## LOVESHAW

Little David ${ }^{\text {TM }}$ Case Sealer
LDXSS 2.0
Stainless Steel Uniform Bottom Belt Case Sealer


## Operator's Manual

## LDXSS 2.0 Operation

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## Introduction

Thank you for purchasing the Little David ${ }^{\mathrm{TM}}$ case sealer, the LDXSS 2.0. The LDXSS 2.0 is uniform bottom belt drive case sealer. The LDXSS 2.0 is a robust built $24 / 7$ case sealer constructed of quality materials, bearing, and electrical components. All employees who will be required to operate and maintain the case sealer must read this manual to ensure safe operation as well as proper set-up and maintenance throughout the life of the machine. After reading this manual, you will know how to perform the following functions,

- How to operate the machine safely.
- How to set the conveyor height of the machine
- How to set the head height.
- How to adjust the side rails width.
- Troubleshooting and replacing of worn or defective parts.

Throughout this manual there are several illustrations designed to help you perform the variety of tasks described.

## Operating Safety

Observe the warnings and cautions below when using the Little David LDXSS 2.0 case sealer. Within this manual, all safety labels are depicted with location and part number. If a safety, label is missing or not legible it must be replaced immediately. Failure to follow safety labels can lead to injury or damage to the machine.

## Instruction: Requirement to System Operation

Instruction: An electrical receptacle must be located near the machine. The line cord connection to the receptacle is the disconnect means for the machine. The receptacle must be located in an area that is easily accessible to all personnel.

## Waming: Potential Bodily Injury

Warning:Always disconnect all sources of energy to the machine before performing maintenance. Sources of energy include electrical and pneumatic. Refer to your company's lock out tag out procedures.

Warning:Never bypass or remove safety guards from the machine or tape cartridge.
Warning:Never override safety devices such as Emergency Stop switches.
Warning: Never adjust the machine or tape cartridges when the machine is operating.
Warning:Never place hands or body inside confines of the machine unless top head assembly is locked in place and all power sources are locked out.

Warning: Never wear jewelry, loose clothing, such as ties, scarves etc and long hair must be pulled back when operating this machine.

Warning: Never pull a jammed box out of the machine while it is in operation. Stop machine and raise head with bypass switch.

Warning: When feeding a semi automatic case sealer always hold the top flaps down a rear of box, to avoid accidental entrapment in the machine

This manual contains operator information for Little David Application Equipment. It is directed toward the person who operates and maintains the machine. Read through the manual completely before operating the machine. Thereafter, refer to it as necessary.

Take special note of all warnings, cautions, and maintenance instructions. Like any other piece of equipment, the Little David Case Sealer functions best when maintained and used correctly.

## Caution: Potential Machine Damage:

Caution:Never push or drag machine across the floor with the top head assembly fully raised. Makes sure it is completely lowered.

Caution:Never pull the machine by its pack table or side rails.
Caution:Provide and use proper electrical power.
Caution:Do not operate, maintain, or otherwise use this machine, except as described in this manual.


## Chapter

## Case Sealer Sections

## Overview

This manual covers several parts of the machine. The following diagram identifies the key sections of the machine.


## Machine Specifications

## Machine dimensions:

- Height: 61.44" @ 22.25" conveyor height
- Width: 33.49" (Approx. Width)
- Length: 34.22" ( 51.20 " with pack table)
- Conveyor height: 22.25" to 25.75" - Standard


## Electrical Requirements:

- Standard Voltage: 120/1/60 with 10 amp dedicated service.
- Optional voltages are available consult factory.


## Operating speed:

- Standard belt speed: 80 ft ./ min.


## Air Requirement:

- N/A


## Machine box capacity:

- Length: - 4.5" (114.3) min. to infinite
- Width: - 4.50" (114.3) min. to 27" (685.8) max. (2" tape)
- Width: - 5.50" (139.7) min. to 27" (685.8) max. (3" tape)
- Height: 4.50" (114.3) min. to 24 " ( 609.6 ) max.
3.50 " (88.9) min. with reduced tape tabs



## Installation

Always check for any signs that the machine may have been damaged before fully removing it from the shipping skid. If machine arrives damaged contact Loveshaw immediately to help in filing a claim with shipping company.

