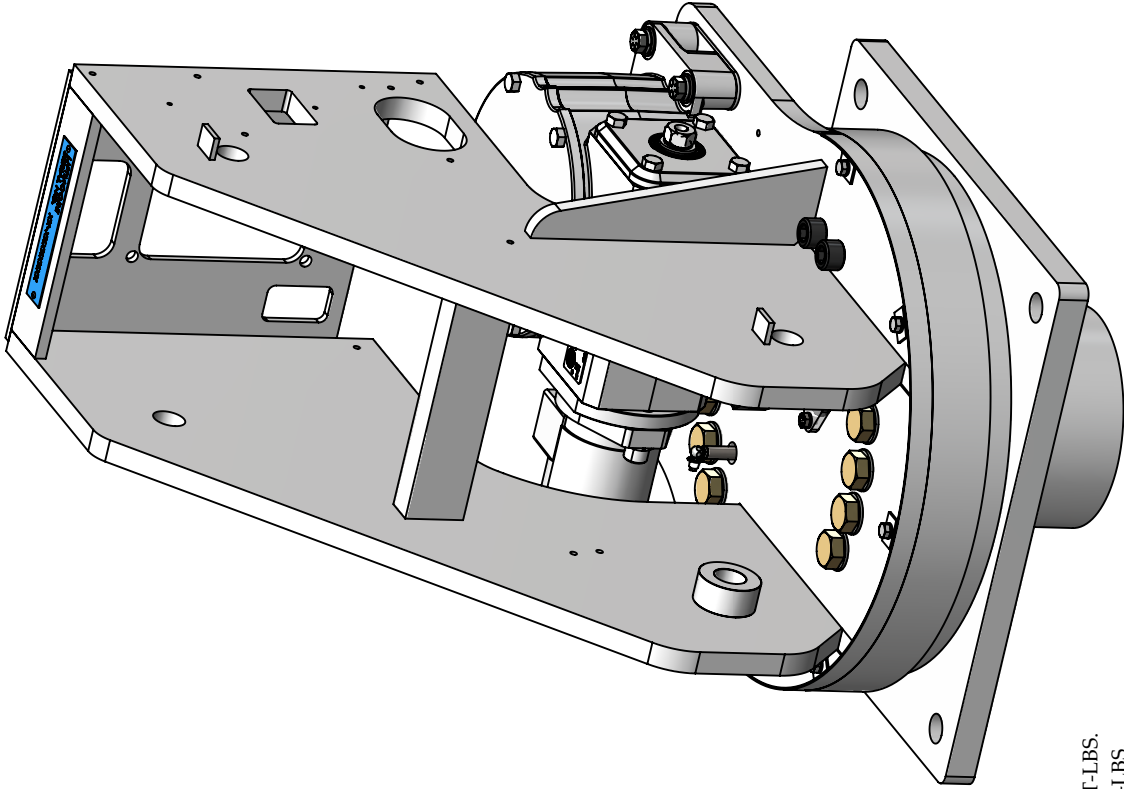
MANIFOLD PRE-ASSY XP DTCH

DRAWING NO.

24993-D

DRWN BY: JE

DATE: 6/4/12



NOTES:

- 1 - TORQUE TO 170 FT-LBS.
- 2 - TORQUE TO 65 FT-LBS.
- 3 - TORQUE TO 28 FT-LBS.
- 4 - TORQUE TO 11 FT-LBS.
- 5 - TORQUE TO 5 FT-LBS.
- 6 - RUN WIRE THRU CONNECTOR.
- 7 - APPLY LOC-TITE VC-3 TO THREADS.
- 8 - APPLY LOC-TITE 565 TO THREADS
- 9 - ADD TEFLON TAPE
- 10 - ADD SILICONE AROUND ITEM # 27
- 11 - ADD MILITARY GREASE TO GEAR TEETH
- 12 - USE EXISTING HARDWARE
- 13 - PIN 1 TO RED WIRE, PIN 2 TO BLACK WIRE

ASSEMBLY FINAL VIEW

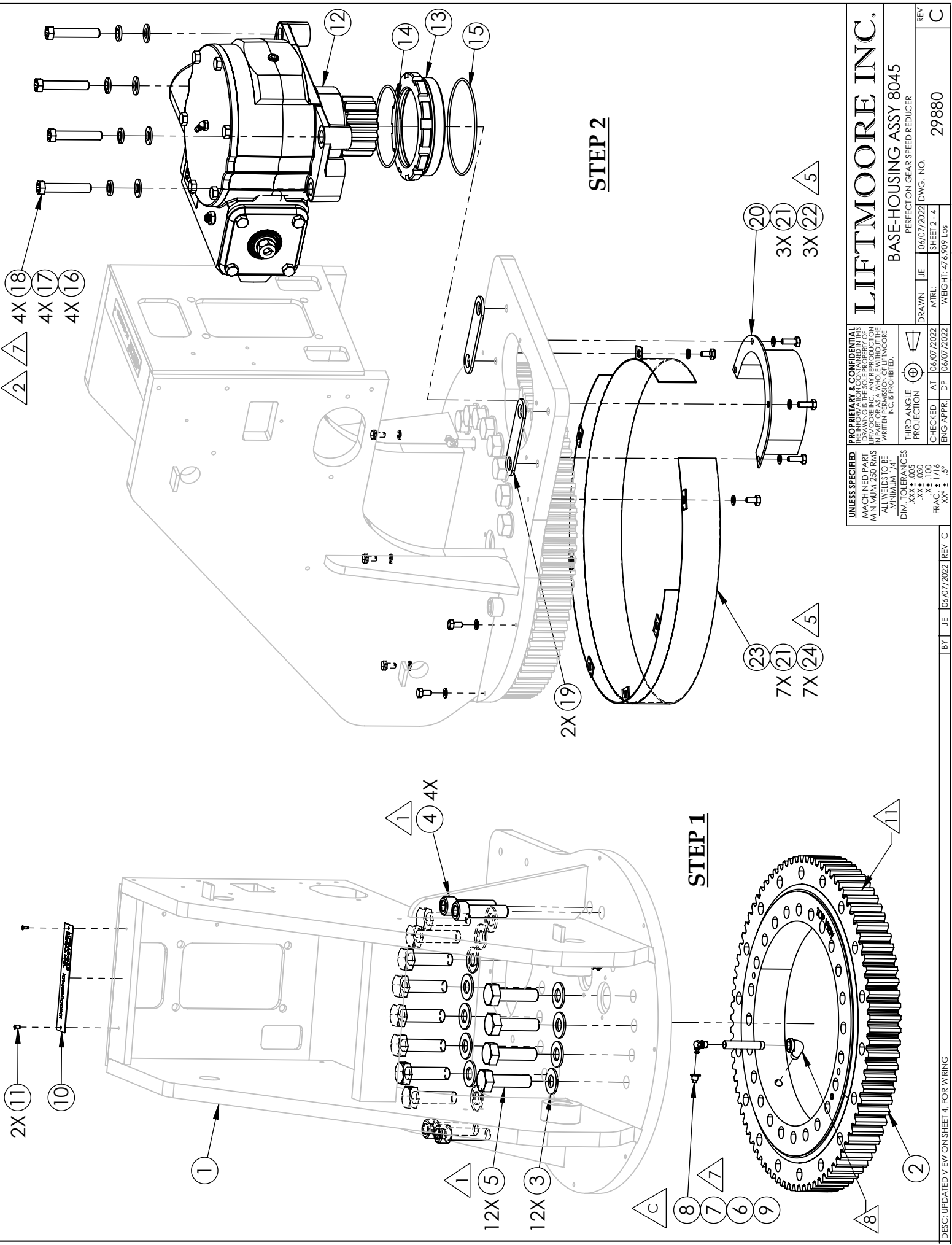
ITEM	PART NUMBER	DESCRIPTION	QTY
1	29882	HOUSING WELDMENT 8045 DTCH	1
2	22916	BEARING, GEAR 4064	1
3	31054	WASHER, FLAT 0.62 SAE GR8	30
4	30867	SCREW, SOC HD 0.62-11 X 2.25	4
5	31100	SCREW, HHC 0.62-11 X 2.25 GR8	12
6	19824	ZERK, 0.12 NPT STRAIGHT X 2.62	1
7	29511	ZERK, M8-1.00 90°	1
8	31224	COVER, ZERK 1/4	1
9	23037	ADAPTER, ELBOW MALE X FEMALE	1
10	23389	PLATE, SERIAL NO. MACHINING	1
11	22406	SCREW, DRIVE	2
12	29116	REDUCER, SPEED P GEAR 14 TOOTH	1
13	27332	RING, ECCENTRIC PERFECTION GEA	1
14	17473	O-RING, 155 BUNA 70 DUROMETER	1
15	17472	O-RING, 158 BUNA 70 DUROMETER	1
16	31062	WASHER, FLAT 0.43 SAE GRADE 8	4
17	30972	WASHER, LOCK 0.43 GR5 PL	4
18	28429	SCREW, HHC 0.43-14 X 2.50 GR8	4
19	29282	SPACER, SPEED REDUCER 4075/4064	2
20	19720	COVER, GEAR PINION 72100	1
21	30889	WASHER, LOCK 0.25 GR5 PLATED	14
22	30457	SCREW, HHC 0.25-20 X 0.75 GR5	7
23	21183	COVER, GEAR 4064	1
24	30809	SCREW, HHC 0.25-20 X 0.50 GR5	7
25	29801	SWIVEL, HYD/ELEC ASSY 8045	1
26	31713	SPACER, HYD SWIVEL SUPPORT	2
27	18714	CONNECTOR, CGB 0.25NPT 0.20	2
28	27858	GROMMET, RUBBER 0.875" I.D.	2
29	27990	PLATE, GROMMET HOLDER - MACH	2
30	21112	PLATE, BASE 4064 MACH	1
31	31605	SCREW, HHC 0.62-11 X 3.00 GR8	18
32	18263	PROTECTOR, SWIVEL SLOTTED WELD	1
33	30890	WASHER, LOCK 0.31 GR5 PLATED	5
34	30458	SCREW, HHC 0.31-18 X 0.75 GR5	3
35	28147	PLATE, SWIVEL MOUNT SLIDE MACH	1
36	30888	WASHER, FLAT 0.31 GR5 PLATED	2
37	31096	SCREW, HHC 0.31-18 X 1.25 GR5	2
38	29765	CONNECTOR, DTCH 2P PLUG 12GA	1
39	29766	WEDGE, DEUTSCH 2P PLUG 12GA	1

UNLESS SPECIFIED
MACHINED PART
MINIMUM 250 RMS
ALL WELDS TO BE
MINIMUM 1/4"
DIM. TOLERANCES
XXX ± .005
XX ± .030
X ± .100
FRAC. ± 1/16
XX° ± .5°

THIRD ANGLE
PROJECTION
CHECKED AT 06/07/2022
ENG APPR DF 06/07/2022

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WITHOUT WRITTEN PERMISSION OF LIFTMOORE
INC. IS PROHIBITED.

LIFTMOORE INC.			
BASE-HOUSING ASSY 8045			
PERFECTION GEAR SPEED REDUCER			
DRAWN	JE	06/07/2022	DWG. NO.
MRL:			
CHECKED	AT	06/07/2022	SHEET 1 - 4
ENG APPR	DF	06/07/2022	WEIGHT- 47.6.909 Lbs
REV			REV
		29880	C



UNLESS SPECIFIED

PROPRIETARY & CONFIDENTIAL

MACHINED PART

DRAWING IS THE SOLE PROPERTY OF

MINIMUM .250 RMS

ALL WELDS TO BE

MINIMUM 1/4"

DIM. TOLERANCES

XXX ± .005

XX ± .030

X ± .100

FRAC ± 1/16

XX° ± .5°

THIRD ANGLE

PROJECTION

⊕

CHECKED

AT

06/07/2022

ENG APPR

DF

06/07/2022

DRAWN

JE

06/07/2022

MTRL

SHEET 2 - 4

WEIGHT-47.6.909 Lbs

REV

C

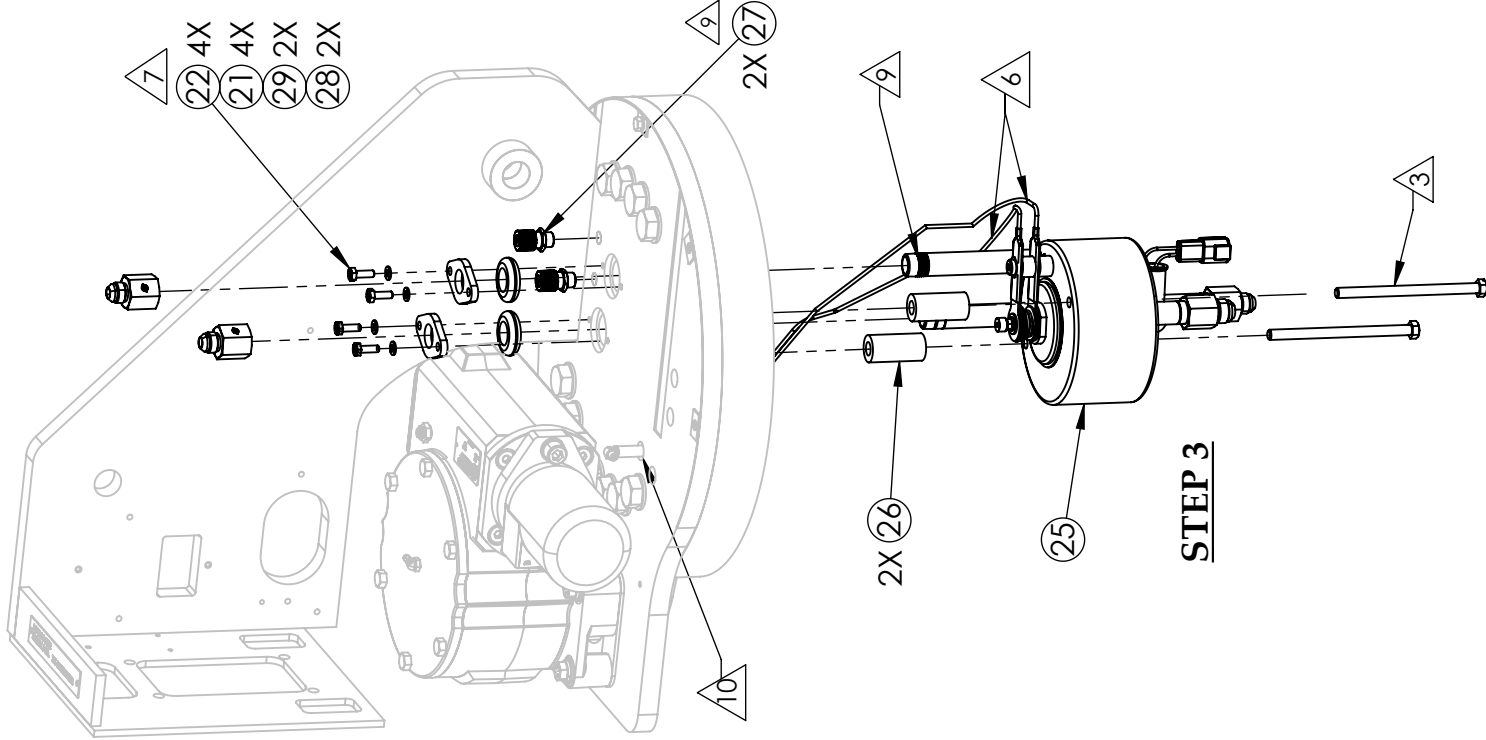
29880

DWG. NO.

