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# ATL CRANE OWNER'S MANUAL

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## Revision History

Date	Version	Description	Author
11/11/17	1.1	Initial version	Muneeb Qureshi
03/01/18	1.2	Safety Protocol Updates	Muneeb Qureshi
02/15/19	1.3	HPU Updates	Muneeb Qureshi
01/07/20	1.4	Decals Updates	Muneeb Qureshi



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## Safety Instructions

**Before the crane operation Safety Instructions must be read and followed:**


- 1. Only authorized persons are permitted to operate the crane.**
- 2. The crane must be used on a firm level ground.**
- 3. Check the trailer/vehicle brakes are engaged.**
- 4. Before operation ensure that:**
  - a. No one is within the working area.**
  - b. The safety devices such as load holding valve is working properly and are installed.**
  - c. The minimum working distance from any type of power lines is correct.**
  - d. The load is correctly hooked.**
- 5. Stabilize the vehicle with outriggers:**
  - a. Outriggers are fully extended.**
  - b. All the wheels of the vehicle are on the ground and the suspension/axle is not completely unloaded.**
- 6. When using attachments, protect the working area with a barrier or safe boundary.**
- 7. The crane or vehicle must not be left without operator unless the power unit/PTO is shutoff/disengaged.**
- 8. Before driving the vehicle, ensure that outriggers are completely inside, and crane is in the folded position.**

**!! DO NOT OVERLOAD THE CRANE !!**



9. Use the crane in accordance with use and maintenance manual, making sure that:
- The load and radius are within the maximum limits shown on the crane load charts below:

### **ATL 100**



<b>Capacity (lb.)</b>	<b>2400lbs</b>	<b>1200lbs</b>	<b>1000lbs</b>
<b>Distance (ft.)</b>	<b>3.39ft</b>	<b>6.34ft</b>	<b>10.00ft</b>

### **ATL 250**



<b>Capacity (lb.)</b>	<b>5000lbs</b>	<b>2750lbs</b>	<b>1900lbs</b>	<b>1200lbs</b>
<b>Distance (ft.)</b>	<b>4.58 ft</b>	<b>8.33 ft</b>	<b>12.08ft</b>	<b>16.00ft</b>

**!! DO NOT OVERLOAD THE CRANE !!**



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## Crane Identification

All American Top Lift Cranes have Identification plates as shown below:

