



**Caldwell Lifting Equipment** has been designed for specific tasks to withstand the particular forces imposed. Guidelines for installation, inspection, maintenance and repair, safe operation and operator training of these lifters follow (product specific information will be sent with each product):

## INSTALLATION

Lifting equipment shall be assembled and installed in accordance with the manufacturer's instructions, unless other specific arrangements have been approved in writing by manufacturer. When lifter/auxiliary power supply is required, user inspection shall ensure that the power source complies with ANSI/NFPA 70, National Electrical Code and shall include a power disconnect switch as required in accordance with ANSI/NFPA 70 based on the lifters requirements. If electrical connections are made, the power supply and corresponding power disconnects shall be connected to the line side (power supply side) of the crane disconnect or to an independent circuit as specified in the manufacturer's operating instructions.

Check for correct rotation of all pumps and power units, lubrication of moving parts, and filling of reservoirs, all in accordance with manufacturer's instructions.

## OPERATOR TRAINING

Lifters shall be operated in accordance with manufacturer's instruction manual, and by personnel who have received instructions described in the "Operating Practices" section of these guidelines. Training shall also include instruction regarding:

1. Details of the lifting cycle.
2. Application of the lifter to the load including (according to the manufacturer's instructions) adjustments to the lifter, if any, to adapt it to various sizes and kinds of loads.
3. Instruction in any special operations or precautions that may be required.
4. Recognition of proper load configuration. For example, preferred operation requires an orderly pattern of stacking.
5. Before assuming responsibility for using the lifter, an operator shall demonstrate his understanding of the lifting procedure to the instructor. The instructor should record notes of operator's demonstrated ability.

## INSPECTION

The lifter shall be visually inspected by or under the direction of an appointed person on a daily or weekly schedule depending on the nature of the lifter and the severity of the service.

Details to look for include but are not limited to:

1. Structural deformation.
2. Cracks in the structural frame, welds, hoist hook attachment points, mechanically operating parts, any attached slings, clevises and hooks.
3. Malfunctions during operation of a mechanically operating lifter.
4. Loose covers, fasteners and stops.
5. Faulty operation of automatic hold and release mechanisms.
6. Wear of hoist hooking points, load supporting clevises, pins, slings, linkages and mechanical parts.
7. Missing nameplates and markings. Contact Caldwell for replacements.

## MAINTENANCE AND REPAIRS

1. A preventive maintenance program should be established for each lifter by a qualified person based on recommendations made by its manufacturer.
2. A qualified person shall have responsibility for repairs. Dated records and details of repairs and parts replacement should be carefully maintained by a qualified person, and copies kept in your possession.
3. Replacement parts shall be at least equivalent to the original manufacturer's specifications.

## OPERATING PRACTICES

### DO'S

1. The operator shall receive, read and understand the manufacturer's instruction manual.
2. The operator shall watch carefully that the lifter is performing properly during the lifting procedure.
3. The operator shall know the standard crane hand signals.
4. The operator shall only respond to signals from an appointed person. However, stop signals from anyone shall be obeyed.
5. The operator shall notify a designated person when he considers a load to be unsafe.
6. The operator shall observe the lifter before using. A defect observed shall be examined by a qualified person to determine if it is a hazard.

### DON'TS

1. The operator shall not operate a malfunctioning lifter or one with an "out of service" tag attached.
2. The operator shall not use the lifter for any purpose(s) other than those designated by the manufacturer's instruction manual.
3. The operator shall not use a lifter when the capacity, weight or product safety labels are missing or are no longer legible.
4. No one shall make alterations or modifications to lifters without consulting the manufacturer.
5. No one shall obscure or paint over the manufacturer's capacity, weight, or product safety labels.
6. Loads shall not be lifted higher than necessary nor be left suspended unattended.
7. The lifter shall not lift a load that is not properly balanced for safe lifting.

## HANDLING THE LOAD

1. The lifter shall not be loaded in excess of its rated load.
2. Ensure the load can withstand forces applied by the lifter.
3. The combined weight of the lifter and load shall not exceed the rated load of the crane or hoist.
4. The lifter shall be applied to the load in accordance with the manufacturer's recommended operating procedure.
5. Lifter ropes and chains shall not be kinked, and multiple part lines shall not be twisted about each other.
6. The lifter shall not touch obstructions during load movement.
7. The lifter shall not be loaded with loose material that might fall during movement.
8. The load or the lifter shall not be slid on the floor or other surface.
9. The operator or other personnel shall not place themselves or any part of their bodies beneath suspended loads.
10. The lifter shall not be used for loads for which it is not designed.
11. If suspended loads are moved manually, they shall be pushed, not pulled.
12. A preliminary lift of a few inches shall be made to establish that the load is stable.
13. All loads shall be accelerated and decelerated smoothly and slowly.