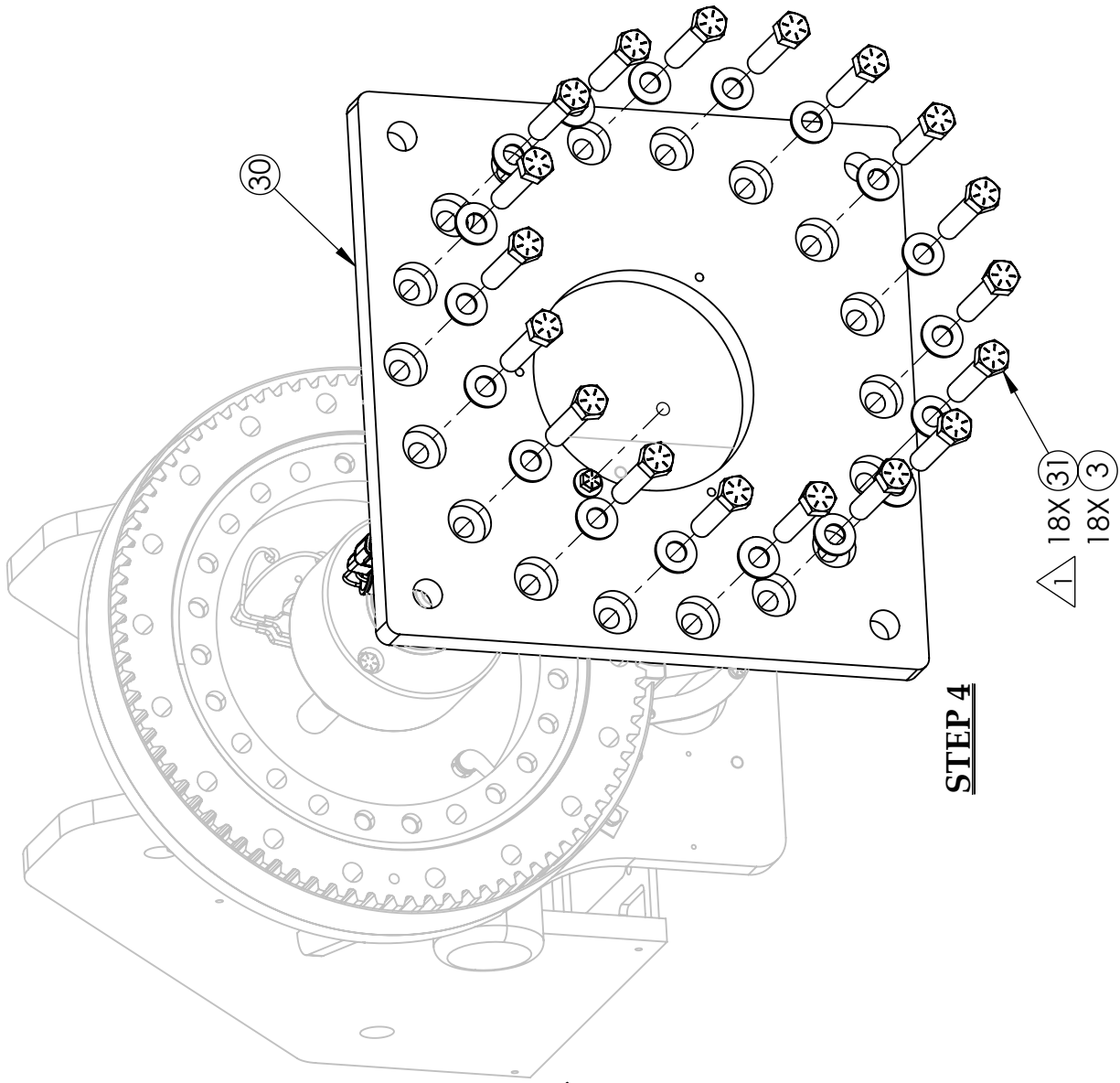
PERFECTION GEAR SPEED REDUCER

BASE-HOUSING ASSY 8045

LIFTMOORE INC.



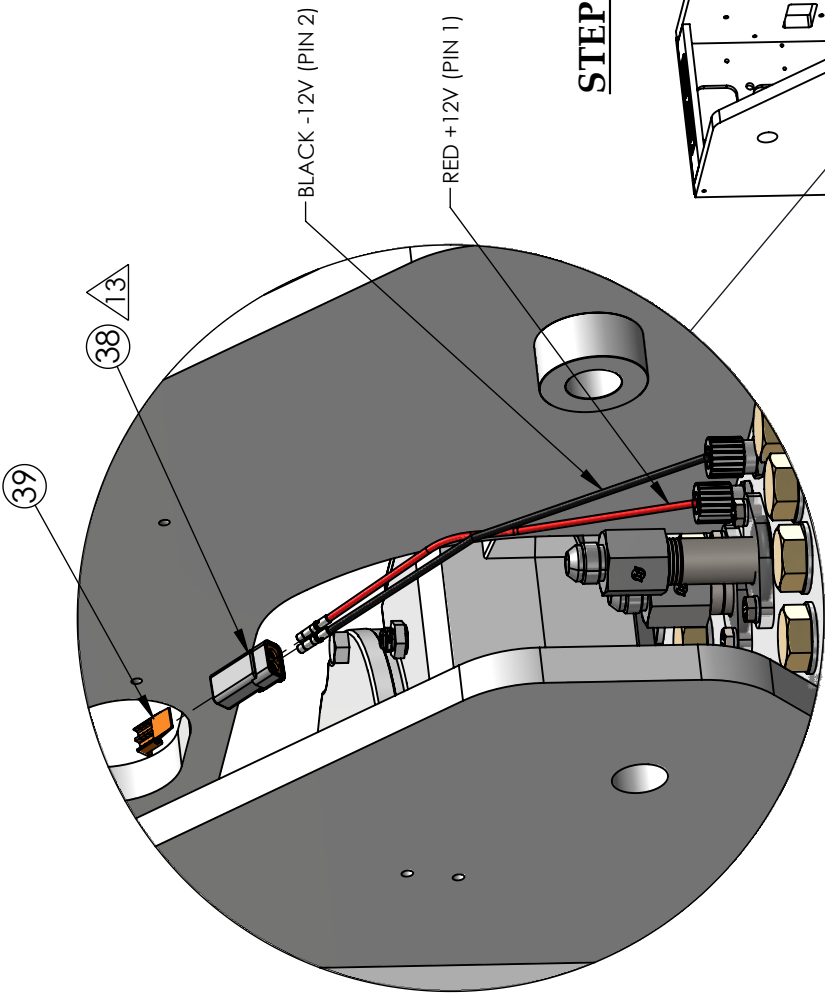
STEP 3



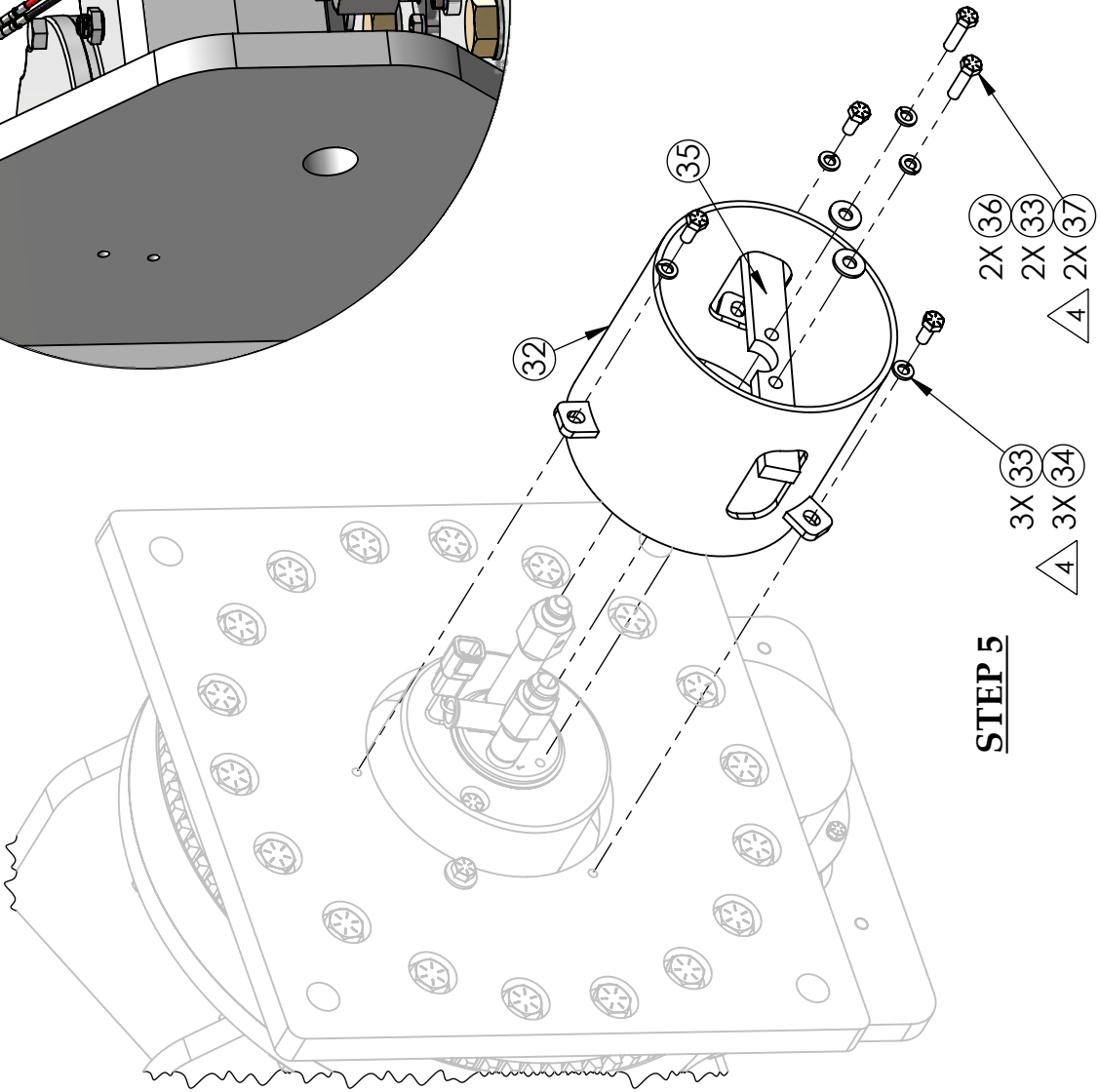
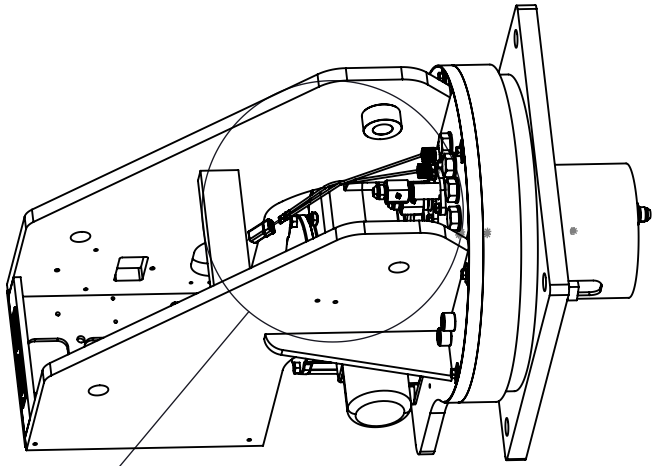
STEP 4

UNLESS SPECIFIED		THIRD ANGLE PROJECTION	
PROPRIETARY & CONFIDENTIAL		DRAWING IS THE SOLE PROPERTY OF	
MACHINED PART		LIFTMOORE INC. AND REPRODUCTION	
MINIMUM .250 RMS		WITHOUT WRITTEN PERMISSION OF LIFTMOORE	
ALL WELDS TO BE		INC. IS PROHIBITED.	
MINIMUM 1/4"			
DIM. TOLERANCES			
XXX ± .005			
.XX ± .030			
X ± .150			
FRAC. ± 1/16			
XX° ± .5°			