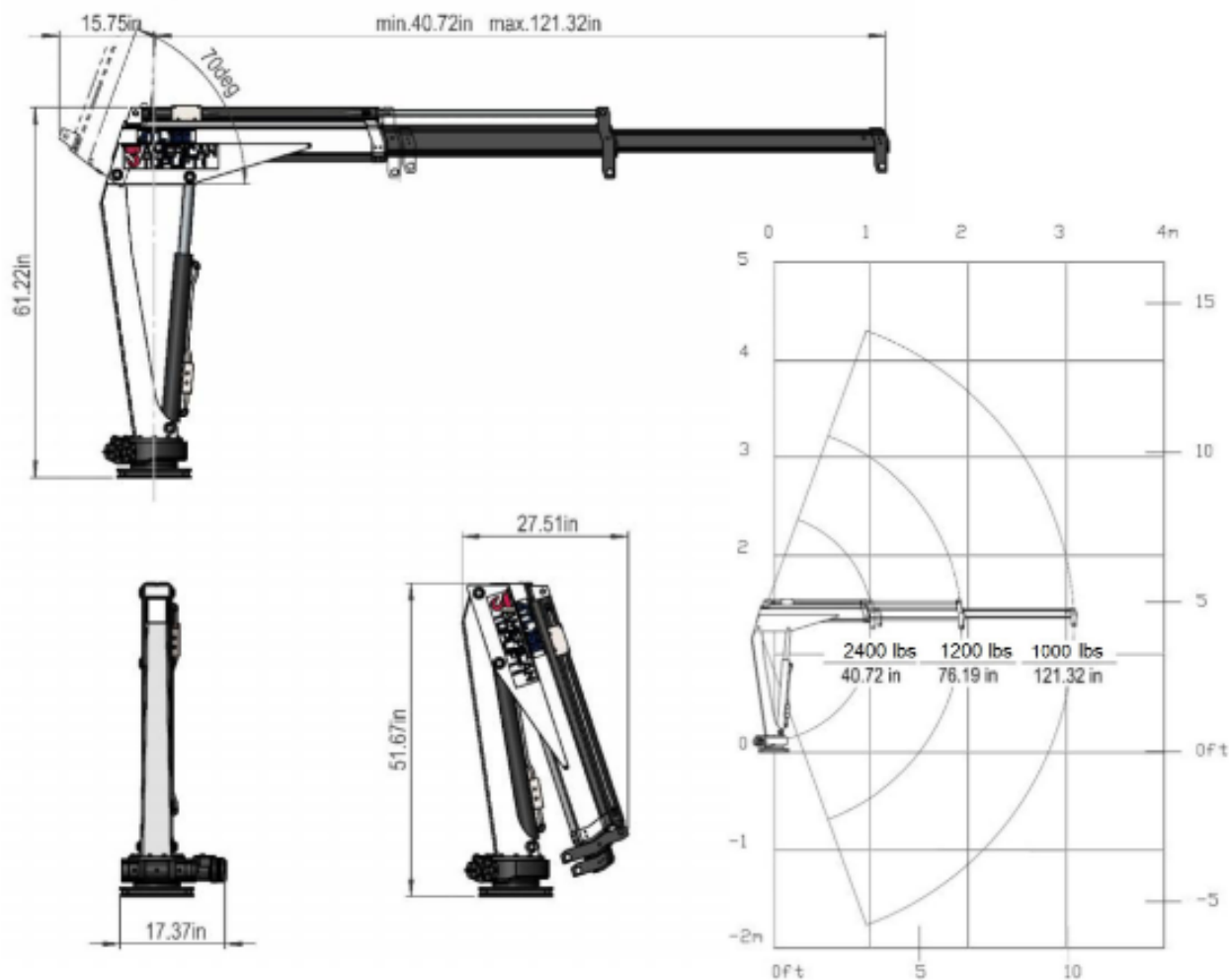
AMERICAN TOPLIFT.COM	
Model	<input type="text"/>
Serial No.	<input type="text"/>
Year	<input type="text"/>
Maximum Load [Lbs]	<input type="text"/>

1. Model : Crane Model
2. Serial Number : A unique serial number of the crane.
3. Year : Year of manufacturing
4. Maximum Load : Maximum lifting capacity of the crane when its fully retracted.



