

# INSTRUCTION MANUAL

(Original Instructions by CBLCo.com)



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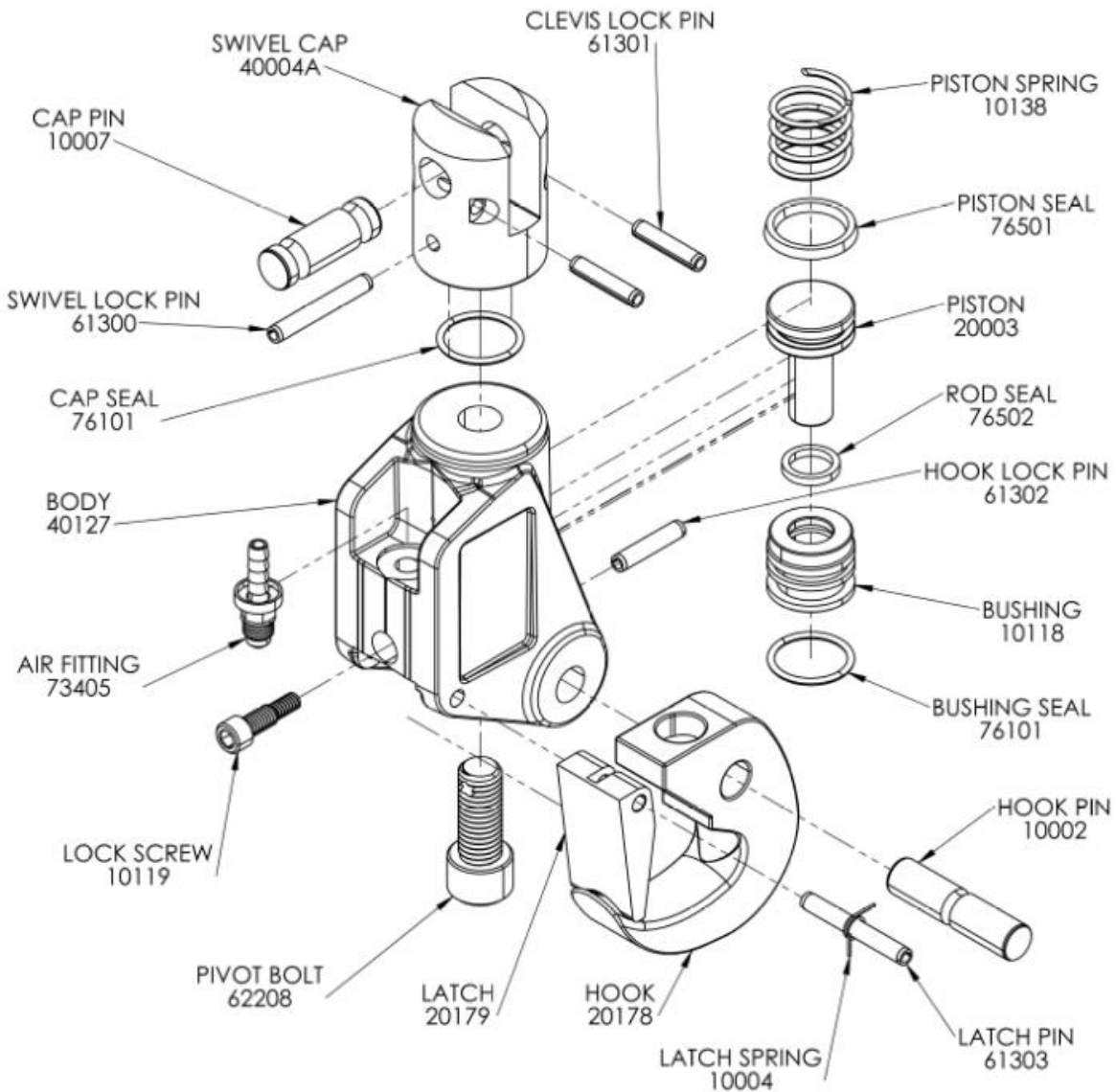
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## **1 Overview**

- This Instruction Manual is intended as a resource to ensure safe and controlled operation of the CBL-3L Cargo Lift System; also referred to as CBL-3L Hook Assembly.
- This Instruction Manual is the Original Instructions; not translated from the language of the Original Instructions.
- When using the Hook Assembly, always wear appropriate Personal Protective Equipment including leather gloves, safety glasses and hard hat. These will help protect against sharp or frayed straps/cables as well as potential breakage of straps/cables and associated flying or falling objects.
- Any changes to this Instruction Manual must be approved by the President of Charles B. Lewis Company.

## 2 Exploded View of CBL-3L Hook Assembly



## 3 Rating/Loading

- The CBL-3L Hook Assembly is intended to lift 3 metric tons, 3000 kg (6615 lb).
- The CBL-3L Hook Assembly is tested to a Dynamic Safety Factor of 2.0 and 100% of hook assemblies are pull-tested to 6000 kg (13230 lb) and shipped with a Manufacturer's Certification of Proof Load.
- The CBL-3L Hook Assembly is designed to a 5:1 Safety Factor.