LIFTMOORE INC.		PERFECTION GEAR SPEED REDUCER	
BASE-HOUSING ASSY 8045		DWG. NO.	
DRAWN	JE	06/07/2022	REV
CHECKED	AT	06/07/2022	C
ENG APPR	DF	06/07/2022	
SHEET 3 - 4		29880	
WEIGHT- 47.609 Lbs			



STEP 6



STEP 5

UNLESS SPECIFIED		THIRD ANGLE	
MACHINED PART		PROJECTION	
DRAWING IS THE SOLE PROPERTY OF		AT	
LIFTMOORE INC. AND NO REPRODUCTION		DF	
WITHOUT WRITTEN PERMISSION OF LIFTMOORE		ENG APPR	
INC. IS PROHIBITED.		DWG. NO.	
DIM. TOLERANCES		SHEET 4 - 4	
XXX ± .005		WEIGHT- 47.6.909 Lbs	
XX ± .030		REV	
X ± .100		C	
FRAC. ± 1/16			
XX° ± .5°			

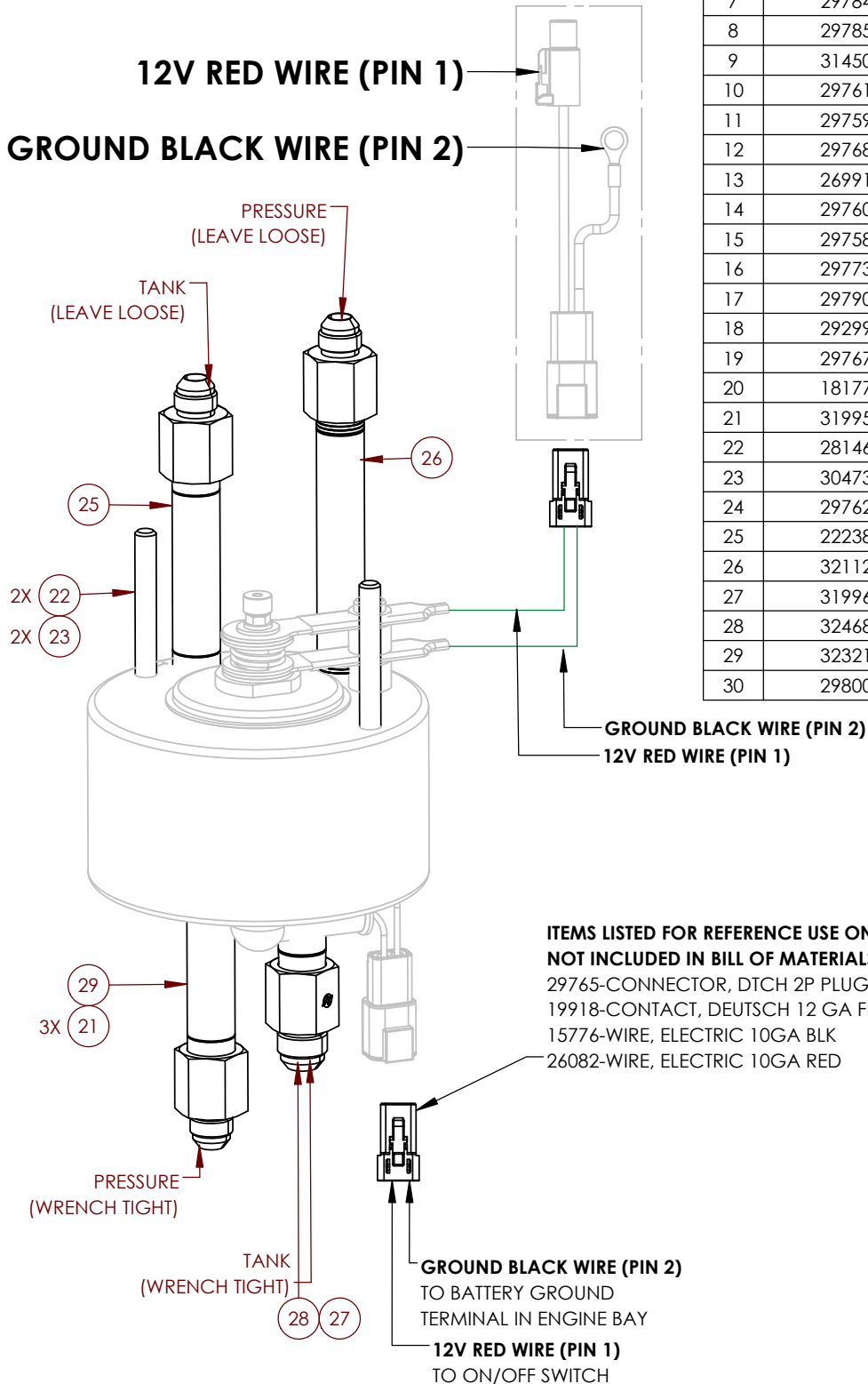
LIFTMOORE INC.

BASE-HOUSING ASSY 8045

PERFECTION GEAR SPEED REDUCER

DRAWN	JE	06/07/2022	DWG. NO.	29880	REV	C
CHECKED	AT	06/07/2022	SHEET 4 - 4			
ENG APPR	DF	06/07/2022				

SEE DRAWING
29824



ITEM	PART NUMBER	DESCRIPTION	QTY
1	28144	SWIVEL, HYDRAULIC 0.50 NPT CTB	1
2	29775	WIRE, SWIVEL SUPPLY W/DTCH 2P	1
3	29779	WIRE, SWIVEL HOT PLATE 1P	1
4	29780	WIRE, SWIVEL GROUND PLATE 1P	1
5	29782	INSULATOR, BOLT ELEC.	1
6	29789	SPACER, SWIVEL NUT BRZ-MACH	1
7	29784	WASHER, FLAT 0.25 ID BRONZE	1
8	29785	SLEEVE, SWIVEL SCREW INSULATOR	1
9	31450	INSULATOR, SLEEVE ~	2
10	29761	NYLON, TUBE 0.25OD X 0.19ID	1
11	29759	BEARING, THRUST 0.75 ID BRONZE	2
12	29768	SCREW, MH PH 10-24 X 6.00 SS	1
13	26991	SCREW, SOC HD 0.37-16 X 1.75	1
14	29760	BEARING, THRUST 0.31 ID BRONZE	1
15	29758	SPRING, COMPRESSION 29.3LB	1
16	29773	WASHER, FLAT 0.25 X 0.07L PTFE	1
17	29790	SCREW, HHC 0.50-13 X 4.50SS MC	1
18	29299	WASHER, LOCK 0.25 STAR SS	1
19	29767	WASHER, LOCK 0.50 STAR SS	2
20	18177	BOOT, RUBBER 1/0 & 2/0	1
21	31995	ADAPTER, 8FP-8MJ	3
22	28146	SCREW, HHC 0.37-16 X 5.50 GR8	2
23	30473	WASHER, LOCK 0.37 GR5 PLATED	2
24	29762	NUT, HEX NYLOC 10-24 FLANGE SS	1
25	22238	ADAPTER, NIPPLE 4.50" LG #8	1
26	32112	ADAPTER, NIPPLE 5.688" LG #8	1
27	31996	ADAPTER, NIPPLE 2.50" LG #8	1
28	32468	ADAPTER, 8FP-10MJ	1
29	32321	ADAPTER, NIPPLE 4.00" LG #8	1
30	29800	NUT, HEX 10-24 PTFE	1

**ITEMS LISTED FOR REFERENCE USE ONLY
NOT INCLUDED IN BILL OF MATERIALS**

29765-CONNECTOR, DTCH 2P PLUG 12GA
19918-CONTACT, DEUTSCH 12 GA FEMALE
15776-WIRE, ELECTRIC 10GA BLK
26082-WIRE, ELECTRIC 10GA RED

UNLESS SPECIFIED
MACHINED PART
MINIMUM 250 RMS
ALL WELDS TO BE
MINIMUM 1/4"
DIM. TOLERANCES
.XX ± .005
.XX ± .030
.X ± .100
FRAC. ± 1/16
XX° ± .5°

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INC. IS PROHIBITED.

THIRD ANGLE
PROJECTION
CHECKED JE 07/20/2022
ENG APPR. AT 07/20/2022

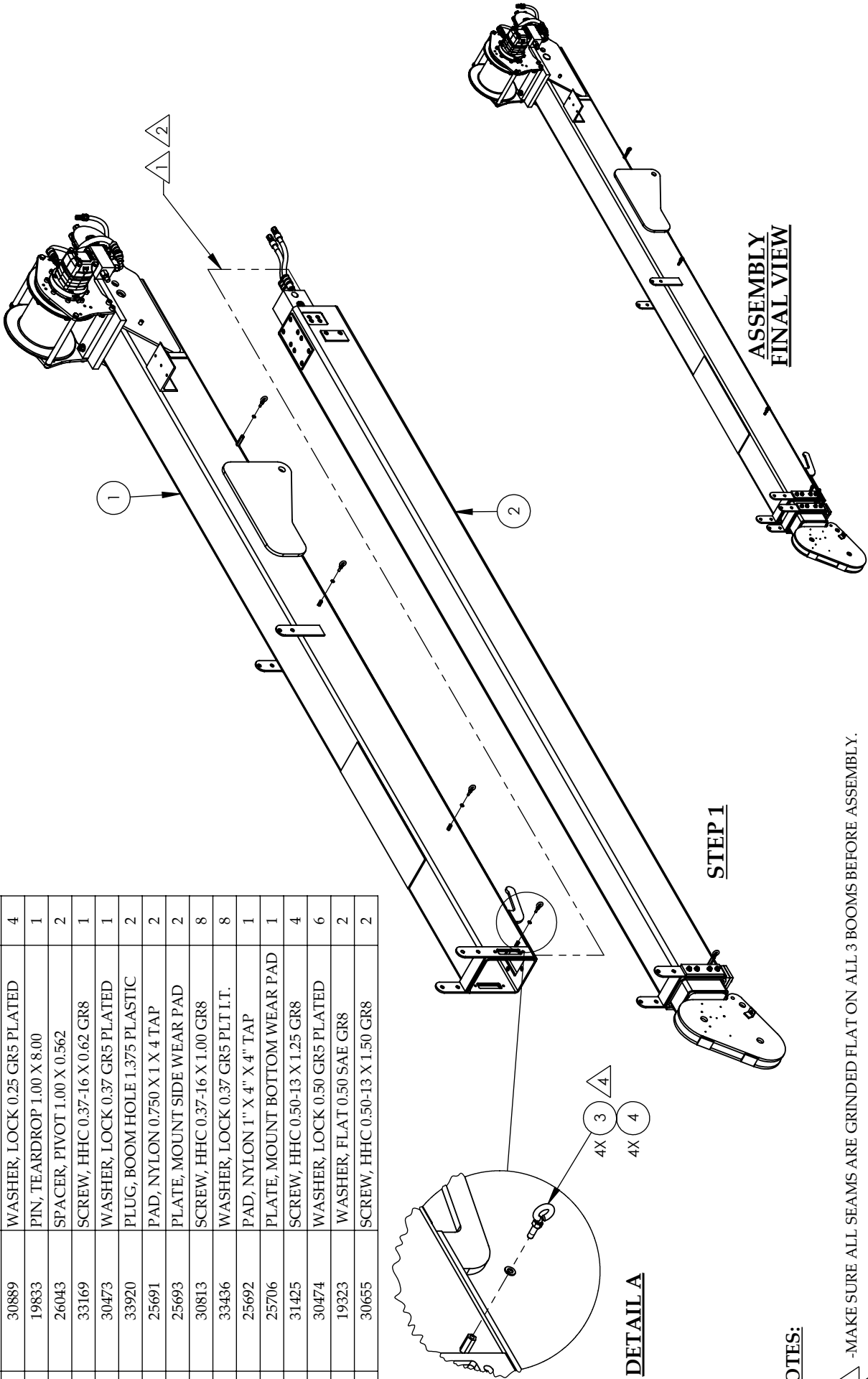
LIFTMOORE INC.

SWIVEL, HYD/ELEC ASSY 8045

HOT/GROUND SUPPLY

DRAWN	AT	07/20/2022	DWG. NO.	REV
MTL:		SHEET 1 - 2		D
WEIGHT: Lbs		29801		

ITEM	PART NUMBER	DESCRIPTION	QTY
1	29233	BOOM, OUTER ASSY 4075DXP-30	1
2	27575	BOOM, INNER ASSY 4064XP-30	1
3	33367	SCREW, EYE 0.25-20 W/ NUT	4
4	30889	WASHER, LOCK 0.25 GR5 PLATED	4
5	19833	PIN, TEARDROP 1.00 X 8.00	1
6	26043	SPACER, PIVOT 1.00 X 0.562	2
7	33169	SCREW, HHC 0.37-16 X 0.62 GR8	1
8	30473	WASHER, LOCK 0.37 GR5 PLATED	1
9	33920	PLUG, BOOM HOLE 1.375 PLASTIC	2
10	25691	PAD, NYLON 0.750 X 1 X 4 TAP	2
11	25693	PLATE, MOUNT SIDE WEAR PAD	2
12	30813	SCREW, HHC 0.37-16 X 1.00 GR8	8
13	33436	WASHER, LOCK 0.37 GR5 PLT I.T.	8
14	25692	PAD, NYLON 1" X 4" X 4" TAP	1
15	25706	PLATE, MOUNT BOTTOM WEAR PAD	1
16	31425	SCREW, HHC 0.50-13 X 1.25 GR8	4
17	30474	WASHER, LOCK 0.50 GR5 PLATED	6
18	19323	WASHER, FLAT 0.50 SAE GR8	2
19	30655	SCREW, HHC 0.50-13 X 1.50 GR8	2



NOTES:

- 1 -MAKE SURE ALL SEAMS ARE GRINDED FLAT ON ALL 3 BOOMS BEFORE ASSEMBLY.
- 2 -MAKE SURE 2ND INNER IS GRINDED DOWN 1/16" INSIDE BOOM 3' BACK IF BOOM IS CONCAVE BEFORE ASSEMBLY.
- 3 -APPLY VIBRA-TITE VC-3 TO THREADS.
- 4 -HAND TIGHT.
- 5 -TORQUE TO 10 FT-LBS.
- 6 -TORQUE TO 30 FT-LBS.