## ATL-100 Specifications

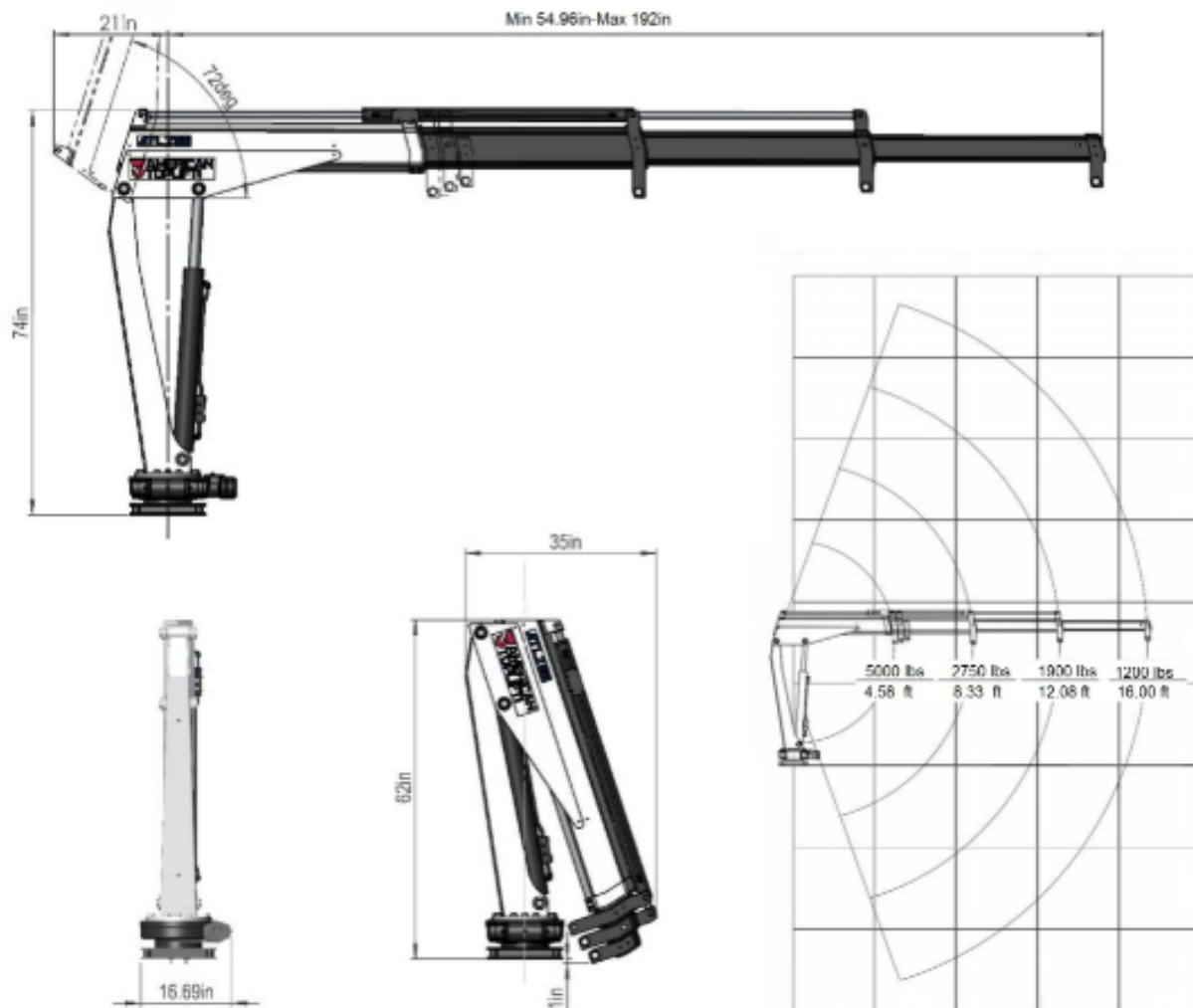
Technical data:	ATL 100
Maximum lifting capacity:	2400 lb.
Telescopic boom	1 hydraulic extension - 1 manual extension
Slewing angle	360°
Net weight	425 lb.
Design standard	ASME B 30.5
<b>Power Pack:</b>	
Voltage	12/24 V
Motor	2.9 Hp
Operation	electric via pushbutton on hand-held unit
Oil flow	1.6 gal/min
Working pressure	2180 psi.
Oil tank capacity	3.17 gal.





## ATL-250 Specifications

Technical data:	ATL 250
Maximum lifting capacity:	5000 lbs
Telescopic boom	2 hydraulic extension - 1 manual extension
Slewing angle	360°
Net weight	990 lbs
Design standard	ASME B 30.5
<b>Power Pack:</b>	
Voltage	12/24 V
Motor	2.95 Hp
Operation	electric via pushbutton on hand-held unit
Oil flow	0.5 gal/min
Working pressure	2300 psi.
Oil tank capacity	4.3 gal.





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## Crane Operation

Thank you for purchasing American Top Lift Inc Cranes. Our cranes are manufactured with high quality and high strength steel material. If these cranes are operated according to the guidelines as per this manual, the cranes will run trouble free. Our philosophy is to provide you the best quality cranes with the most competitive prices and easy operation.

Below are the first steps which needs to be taken before the operation of American Top Lift Inc Crane.

### 1.1 General Operation

- Operator of the crane must follow all the safety procedures and wear PPE equipment while operating the crane.
- Operator must read the crane instructions carefully before operating the crane which includes proper understanding of the load chart on the crane.
- If operator does not follow the warnings, safety instructions or any other guidelines in this manual or general safety rules, this will result in serious injury or death.
- Operator must be trained to operate the crane as per ANSI B30.5 standards.