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#### **4 Features and benefits of CBL Hook Assemblies:**

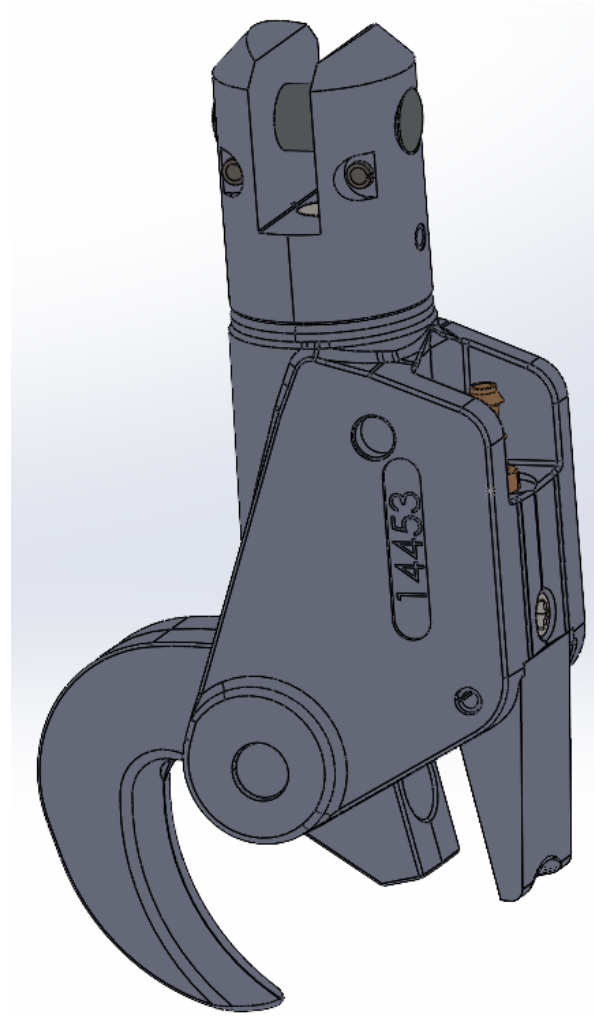
- Ergonomic design for maximum ease of use on standard or irregular loads.
- Cost effective.
- Easily maintained, with fewer parts.
- Versatile: able to accept both flat or round strapping
- High quality construction with corrosion resistant, high-strength materials
- Proven worldwide rugged dependability.
- Interchangeable Hook Assemblies for powered release on unitized cargoes.
- Easy one-hand loading of the Hook Assembly around the strap/cable; simply slide the Hook under the strap and the Latch will deflect and return to keep the strap/cable securely loaded into the Hook Assembly.
- Multiple Hook Assemblies can be safely released simultaneously by a single control valve in a remote location.
- Remote air-operated hook release (of stowed or landed load) by internal pneumatic Piston motion (with shielded Air Fitting).
- Also, a manual hook release option (of stowed or landed load) by depressing spring-loaded positive retention Latch.
- Single piece 360° Swivel Cap
- Direct connection of chain to Hook Assembly (without shackles, hammerlocks, chain-swivels, special fasteners, or safety wire)
- Minimal air use per cycle (high-efficiency dynamic lip seals)
- Hook Assemblies are each proof load tested by an independent testing company; and are shipped with a Manufacturer's Certification of Proof Load with each Hook Assembly.
- Each Hook Assembly is engraved with a unique Serial Number
- Hook Assembly is safe; as 40.8kg (90 lb) Minimum Load will prevent release of Hook during inadvertent application of 40 psi (2.7 bar) pneumatic pressure.

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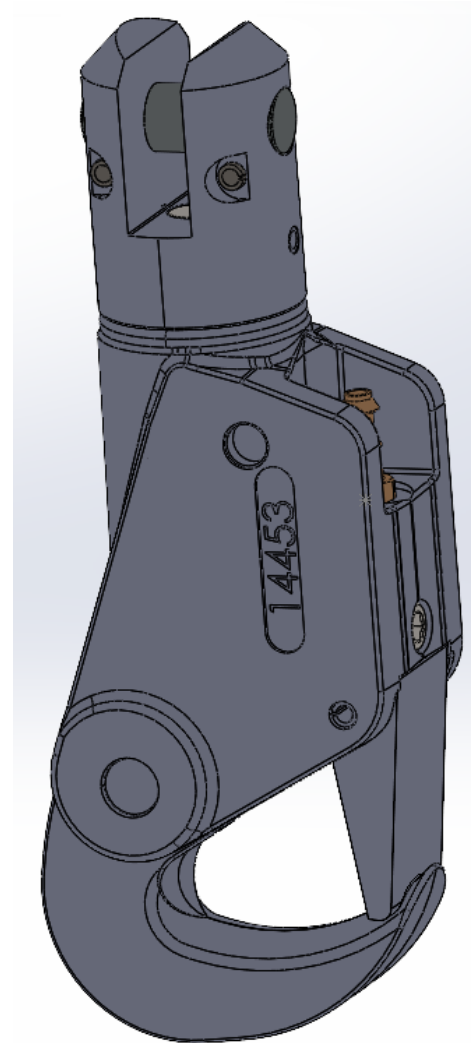
## 5 Actuation/Operation of the Hook Assembly

- Each Hook Assembly has a rotating Hook which can rotate to an Open and a Closed position as shown below.