UNLESS SPECIFIED		THIRD ANGLE PROJECTION		DRAWN		DATE		REV	
MACHINED PART		THIRD ANGLE PROJECTION		NA		04/01/2021		A	
MINIMUM 250 RMS		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
ALL WELDS TO BE		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
MINIMUM 1/4"		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
DIM. TOLERANCES		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
XXX ± .005		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
.XX ± .030		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
X ± .100		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
FRAC. ± 1/16		THIRD ANGLE PROJECTION		NA		04/01/2021		B	
XX° ± .5°		THIRD ANGLE PROJECTION		NA		04/01/2021		B	

LIFTMOORE INC.

BOOM ASSEMBLY 4075DXP-30

DYNAMIC OIL WINCH

DWG. NO.

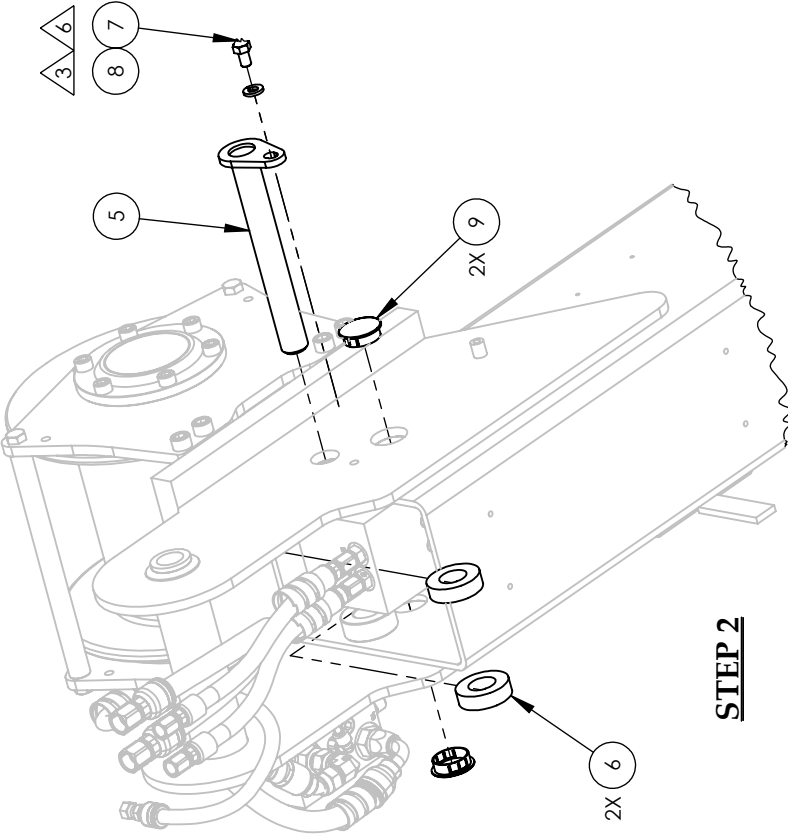
29235

WEIGHT: 1481.486 Lbs

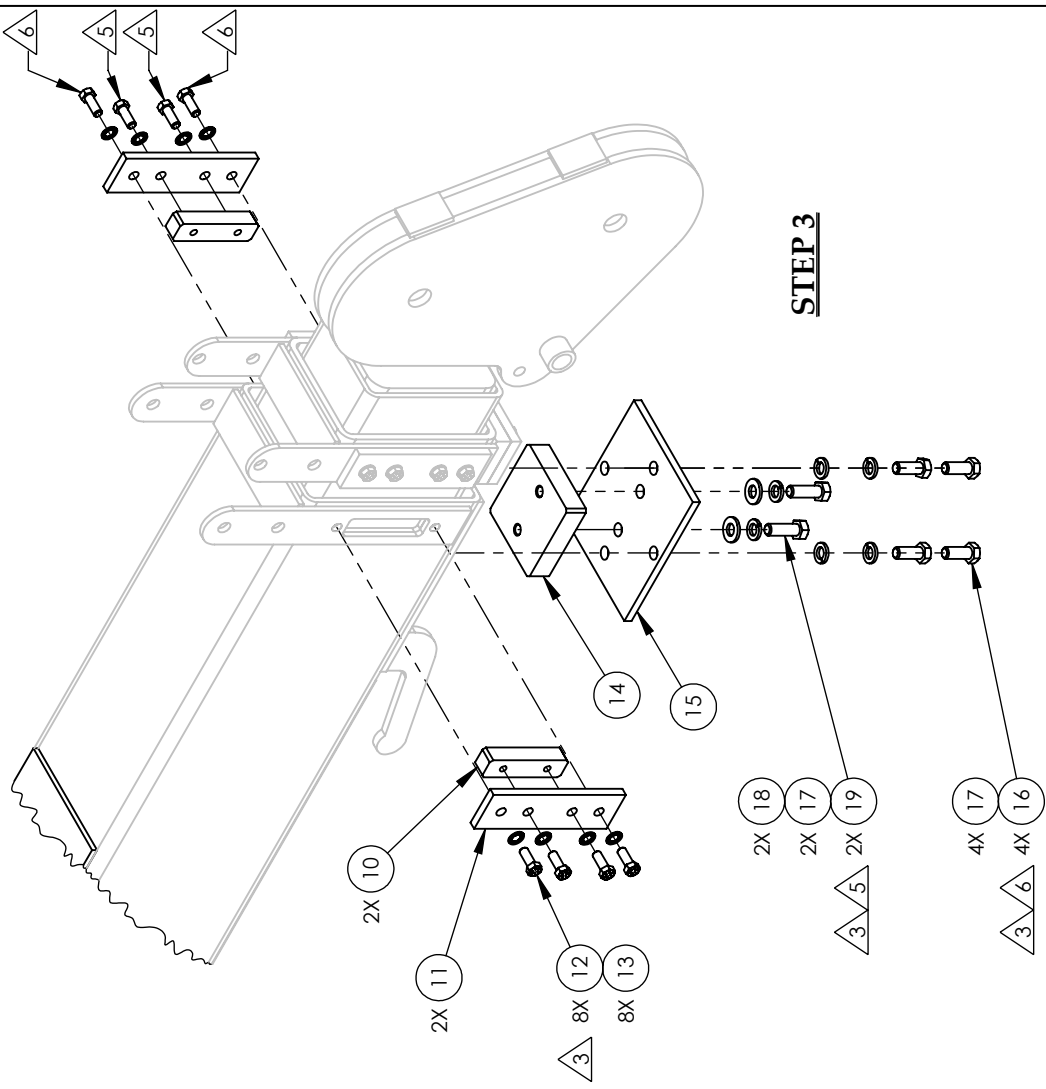
SHEET 1 - 2

REV


B



STEP 2

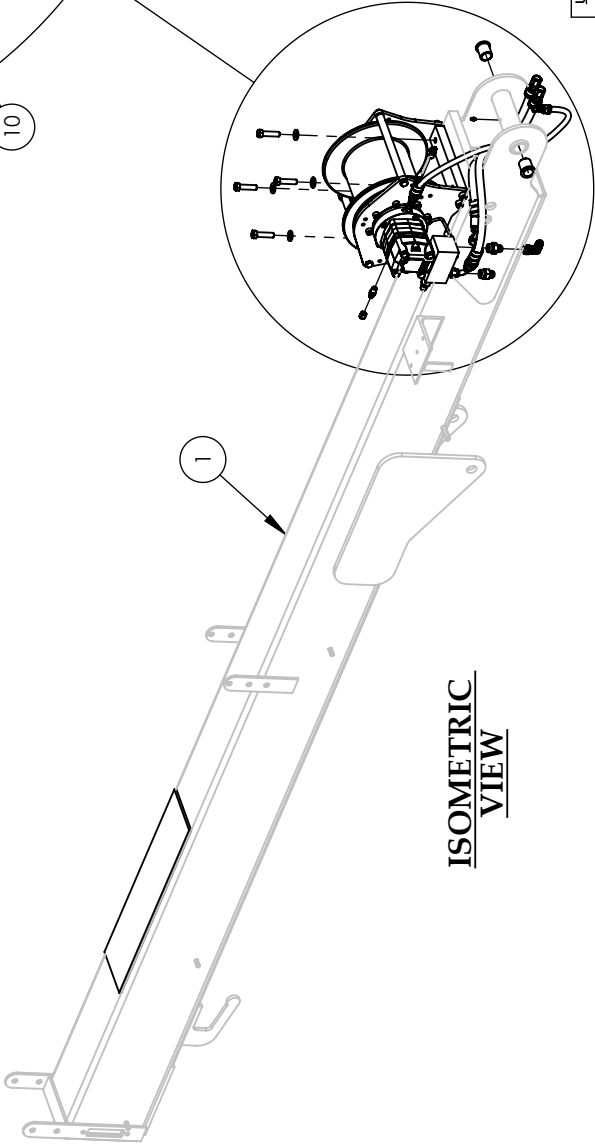


STEP 3

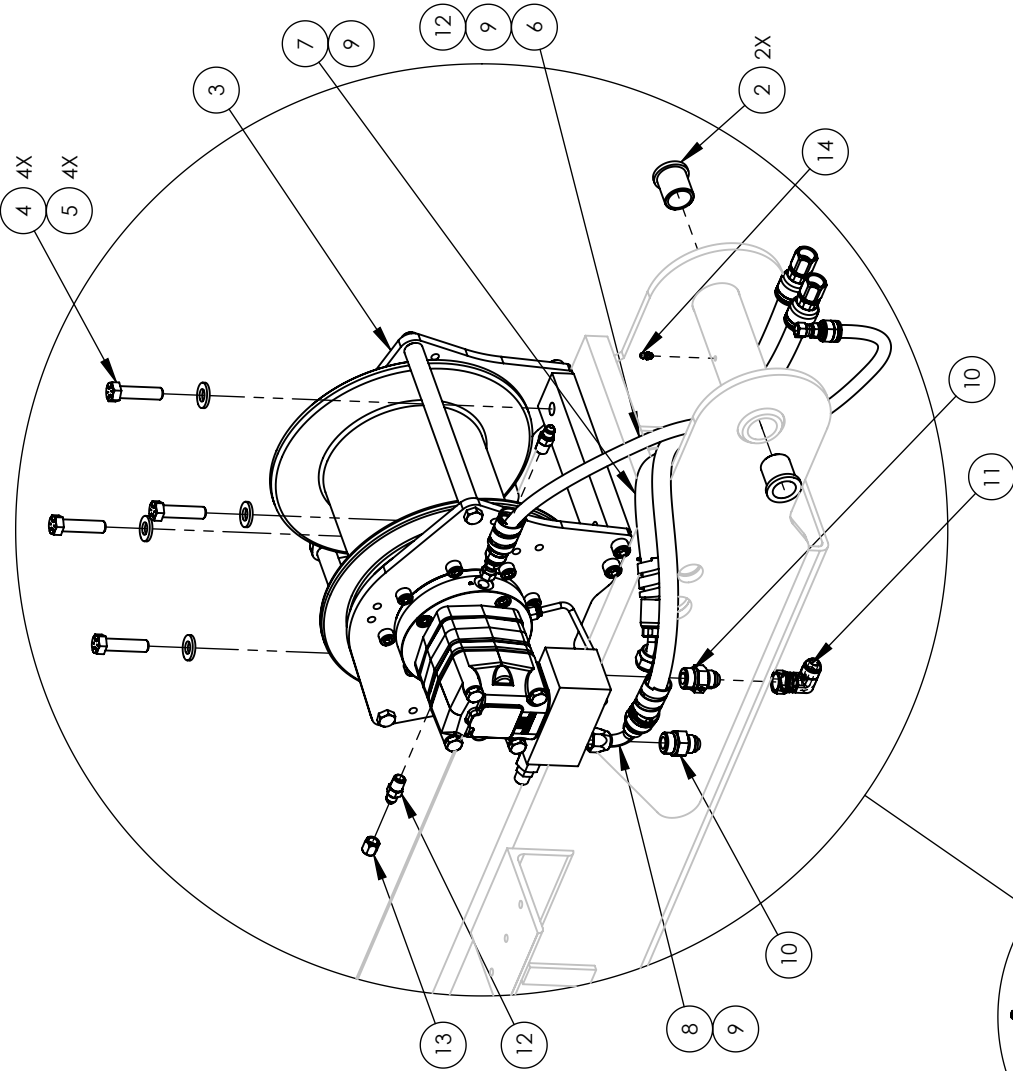
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	THIRD ANGLE PROJECTION								
									
					DIM. TOLERANCES				
					MACHINED PART				
					MINIMUM .250 RMS				
					ALL WELDS TO BE				
					MINIMUM 1/4"				
					XXX ± .005				
.XX ± .030									
.X ± .100									
FRAC. ± 1/16									
XX° ± .5°									
CHECKED	JE	04/01/2021							
ENG APPR:	DP	04/01/2021							

LIFTMOORE INC.			
BOOM ASSEMBLY 4075DXP-30			
DYNAMIC OIL WINCH			
DRAWN	NA	DATE	04/01/2021
DATE	04/01/2021	DWG. NO.	29235
REV	B	REV	B
SHEET 2 - 2			
WEIGHT: 1481.486 Lbs			