### 1.2 Inspection Before operation

Below points need to be check on daily basis before using the crane:

- a. Hydraulic oil level in the reservoir.
- b. Battery charge or gas in the fuel tank.
- c. Cracks in the welding on crane booms and pillar.
- d. Lubrication or greasing on the booms and slewing drive.
- e. Hydraulic hose connections and signs of any leakage of hydraulic oil.
- f. Hook damage or safety latch missing.

If any of the above are found damaged, leaking or missing please proceed with immediate repair.

***DO NOT OPERATE THE CRANE WITHOUT REPAIRS.***





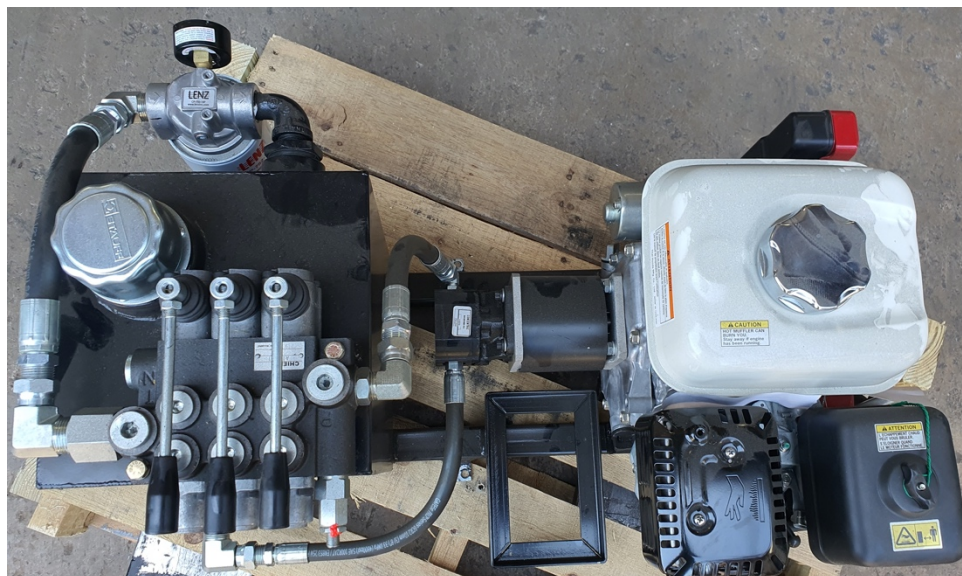
***NOTE: American Top Lift Inc will not be liable for any injury or death caused by wrong operation or not following the safety rules by the operator of the crane.***

### **1.3 HYDRAULIC POWER UNIT STARTUP**

American Top Lift Cranes comes with DC 12V Electric/Hydraulic Power Unit or Gas Power Hydraulic Power unit.

#### **1.3.1. Gas Powered Hydraulic Power Unit:**

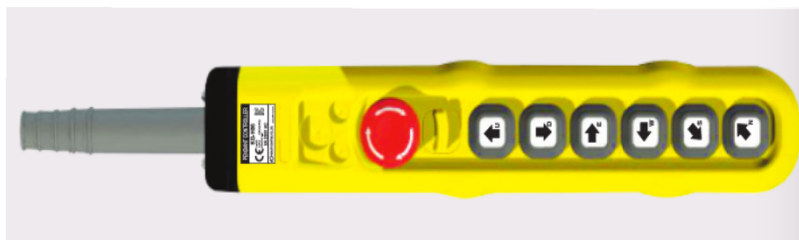
- Please check the fuel tank must be full and engine oil adequate
- Engine ignition must be connected to the battery and the battery should be fully charged.
- Turn on the ignition and start the engine.
- Gas Powered Hydraulic Power unit comes with manual lever block as shown in the picture below:
- Pull the first lever backwards to lift the crane boom.
- Push the first lever forward to bring the crane boom down.
- Push the second lever forward to extend the crane booms.
- Pull the second lever backwards to retract the booms.
- Push the third lever forward to rotate the crane right.
- Pull the third lever backwards to rotate the crane left.











### 1.3.2. DC 12V Electric Power Unit:

- Please check the hydraulic reservoir is filled with hydraulic oil.
- Please check the power unit is properly connected to the battery and the battery is fully charged.
- Disengage the red emergency stop button to power the power unit to make power unit operational.
- Press up button for crane boom lift up operation.
- Press down button for crane boom down operation.
- Press out button for crane boom extension operation.
- Press in button for crane boom retraction operation.
- Press right button for crane right rotation operation.
- Press left button for crane left rotation operation.