OPEN POSITION:



CLOSED POSITION:



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- The Hook is manually rotated by hand to the Closed position.
  - During lifting of at least 40.8 kg (90 lb), the Hook is kept from rotating from the Closed to the Open position by a spring-loaded Piston whose tip protrudes and rests in a pocket in the Hook. This pocket can be seen in the Open Position image above.
  - During unloaded release, [or release with less than 40.8 kg (90 lb) of load] the spring-loaded Piston is retracted by air or nitrogen pressure at 40psi max pressure. Then the Hook is free to rotate (either manually or by lifting the Hook Assembly with the crane which causes the Hook to rotate to the Open Position and slide off of the strap).

## **6 Safe Operation and Intended Use**

- The Hook Assembly is intended to lift straps, bands, cables or ropes that encircle a 225 kg (500 lb) “bale” of raw paper called “pulp”. This bale is a stack of raw paper with a band encircling it vertically.
- Inspect daily for damage, cracks, and unusual wear before use.
- Replace worn or damaged parts resulting from normal operation.
- Institute a comprehensive service, monitoring, and maintenance program which uses the Maintenance Manual for CBL-3L.
- Do not use equipment if damaged or signs of excessive wear is evident.
- Stand away from load when lifting.
- Do not release with air pressure nor manually until load is landed.
- Do not exceed 40 psi air or nitrogen pressure to activate internal pneumatic piston.
- Do not lift less than 40.8 kg (90 lb)
- Do not use any component parts that are not approved by Charles B Lewis Company, Inc.
- Inspect and replace critical parts (Swivel Bolt, Piston, Piston Bushing, Cap Pin, Hook Pin, Hook) if equipment is exposed to severe lifting exceeding the rated Safe Working Load (SWL).
- To insure safe and reliable operation; pull test the Hook Assembly after replacing critical parts.
- The MSDS of the grease used (and listed in the Maintenance Manual) should be made available to operators.

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## 7 Unsafe Operation and Misuse

- The Hook Assembly should not be used to lift more than 3000 kg (6600 lb).
- The Hook Assembly should not be used to lift less than 40.8 kg (90 lb).
- The Hook Assembly should not be used to lift chains or ropes or other straps that are too large and do not enable the Hook and Latch to fully close before lifting begins.
- The tip of the Hook should not be used to lift or pry objects. Only lift with the Hook Assembly when the Latch is fully closed.
- The Hook Assembly is an actuating assembly and should never be used to hammer or impact other objects.
- The Hook Assembly should not be allowed to swing and contact other Hook Assemblies or stationary equipment in a violent manner.
- The Hook Assembly should not be subjected to unfiltered, or contaminated, or moisture-laden air or nitrogen.
- The Hook Assembly should not be part of a conductive path for electrical work or welding.
- The Hook Assembly should never be submerged in any liquid.

## 8 Specifications

- Overall Dimensions:
  - 241mm (9.50”) long
  - 94mm (3.70”) wide
  - 64mm (2.50”) thick.
- Weight: 3.86 kg (8.5 lb)
- Maximum strap/cable capacity: 25mm (2.0”) flat or 22mm (0.88”) round.

## 9 Requirements

- Air or Nitrogen supplied through a pressure regulator at 40psi (2.72bar) maximum pressure; and a minimum flow of 4.8 cubic inches (79cc) of flow per each pneumatic release cycle per hook (assuming 10 ft (3.05m) of ¼” (6.4mm) ID hose leading from pneumatic valve to each Hook Assembly.
- ½” Grade 80 alloy chain or better (for 3000 kg (6615 lb) SWL @ 5:1 S.F.) connected to supplied 5/8” (15.9mm) diameter Cap Pin and fitting within the 5/8” (15.9mm) space between the ears of the Swivel Cap.

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- Air hose of correct size and construction to be retained on the supplied and installed ¼” (6.4mm) Push-On type Air Fitting.



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## 10 Revision Sheet

Release No.	Date	Revision Description
Rev. A	02/15/2023	Initial Release
Rev. B		

<b>Instruction Manual Authorization</b>
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I have reviewed this Instruction Manual for CBL-3L Hook Assembly.  
This document has been completed in accordance with the requirements of Charles B. Lewis Company.

MANAGEMENT CERTIFICATION - Please check the appropriate statement.

\_\_\_\_\_ The document is approved.

\_\_\_\_\_ The document is approved, pending the changes noted below.

\_\_\_\_\_ The document is not approved.

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Jim Herrel  
NAME  
President

2/16/2023  
DATE