ITEM	PART NUMBER	DESCRIPTION	QTY
1	29232	BOOM, OUTER 4075DX-30 WELD	1
2	32485	BUSHING, BOOM PIVOT 3200/4000	2
3	29086	WINCH, HYD. DYNAMIC OIL A44	1
4	30462	SCREW, HHC 0.50-13 X 2.00 GR8	4
5	19323	WASHER, FLAT 0.50 SAE GR8	4
6	32968	HOSE, HYD #4 37.50"	1
7	32051	HOSE, HYD #8 28.00" 45°-ST	1
8	20034	HOSE, HYD #8 36.00" 90°-ST	1
9	31408	WRAP, 3/4" BLACK SPIRAL CUT (LENGTHS: 27", 32", 38")	3
10	31913	ADAPTER, 8MJ-10MO	2
11	32547	ADAPTER, 90° 8FJX-8MJ	1
12	29301	ADAPTER, 4MJ-1/4BSPP	2
13	23512	ADAPTER, CAPNUT #4	1
14	30936	ZERK, 0.25-28 STRAIGHT	1



ISOMETRIC
VIEW



DETAIL A

NOTE
SEAM MUST BE GRIEDED FLAT INSIDE BOOM ALL THE WAY THROUGH

UNLESS SPECIFIED

MACHINED PART

MINIMUM 250 RMS

ALL WELDS TO BE

MINIMUM 1/4"

DIM. TOLERANCES

XXX ± .005

XX ± .030

X ± .010

FRAC. ± 1/16

XX° ± .5°

THIRD ANGLE

PROJECTION

CHECKED JE

ENG APPR DF

04/01/2021

04/01/2021

PROPRIETARY & CONFIDENTIAL

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DYNAMIC WINCH A44

BOOM, OUTER ASSY 4075DXP-30

DRAWN NA

MTRL:

04/01/2021

04/01/2021

REV

29233

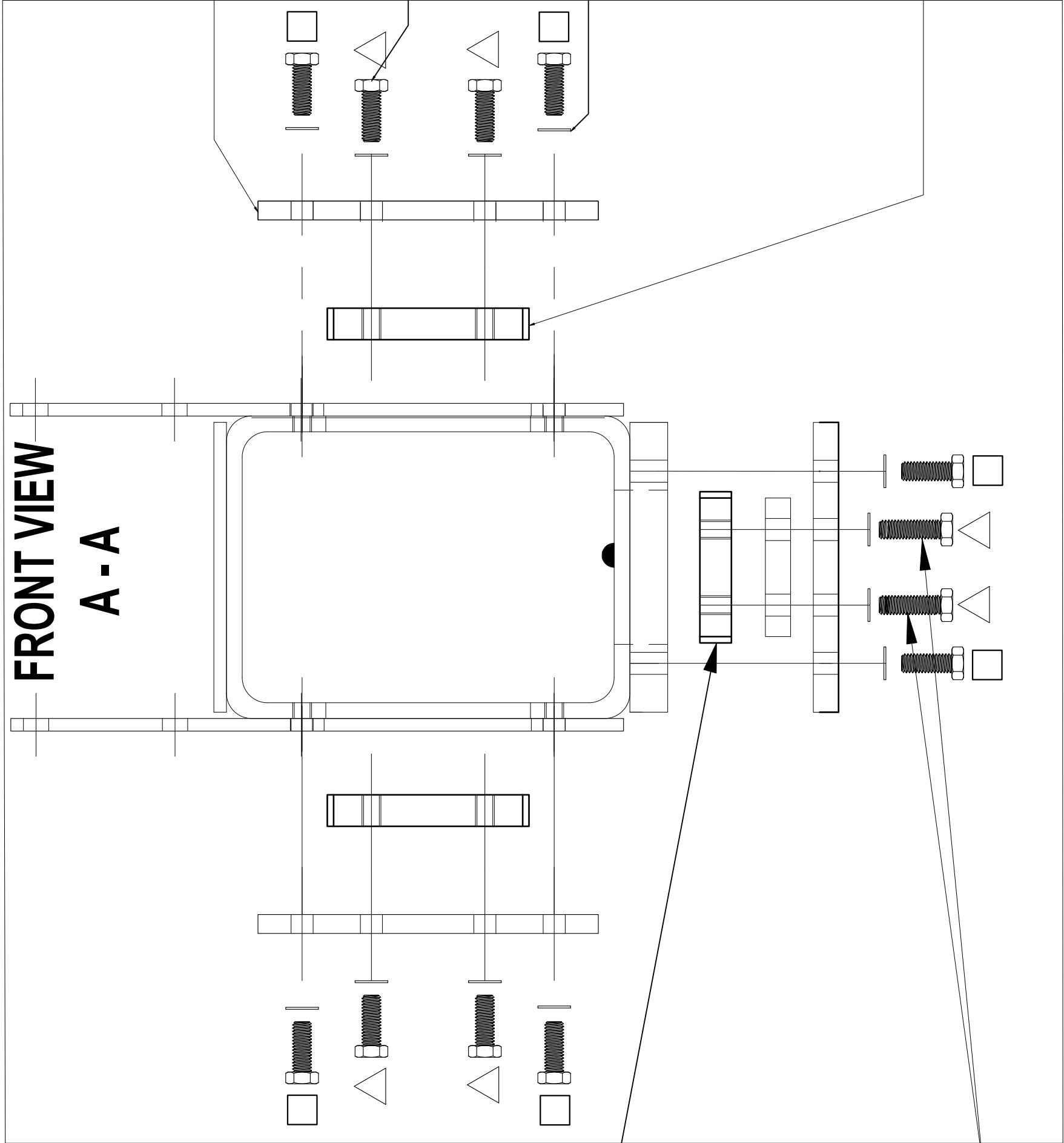
B

NOTE: ADD VIBRA TITE TO ALL PADS

TORQUE VALUES

△ = 10 FT-LBS

□ = 30 FT-LBS



- P/N 25691
PAD, NYLON 0.625 X 1.00 X 4.00 TAP
2 PLCS

P/N 25693
PLATE, MOUNT SIDE WEAR PAD
2 PLCS

P/N 30813
SCREW, HHC 0.37-16 X 1.00 GR8
8 PLCS

P/N 33436
WASHER, LOCK 0.37 GR5 PLT I.T.
8 PLCS
- P/N 25690
PAD, NYLON 0.75 X 1.00 X 3.00 TAP

P/N 29619
PLATE, SPACER 0.50" BOOM PC

P/N 29616
PLATE, MOUNT BOTTOM WEAR PAD

6X P/N 33436
WASHER, LOCK 0.37 GR5 PLT I.T.

4X P/N 30812
SCREW, HHC 0.37-16 X 1.25 GR8

2X P/N 30861
SCREW, HHC 0.37-16 X 1.50 GR8

- P/N 33367
SCREW, EYE 0.25-20 W/ NUT

P/N 30889
WASHER, LOCK 0.25 GR5 PLATED

FRONT
VIEW

NOTE: MAKE SURE ALL
SEAMS ARE GRIEDED
BEFORE ASSEMBLY

- P/N 23862
SCREW, SOC HD 0.37-16 X 1.25
8 PLCS

ADD VIBRA TITE TO SCREWS

- P/N 33955
PAD, NYLON 0.26 X 4 X 7.5 CSK

P/N 33614
SCREW, SOC FH 0.25-20 X 0.50
8 PLCS

- P/N 27573
BOOM, INNER 1ST 4064X-30 WELD

REPLACEMENT PARTS FOR CYLINDER	PART NUMBER
CHECK VALVE	31591
COUNTERBALANCE VALVE	30851
HOSE, HYD #6 21.00"	32961
ADAPTER, 6MJ-6MO	31063
CYLINDER, 2.75 X 202.0 - 2CYLS	25544

- COUNTER BALANCE VALVE

ADAPTER, 6MJ-6MO
2 PLCS

HOSE, HYD #6 21.00"
2 PLCS

CHECK P.O. VALVE

- P/N 34032
PAD, NYLON 0.20 X 4 X 3.62 CSK
2 PLCS

P/N 23347
PLATE, SPACER EXT CYL 4064
2 PLCS

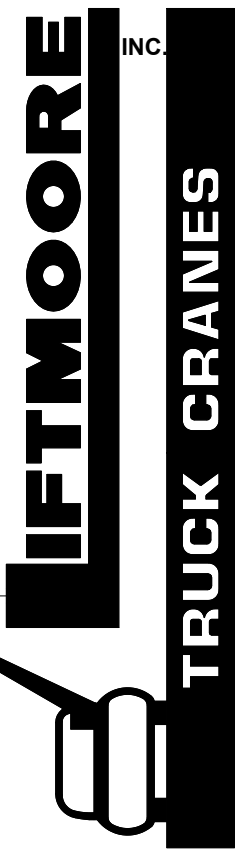
- P/N 33614
SCREW, SOC FH 0.25-20 X 0.50
8 PLCS

- P/N 25561
CYLINDER ASSY 4064X-30 EXT

- P/N 27257
BOOM, INNER 2ND 4064X-30 WELD

- P/N 21196
CS, 1.00 DIA X 4.62

P/N 30692
RING, SNAP 1" INTERNAL CS
2 PLCS



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DRWN BY: JEF

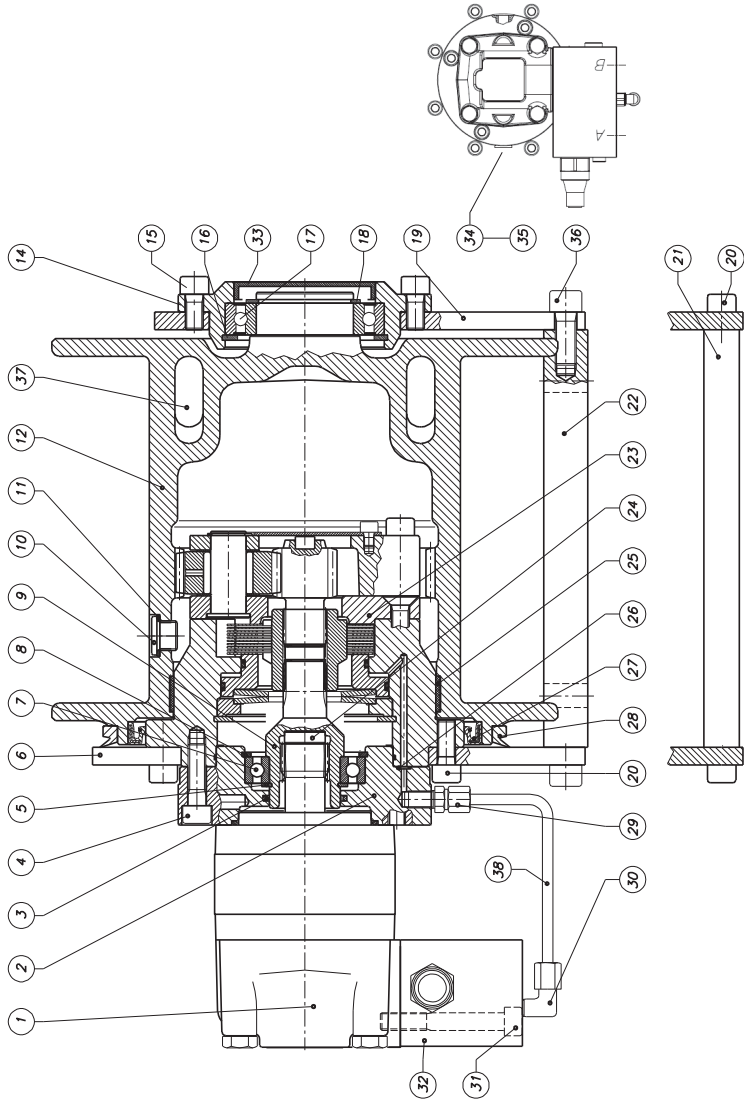
DATE: 10/12/15

DRAWING NO.

BOOM, INNER ASSY 4064XP-30
BAIL ATB , NEW WEAR PAD, WELDED CYL. SPACERS

27575-G

Pos	Code	Qty	Description
1	425026600	1	MOTOR OMSU 200 35.151F0582
2	025110129	1	MOTOR FLANGE WINCH A30-44
3	415061900	1	SEAL ROTO-GLYD RING S 56131-0400-
4	410001600	4	HEX SOCKET HEAD CAP SCREW M10X35 8.8 UNI 5931
5	421000600	1	SEGER FOR SHAFT Ø40
6	023410256	1	MOTOR SIDE SUPPORT A41
7	400023000	1	BALL BEARING 6008 TYPE B
8	421101200	1	HOLE SEEGER Ø68
9	026310115	1	MOTOR COUPLING WINCH A30-44
10	419000700	2	HEX SOCKET HEAD CAP PLUG 3/8" GAS DIN 908
11	423000600	2	3/8" COPPER WASHER UNI 6953
12	023010123	1	CAST IRON DRUM A44
14	023510105	1	BEARING SUPPORT RING A41
15	410022600	6	HEX SOCKET HEAD CAP SCREW M10X20 12.9 UNI5931
16	421101700	1	HOLE SEEGER Ø90
17	400020600	1	BALL BEARING 6011 2RS (ZKL)
18	421000900	1	SHAFT SEEGER Ø55
19	023410257	1	ROPE SIDE SUPPORT A44
20	410407000	12	HEX SOCKET HEAD CAP SCREW M10X25 12.9 UNI 5931
21	024510156	2	CROSS MEMBER A41
22	024510155	2	FIXING PLATE A41
23	029810118	1	BRAKE GROUP NP18 (WITH REDUCTION)
24	02741054	1	SHIMMING PAD S19/2
25	294201900	1	GUIDE RING ATS-F 148X153X19.5 RFG
26	406001100	1	O-RING 2-008
27	415012800	1	OIL SEAL 180X200X13 BASL
28	406060900	1	V-RING NBR VA 199
29	440001000	1	STRAIGHT CONNECTOR 1/8"G CONICAL Ø6 PIPE
30	440000100	1	CONNECTOR 90° 1/8"BSP TAPERED Ø6 PIPE
31	410002000	2	HEX SOCKET HEAD CAP SCREW M10X80 8.8 UNI 5931
32	438040300	1	VALVE OWC-SE-100-78 7/8"-14UNF SAE10
33	415068800	1	CLOSING CAP RCA 80X10
34	419000600	1	HEX SOCKET HEAD CAP PLUG 1/4" GAS DIN 908
35	423000300	1	SOFT COPPER WASHER 1/4" 13X19X1.5
36	410402100	8	HEX SOCKET HEAD CAP SCREW M12X30 12.9 UNI 5931
37	02410222	1	THIMBLE FOR ROPE Ø6 WINCH P9