-  **UP Button:** Push to raise up the boom.
-  **Down Button:** Push to lower the boom.
-  **Extension Out Button:** Push to extend the booms.
-  **Extension In Button:** Push to retract the booms.
-  **Rotate Left:** Push to rotate the boom left.
-  **Rotate Right:** Push to rotate the boom right.



## **1.4 Stabilizers**

During the crane operation, the stabilizers must be deployed properly on the ground. Stabilizers must be lubricated all the times and should be deployed on the flat surface.

Operator must stay away from the stabilizers to avoid any injury during the operation at all times.

## **1.5 Crane position after the operation**

- a. All the booms must be retracted.
- b. Crane must be in the stowed position and the hook must be latch to the D ring on the vehicle.

## **1.6 Retracting the Stabilizers.**

- a. Stabilizers must be retracted and stowed in a proper position.

## **1.7 Hydraulic Power unit Shutoff**

- a. Hydraulic power units electric or gas powered must be shutoff properly.

## **1.8 Wrong Crane Usage**

- Crane must be mounted on the properly reinforced truck/trailer.
- Pulling loads horizontally are not allowed at any time. Crane must be use for vertical lifting only.
- Crane must not be structurally modified.
- Operation of the crane in high winds.
- Operation of the crane under beyond temperature limits i.e. - 22°F~+120°F.
- Lifting the load which is over than the load specified in the load chart.
- Using the crane without PPE.
- Not maintaining the crane according to the maintenance guide.

**NOTE: All warranty will be void if above mentioned points are not followed and American Top Lift Inc will be not responsible for injury or death caused by wrong crane usage.**



## Crane Safety Decals

### 1.9 Safety Decals

***Below is the list of safety decals and load chart which must to be followed at all times.***

***Failure to comply with the safety warnings may result in serious injury or death.***

***All the safety decals must be replaced if they are damaged or missing and they must be kept in good condition at all times.***

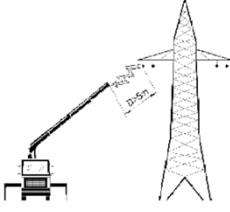
#### INSTRUCTIONS FOR SAFE USE OF THE CRANE

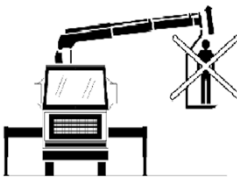
- 1 Only authorized persons are permitted to operate the crane.
- 2 The crane must be used on firm, level ground.
- 3 Check that the vehicle hand brake is on and that the wheels are chocked.
- 4 Before operation make sure that:
  - no-one is within the working area of the crane;
  - the safety devices are in place and operative;
  - the minimum safe working distances from power lines are observed;
  - the load is correctly slung and hooked.
- 5 Stabilize the vehicle with the outriggers, making sure that:
  - the lateral supports are fully extended;
  - the wheels are in contact with the ground and the suspension is not completely unloaded.
- 6 Use the crane in accordance with the use and maintenance manual, making sure that:
  - the load and radius are within the maximum limits shown on the crane capacity plate;
  - the crane is used progressively avoiding sudden load movements;
  - swinging or dragging of the load is avoided;
  - the load is lifted before rotating.
- 7 When using implements protect the working area with a barrier.
- 8 The vehicle/crane are not left unless the power take off is disengaged and the load is on the ground.
- 9 Before driving the vehicle ensure that the outriggers are fully retracted and re-entered, the safety taps closed and the crane is in the folded position.





	<b>⚠ WARNING</b>
	<b>Free Falling Boom Hazard</b> Free falling manual boom extensions can result in death or serious injury. <ul style="list-style-type: none"><li>• Properly install retention pins prior to operation.</li><li>• Do not stand in front of extension when removing retention pin.</li><li>• Do not allow extensions to free fall.</li></ul>

	<b>⚠ DANGER</b>
	<b>Electrocution Hazard</b> Death or serious injury will result from touching tethered remote if crane, load, or vehicle becomes electrically charged.  Maintain safe clearance from high voltage power sources.