410002000

VALVE OWC-SE-100-78 7/8"-14UNF SAE10

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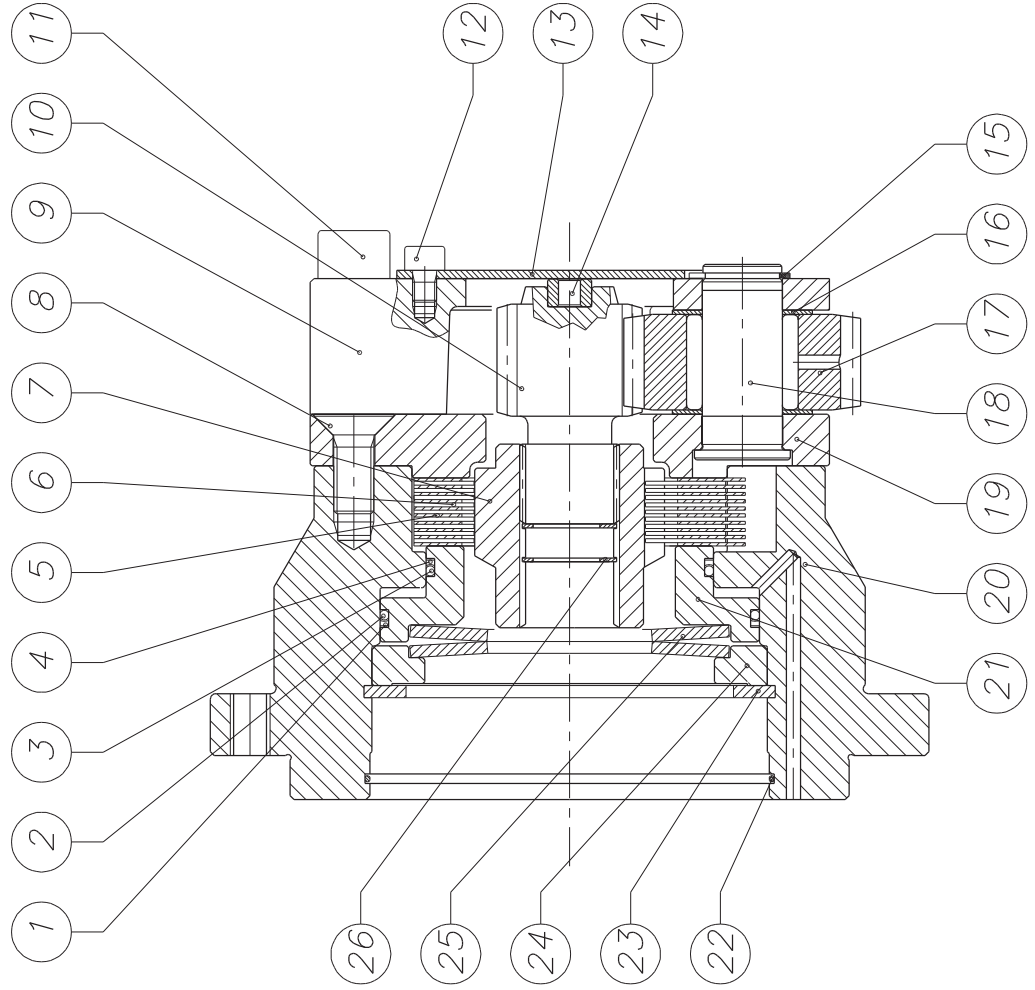
DRWN BY: JE
DATE: 6/8/20

WINCH, HYD. DINAMIC OIL A44
CCW, 4400 lbs CAPACITY

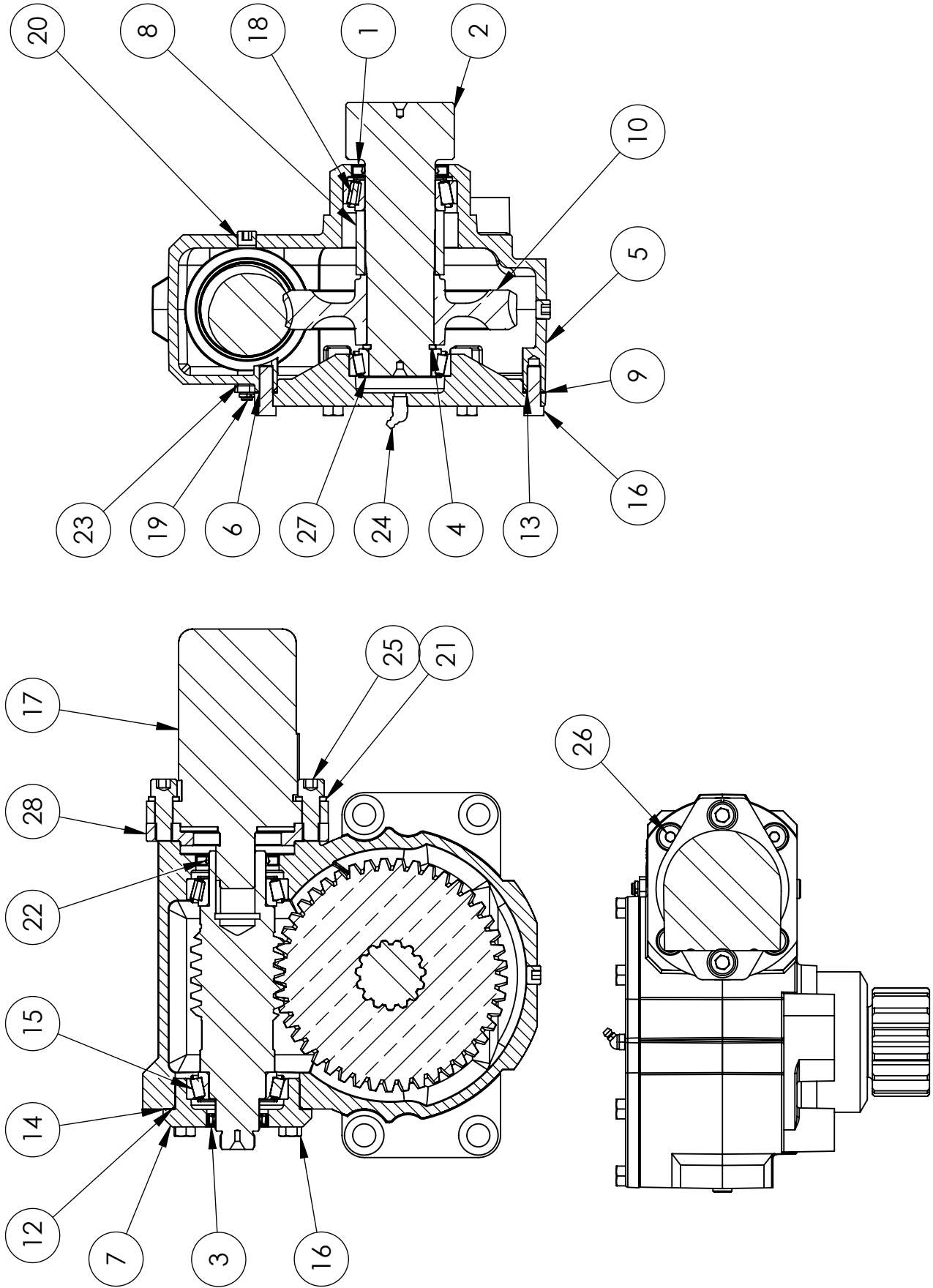
DRAWING NO.

29086-0

Pos	Code	Qty	Description
1	406016600	1	O-RING 2-153 N 674-70 (PARKER)
2	415066900	1	ANTIEXTRUSION PARBAK 8-153
3	406016500	1	O-RING 2-146 N 741-75 (PARKER)
4	415066800	1	ANTIEXTRUSION RING PARBAK 8-146
5	02941061	9	INTERNAL STEEL DISK P6-P9-P15
6	029410105	10	BRONZE DISK
7	02241020	1	INPUT SHAFT
8	410101200	3	HEX SOCKET COUNTERSUNK HEAD CAP SCREW M10X25 10.9
9	222101100	1	PLANETARY CARRIER A44
10	261111200	1	SOLAR SHAFT NP18-A44
11	410405300	6	HEX SOCKET HEAD CAP SCREW M12X60 12.9 UNI 5931
12	410015900	3	HEX SOCKET HEAD CAP SCREW TCEI M6X8 8.8 UNI 5931
13	240100700	1	CONTAINMENT PLATE NP10-NP18
14	2030101700	1	SUN GEAR PAD NP18
15	421000100	3	SHAFT SEEGER Ø20
16	402002700	6	FIFTH WHEEL AS 20X35X0,8
17	02981910	3	NEEDED PLANETARY GEAR GROUP RE210 1:5,77
18	02581038	3	PLANETARY CARRIER PIN RE200 YEAR VERS.2003
19	237129500	1	PLANETARY CARRIER A44
20	233102500	1	FLANGE NP18-A44
21	243125200	1	BRAKE BODY A44
22	406000800	1	O-RING 2-045
23	421101900	1	HOLE SEEGER Ø100
24	273132400	1	SPRING CAP NP18
25	416201200	2	CUP SPRING 80X41X3 DIN2093
26	421103200	2	CLIP RING DIA 22MM

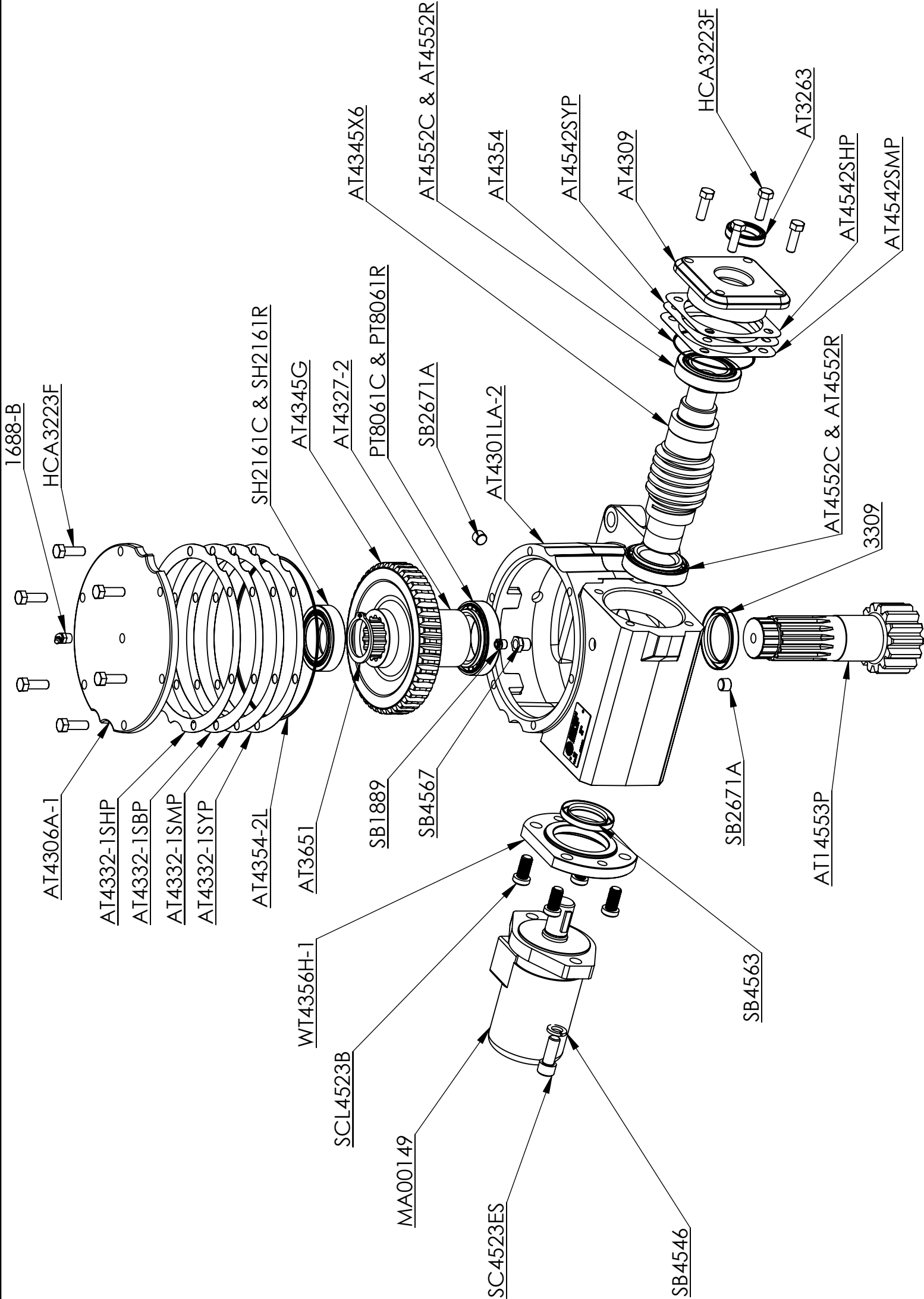




ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	3309	SEAL, OIL #19831	1
2	AT14553P	OUTPUT PINION	1
3	AT3263	SEAL, OIL #12355PTC	1
4	AT3651	SNAP RING, INT SHR175STPA	1
5	AT4301LA-2	HOUSING	1
6	AT4306A-1	CAP, GEAR	1
7	AT4309	CAP, WORM	1
8	AT4327-2	SPACER, GEAR	1
9	AT4332-1SBP	SHIM, GEAR CAP .010 BROWN	1
9	AT4332-1SHP	SHIM, GEAR CAP .0075 NATURAL	1
9	AT4332-1SMP	SHIM, GEAR CAP .005 BLUE	1
9	AT4332-1SYP	SHIM, GEAR CAP .003 GREEN	1
10	AT4345G	GEAR, WORM 45:1	1
11	AT4345X6	WORM 45:1	1
12	AT4354	O-RING, PARKER 2-043	1
13	AT4354-2	O-RING, PARKER 2-165	1
14	AT4542SHP	SHIM, WORM .0075 NATURAL	1
14	AT4542SMP	SHIM, WORM .005 BLUE	1
14	AT4542SYP	SHIM, WORM .003 GREEN	1
15	AT4552C & AT4552R	BRG, ROLLER CUP NP761714 & CONE NP535811	2
16	HCA3223F	3/8-16 X 1 1/8" HHCS GRD 5	10
17	MA00149	MOTOR, HYD 4.7 CIPR	1
18	PT8061C & PT8061R	BRG, ROLLER CUP-LM104911 & CONE-LM104949	1
19	SB1889	VENT, PRESSURE 1-5 PSIG	1
20	SB2671A	1/4-18 NPT HEX SOC PLUG	2
21	SB4546	1/2" SPLIT LOCKWASHER	2
22	SB4563	OIL SEAL C/R 16084	1
23	SB4567	BUSHING, RED 1/8 X 1/4	1
24	SB4599A	GREASE FITTING 1/8 NPT 45°	1
25	SC4523ES	1/2-13 X 1 1/4" SHCS SS	2
26	SCL4523B	1/2-13 X 1" LSHCS	4
27	SH2161C & SH2161R	BRG, ROLLER CUP LM102910 & CONE LM102949	1
28	WT4356H-1	MOTOR ADAPTER	1



UNLESS OTHERWISE SPECIFIED, ALL DETAILS MUST BE FREE OF BURRS AND SHARP EDGES, WHICH MAY BE DETRIMENTAL TO SATISFACTORY ASSEMBLY, SAFE HANDLING, OR FUNCTION.	PART NO. AT19549S	DRAWN BY:	DRAWN BY DATE: 10-29-19
	MATERIAL NO.	CHKD. BY:	CHKD. BY DATE:
	MATERIAL TYPE	UNLESS OTHERWISE SPECIFIED DIMS ARE IN INCHES TOL ON ANGLE +.5° 1 PL +.050 2 PL +.010 3 PL +.005 SURFACE FINISH TO BE 125 µin INTERPRET DIM AND TOL PER ASME Y14.5M - 1994	
	SPEC.	THIRD ANGLE PROJECTION	
HEAT TREAT		SIZE B	CAGE CODE 29116
REV B		SCALE 1:4	WEIGHT: 85.31 LBS



LIFTMOORE CRANES			
PARTS PAGE			
REF LIFTMOORE #29116			
SIZE B	CAGE CODE 29116	DWG NO.	REV B
SCALE 1:4	WEIGHT: 85.31 LBS	Sheet1 of 2	



UNLESS OTHERWISE SPECIFIED, ALL DETAILS MUST BE FREE OF BURRS AND SHARP EDGES, WHICH MAY BE DETRIMENTAL TO SATISFACTORY ASSEMBLY, SAFE HANDLING, OR FUNCTION.	PART NO. AT19549S	DRAWN BY:	DRAWN BY DATE: 10-29-19		LIFTMOORE CRANES	
	MATERIAL NO.	CHKD. BY:	CHKD. BY DATE:			
	MATERIAL TYPE	UNLESS OTHERWISE SPECIFIED DIMS ARE IN INCHES TOL ON ANGLE +.5° 1 PL ±.050 2 PL ±.010 3 PL ±.005 SURFACE FINISH TO BE 125 µin INTERPRET DIM AND TOL PER ASME Y14.5M - 1994				
	SPEC.					
	HEAT TREAT	THIRD ANGLE PROJECTION 				
		SIZE B	CAGE CODE	DWG NO. 29116	REV B	
UNIT REF LIFTMOORE #29116				SCALE 1:5	WEIGHT: 85.31 LBS	Sheet 2 of 2

PRE-BUILD

REPORT ERRORS OR CHANGES TO
ENGINEERING IMMEDIATELY

CIRCUIT NUMBER AND DESCRIPTION			
Color	Length	Connectors	Function
RED	23"	P12B.1	P2-R.1 ROT CW
RED/BLK	18"	P12B.2	P2-RA.1 ROT CCW
GRN	23"	P12B.5	P2-L.1 BOOM UP
ORN	18"	P12B.6	P2-LA.1 BOOM DWN
GRN/BLK	19"	P12B.3	P2-X.1 EXT OUT
ORN/BLK	25"	P12B.4	P2-XA.1 EXT IN
BLU	27"	P12B.7	P2-HA.1 HOIST UP
BLK	22"	P12B.8	P2-H.1 HOIST DWN
WHT/BLU	15"	P12B.10	P2-RES.1 E-STOP 
WHT	15"	P12B.12	P2-U.2 UP LIMIT SWITCH
RED	19"	P12D.8	P2-U.1 UP LIMIT SW. 12V
WHT/BLK	26"	P12A.10	P2-P.1 PROP
WHT	13"	P12A.2	P4-CH.1 CAN HI MAIN
GRN	13"	P12A.3	P4-CL.1 CAN LOW MAIN
YEL/BLK	13"	P12A.7	P2-ATB.2 ATB
RED	20"	P12A.12	P12D.2 REC. PWR 12V
RED	17"	P12D.3	P2-ATB.1 PWR, ATB 12V
RED	16"	P12D.4	P4-J.1 PWR, CAN 12V
GRN	9"	P4-CL.2	P4-J.3 CAN LOW
WHT	9"	P4-CH.2	P4-J.4 CAN HI
YEL	N/A	P12D.1	MAIN PWR FUSE HOLDER
BLK	16"	P12A.11	BLU/FEM HORN 12V
MAIN GROUND TERMINAL			
BRN	10"	P12C.1	TR-1 MAIN GROUND
BRN	17"	P12C.2	P12A.1 RECEIVER GROUND
BRN	19"	P12C.3	P2-RA.2 ROT CCW VALVE GND
BRN	24"	P12C.4	P2-R.2 ROT CW VALVE GND
BRN	24"	P12C.5	P2-L.2 ELEV UP VALVE GND
BRN	19"	P12C.6	P2-LA.2 ELEV DWN VALVE GND
BRN	20"	P12C.7	P2-X.2 EXT OUT VALVE GND
BRN	26"	P12C.8	P2-XA.2 EXT IN VALVE GND
BRN	23"	P12C.9	P2-H.2 WINCH DN VALVE GND
BRN	28"	P12C.10	P2-HA.2 WINCH UP VALVE GND
BRN	27"	P12C.11	P2-P2 PROP. VALVE GND
BRN	13"	P12C.12	P4-J.2 CAN GND
P6-GND GROUND TERMINAL			
BRN	10"	P6-GND.1	TR-1 MAIN GROUND
BRN	33"	P6-GND.5	BF-1 HORN GND
BRN	16"	P6-GND.6	P2-RES.2 RESISTOR GND 

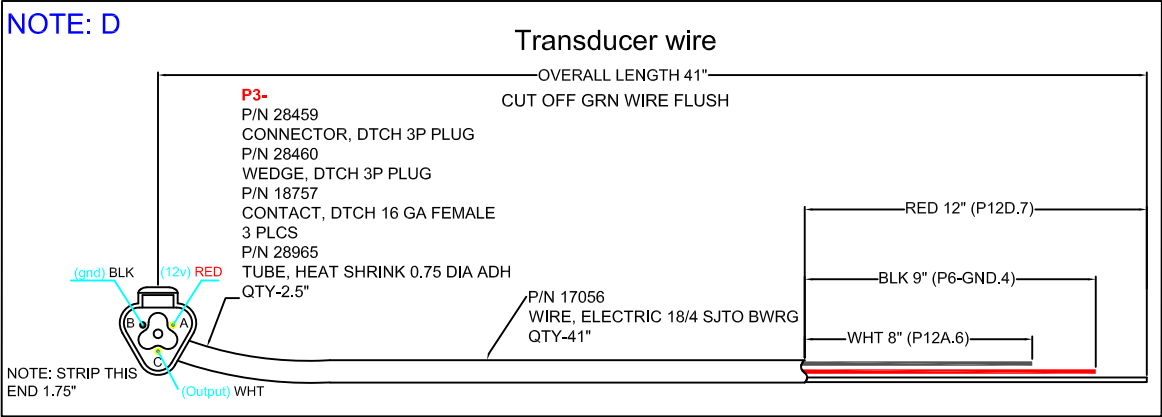
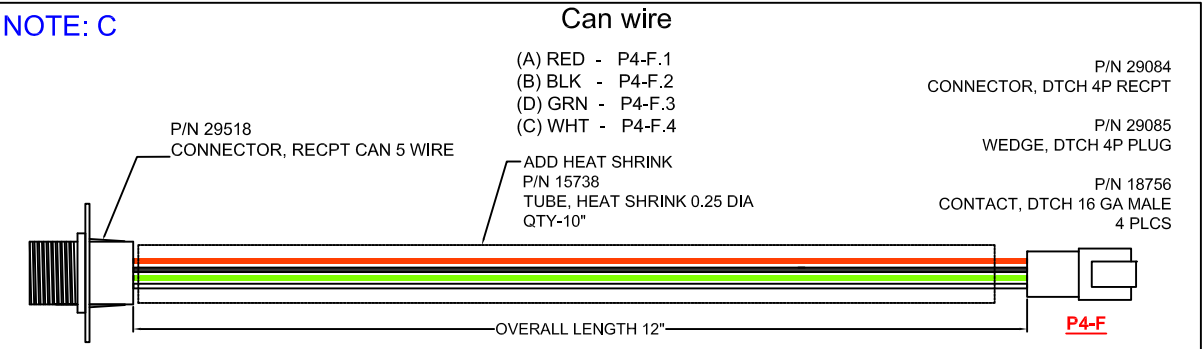
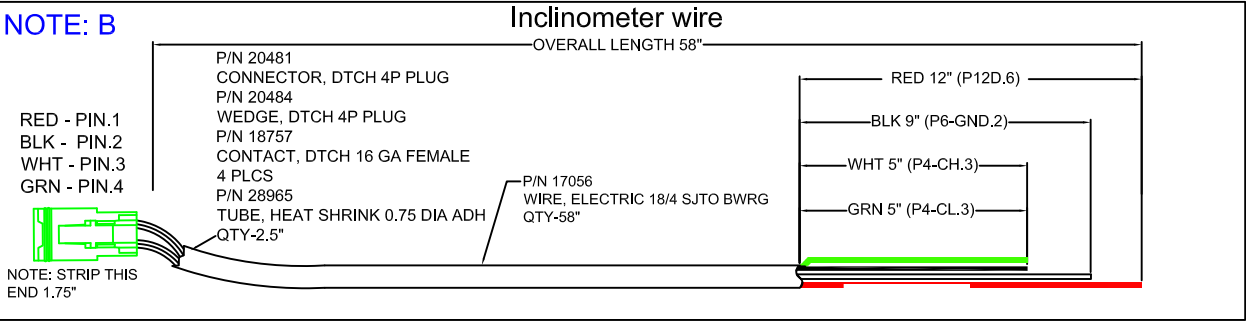
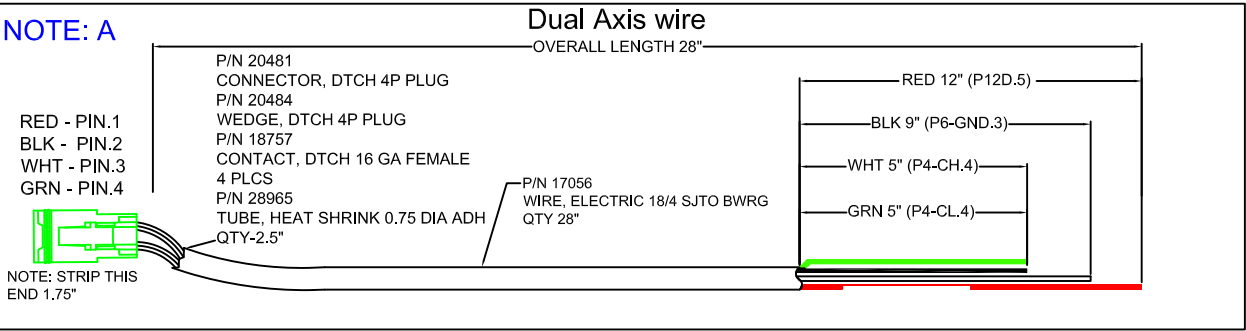
					TYPICAL TOLERANCES		LIFTMOORE, INC Houston TX (713)-688-5533	
ADDED RESISTOR TO ESTOP OUTPUT FOR ERROR CODES					JE	5/25/22	E	EWH, DTCH HYD 8045DXP WP HORN, SAUER DANFOSS VALVES
CHANGED WIRE LENGTH FOR DUAL AXIS & INCLINOMETER					JE	5/11/22	D	
CORRECTED WIRE LENGTH					JE	9/1/21	C	
CORRECTED WIRE LENGTH					JE	7/30/21	B	
DECREASED LENGTH ON TRANSDUCER & INCLINOMETER WIRES					JE	5/10/21	A	DRAWING NO. 29547-E
DESCRIPTION					BY	DATE	REV.	