	<b>⚠ WARNING</b>
	<b>Fall Hazard</b> Hoisting personnel on boom, hook, load, or loadline can result in death or serious injury. <ul style="list-style-type: none"><li>• Never use crane to hoist personnel.</li><li>• Never ride the boom, hook, load, or any device attached to crane boom or load line.</li></ul>



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## Crane Maintenance

Preventive maintenance is extremely important for the operation and lifetime of the crane. Owner must follow the maintenance guide lines in order to avoid crane failure.

- Crane Maintenance must be done by qualified personnel only.
- No modification, changes or replacements to be done without written/formal approval from American Top Lift Inc.
- Use of properly rated equipment and tools is required for maintenance.
- Put the crane in stowed position before performing any type of maintenance.
- Shut off the power unit before performing any type of maintenance.
- Shut off/disconnect any type of electrical connection which may result in electric shock to the maintenance personnel.
- Only use ATL approved parts.
- Use good quality hydraulic oil and recommended fuel type for the gas engine.
- Do not cut or remove any hydraulic hoses while crane is under pressure.

### 2.1 Crane Lubrication

Please follow the below chart for grades and type of lubricants:

<b>LUBRICANT</b>	<b>TYPE</b>
Hydraulic Oil	AW 32
Engine Oil	SAE 10W30
Grease	NGLI Grade 2



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## 2.2 Maintenance Check Points

<b>Points</b>	<b>Daily</b>	<b>Monthly</b>	<b>Yearly</b>
Battery	Yes		
Gas	Yes		
Hydraulic Hose	Yes		
Hook and safety latch	Yes		
Safety Decals	Yes		
Nuts, Bolts & Hose Fittings		Yes	
Hydraulic Oil		Yes	
Engine Oil		Yes	
Hydraulic Oil change			Yes
Engine Oil change			Yes
Battery replacement If Applicable			Yes
Boom Greasing		Yes	
Slewing Drive Greasing			Yes

## 2.3 Hydraulic Power Unit Maintenance

Please refer to Hydraulic Power Unit's Manufacturers Manual.



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## Trouble Shooting

For problems that are not covered here, please contact CUSTOMER SERVICE at 1 844 LIFT JOB.

- Power unit does not turn on!
- Check the engine oil and gas for the gas-powered power unit and Battery charge and connections of 12V DC power unit.
- Crane does not lift!
- Check the pressure of the power unit it should be 2200 PSI.
- Check the flow of hydraulic power unit with flowmeter.
- Check the battery of remote control (in case of wireless unit) or emergency stop button is disengaged (in case of wired controller).
- Crane boom lift coming down by itself!
- Check the load holding valve for any leakage.
- Check the cylinders for any leakage.





## Operations That does not Require Authorized Service Personnel

Fault	Cause	Remedies
The crane does not rotate properly	Vehicle not in level position	Stabilize the vehicle
	Lack of lubrication	<p><u>With RACK</u>: Grease the bushes and the rotation guide shoe</p> <p><u>With SLEW RING</u>: Grease the slew ring &amp; pinion gear- slew ring group</p>
The extension booms do not completely extend or work jerkily	Lack of lubrication of the guide shoes	Grease the guide shoes
Crane controls are not active	Lack of electric energy	Check the fuse, the battery and electric circuit
Vibrations in crane operations	Shortage of oil	Check the level and top up if necessary
	Obstructed filters	Clean or replace the filter cartridge
Notable decrease in movement speed	Obstructed filters	Clean or replace the filter cartridge



## Operations That Require Authorized Service Personnel

Fault	Cause	Remedies
The Crane doesnot lift the loads indicated on the load chart	Non Efficient pump, pressure is less than required	Replace the pump, check the pressure
Crane Boom doest not hold up the load	Load holding vale is faulty, oil leak inside the ram	Replace the valve and defective seals of hydraulic cylinder
The extension booms doesnot extends completely or have jerky operation	wear and tear of wear pads	check the wear pads and change is required
Vibration In Crane operations	Pump is not efficient	check the pump, change if necessary
Slow speeds in crane movement	Pump is not efficient	check the pump, change if necessary