REPORT ERRORS OR CHANGES TO
ENGINEERING IMMEDIATELY

TYPICAL TOLERANCES		LIFTMOORE, INC. Houston TX (713)-688-5533	
MACHINE	± .005	EWH, DTCH HYD 8045DXP WP HORN, SAUER DANFOSS VALVES	
PLASMA	± 1/32		
WELD	± 1/16		
CAD DRAWING	DRWN BY: JE	DATE: 4/24/21	DRAWING NO. 29547-E
DO NOT SCALE	CHK'D BY:	MATRL:	

DESCRIPTION	BY	DATE	REV.
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DRAWING NO.
29547-E

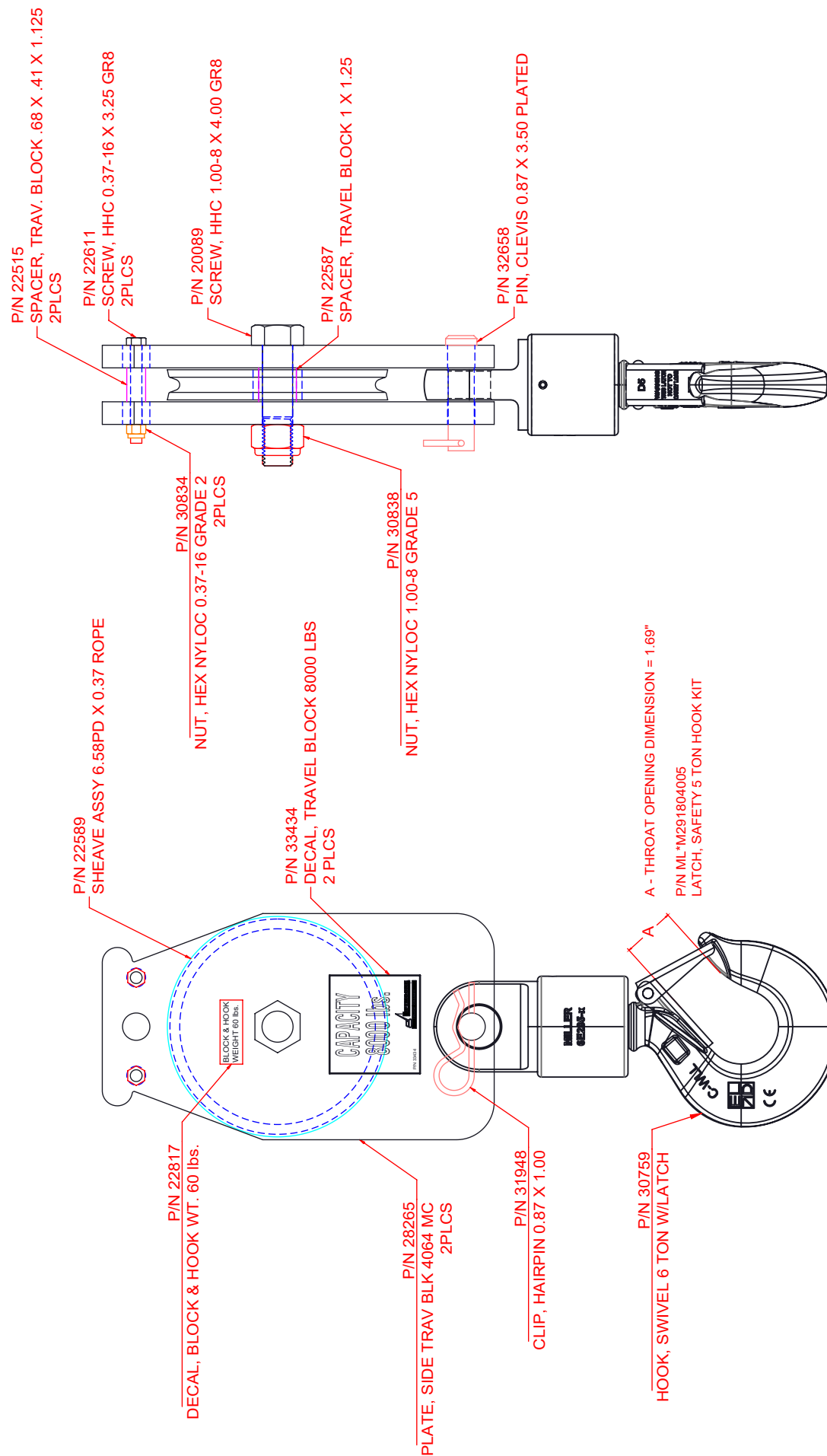
EWB, DTCH HYD 8045DXP WP
INCLINOMETER AND TRANSDUCER

DRWN BY: JE

DATE: 10/30/20

Houston TX
(713)-688-5533
www.liftmoore.com





CAUTION:

NEVER USE A HOOK WHOSE THROAT OPENING HAS BEEN INCREASED, OR WHOSE TIP HAS BEEN BENT MORE THAN 10 DEGREES OUT OF PLANE FROM THE HOOK BODY, OR IS IN ANY WAY DISTORTED OR BENT.

Houston TX
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www.liftmoore.com

DRAWING NO.

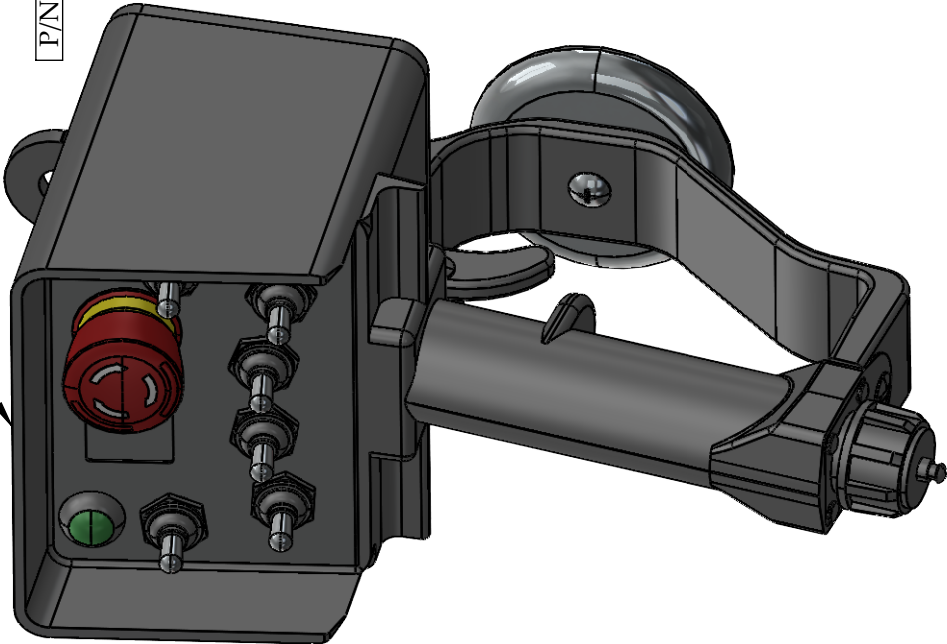
BLOCK, TRAV ASSY 8K lbs/6.5D

6.58PD X 0.37 ROPE; 30759 HOOK

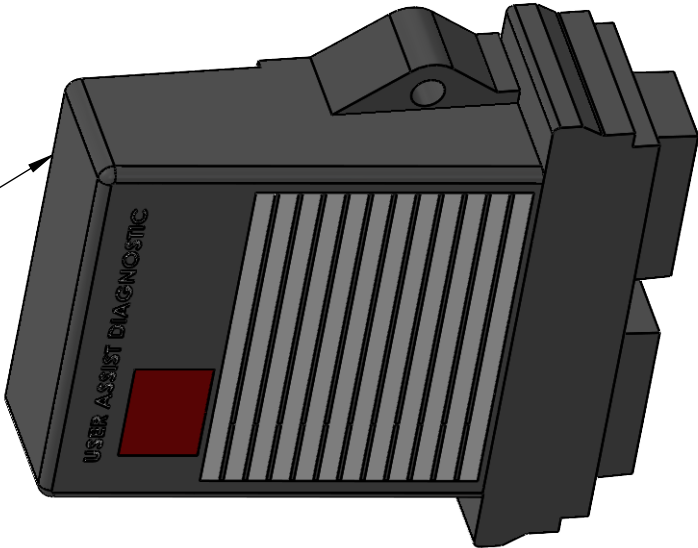
29259-B

TRANSMITTER AND RECEIVER ARE PROGRAMMED TO FORM A MATCHED SET SO THAT A TRANSMITTER ONLY OPERATES ONE CRANE. IF EITHER PART IS REPLACED, THE RECEIVER MUST BE PROGRAMMED TO THE TRANSMITTER USING A TEMPORARY WIRING HARNESS AVAILABLE FROM LIFTMOORE.

P/N 28790 CONTROL, FM TRANS GUIDER



P/N 28792 CONTROL, FM REC VC-129



WIRING CRANE RECEIVER

P1 - DEUTSCH DTM13-12PA, GRAY

PIN	DESCRIPTION
1	GROUND
2	CANH
3	CANL
4	N/C
5	N/C
6	BOOM PRESSURE 4-20mA INPUT
7	ANTI-TWO-BLOCK SWITCH INPUT
8	N/C
9	N/C
10	PROPORTIONAL SPEED CONTROL OUTPUT
11	HORN OUTPUT
12	POWER (9-30V)

P2 - DEUTSCH DTM13-12PB, BLACK

PIN	DESCRIPTION
1	ROTATION CW OUTPUT
2	ROTATION CCW OUTPUT
3	EXTEND OUT OUTPUT
4	EXTEND IN OUTPUT
5	BOOM UP OUTPUT
6	BOOM DOWN OUTPUT
7	HOIST UP OUTPUT
8	HOIST DOWN OUTPUT
9	N/C
10	E-STOP OUTPUT
11	N/C
12	BOOM UP LIMIT SWITCH INPUT

NOT SHOWN ITEMS:

- P/N 28796 - WIRE, CTRL FM TETHER 25' CAN
- P/N 20186 - CHARGER, FM TRANS 12V LIGHTER
- P/N 28705 - SCREW, HHC 0.25-20 X 1.00 SS
- P/N 28690 - WASHER, LOCK 0.25 316 SS
- P/N 29405 - WASHER, FLAT 0.25 SS 316

OPTIONAL:

- P/N 24510 - CHARGER, FM TRANS AC GUIDER

UNLESS SPECIFIED

MACHINED PART

MINIMUM 250 RMS

ALL WELDS TO BE

MINIMUM 1/4"

DIM. TOLERANCES

XXX ± .005

XX ± .030

XX ± .150

FRAC. 1/16

XX° ± .5°

THIRD ANGLE PROJECTION

CHECKED JE 07/23/2021

ENG APPR DF 07/23/2021

PROPRIETARY & CONFIDENTIAL

DRAWING IS THE SOLE PROPERTY OF LIFTMOORE INC. AND REPRODUCTION WITHOUT WRITTEN PERMISSION OF LIFTMOORE INC. IS PROHIBITED.

REV A

07/23/2021

SHEET 1 - 1

WEIGHT: Lbs

BOX, FM PARTS XP WP

LIFTMOORE INC.

DRAWN NA 07/23/2021

MTRL: 29695

REV A

LIFTMOORE LIMITED WARRANTY

Parts and Structural

Liftmoore, Inc. warrants each LIFTMOORE crane to be free from defects in materials and workmanship for twelve (12) months from the date of delivery to the original customer. Under the terms of this warranty the crane structural components manufactured by LIFTMOORE, Inc. are warranted for thirty-six (36) months from the date of delivery to the original customer. LIFTMOORE, Inc. will repair or replace, as its sole discretion, any equipment or part that is returned f.o.b. to LIFTMOORE, Inc.'s plant at 7810 Pinemont Drive, Houston, Texas 77040, or to one of its authorized dealers, and is found by LIFTMOORE, Inc. or its authorized dealer to have been defective at the time of original delivery.

The foregoing warranty is the exclusive warranty made by LIFTMOORE, Inc. with respect to its cranes and is in lieu of all other warranties. ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS OF ANY CRANE FOR A PARTICULAR PURPOSE OR OPERATION, ARE HERBY EXPRESSLY DISCLAIMED.

The foregoing warranty applies only to LIFTMOORE cranes under normal use and service and does not apply in the event of damage caused by repair or alteration or damage during shipment, accident, negligence, overloading, or misuse, including operator's failure to follow any of the instructions issued with the crane.

This warranty is limited to the original purchaser and is not assignable. In order to submit a claim, the original purchaser must provide a copy of the original invoice for the crane in question within twelve (12) months following the delivery date and within 30 days from the date of repair.

The warranty applies only when the LIFTMOORE crane is used for commercial purposes and does not cover any purchase for use for personal, family or household purposes.

LIMITATION OF LIABILITY: LIFTMOORE, Inc.'s liability for any losses or damages resulting from any cause whatsoever, including LIFTMOORE, Inc.'s NEGLIGENCE or from a defective crane irrespective of whether such defects are discoverable or latent, shall in no event exceed the purchase price of the crane to which losses or damages are claimed, or at the election of LIFTMOORE, Inc., the repair or replacement of the defective crane.

In no event shall LIFTMOORE, Inc. be liable for any special, incidental, or consequential damages, including commercial losses or costs of any kind sustained by purchaser or any other person or for any damages for which purchaser may be liable to other persons by reason of any defect in any LIFTMOORE crane or any part thereof.

LIFTMOORE, Inc. reserves the right to make changes in design or construction of its cranes at any time without obligating itself to make such changes on cranes previously manufactured.

No agent, employee, or representative of LIFTMOORE, Inc. has authority to amend or modify the foregoing warranty or to bind LIFTMOORE, Inc. by any other warranty, guaranty, or assumption of liability.

In the event any provision of this warranty is for any reason held ineffective, the remaining provisions shall remain in full force and effect.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other legal rights that vary from state to state.