## Section 1: Placing the Machine

The case sealer is fully assembled and ready for operation.
Step One: Carefully remove the machine from the shipping skid. Remove all fasteners and brackets holding the machine to the skid.

Step Two: Take care removing the machine from the skid. Use a forklift or similar device to complete this task.

Step Three: Move machine to designate location. It may be necessary to adjust the conveyor height of the machine. The legs on the machine are adjustable by loosening the leg clamping hardware and moving the leg to its proper position. The use of a jack or forklift is required.

## Chapter

## Theory of Operation

## LDXSS 2.0

The LDXSS 2.0 needs to be manually adjusted for the width and height of the box to be sealed.

With the machine off, a box will need to be placed between the side rail arms. Locate the head lock knob. Raise the head assembly by losing the lock knob on the top of the mast weldment. With the lock knob loose rotate the head lift crank till it clears the box then rotate the lock knob to lock the head in place.
(NOTE: Do not place the box on top or under cartridge while adjusting drives or head assembly. Damage may result.)

While holding the box in placed between the side rails loosen the side rail lock knob and rotate the side rails in towards the box. When the side rails contact the box on both sides tighten the side rail lock knob. Fold all four top flaps of the box, holding them down unlock and then rotate the crank to lower the head assembly till it is just resting on top of the box then lock the head in place with head lock knob.

Start machine and the box will be pulled through with the bottom belt drives and exit the machine. It may be necessary to increase the head pressure if the box stalls. Loosen the head lock knob and then apply downward pressure by rotating the head lift crank to increase drive pressure. ( NOTE: Excess pressure will cause box damage and too little will cause box to stall.)

## Key design features:

The LDXSS 2.0 is a uniform manual adjusted side belt case sealer. Some of the key features are.

- Stainless steel and non-corrosive material construction.
- Sanitary design ( material stand offs \& cleaning access )
- Easy access internal mounted bottom belt tensioners with sealed stainless steel bearings.
- Self-tracking industrial grade endless belts.
- 2" to 3 " tape cartridge capability ( Fill plates and hardware required for change from $3^{\prime \prime}$ to $2^{\prime \prime}$ in base. Head assembly requires longer head shafts from 2" to $3^{\prime \prime}$.
- Self-centering open concept side rail guides.
- Smooth and precise vertical hand crank head adjustment
- Roller bearings on mast assembly for long life.



## Machine Components

## Control Station / Electrical Enclosure

The control station consist of an electrical enclosure, push pull mushroom head emergency stop switch and a start switch with motor overload relay.


## Bottom Belt Drive Assembly

The bottom belt drive assembly consist of (1) $1 / 3 \mathrm{hp}$. motor, (2) idler / tension assembly, (1) gear box and (2) guided rough top belts. The bottom belt drive assembly; assist in conveying the box forward through the machine. The endless rough top belt has an integral guide rib on the back of it. This guide eliminates any sophisticated apparatus to track the belt. The endless belt feature has increased longevity over conventional laced belting. The tensioner when adjusted maintains the tension on the drive roller.


## Head Assembly \& Mast Assembly

The head assembly consists of a sheet metal parts, roller bearings, slide plates and stand offs. The assembly can be converted to a $2^{\prime \prime}$ wide or 3 " wide cartridge cavity by changing the tie shafts and mast stand offs. The horizontal surface that contact the box is made of a low friction plastic that provides a long wear surface.

Internal sealed roller bearings and low friction slide plates provide smooth vertical head weldment travel on the mast assembly.

The mast assembly is made up of a vertical structural tube, vertical adjustment screw, hand crank and lock knob.


## Chapter



## Maintenance

## Safety: NEVER perform any maintenance on the LDXSS 20 without first following your companys'LOCK OUT / TAG OUT procedures.

## Replacing bottom belt drive motor

1. Disconnect electrical or unplug machine.
2. Loosen or remove cradles holding motor cable. This will provide slack in the line after removing motor from gear box. It may be necessary cut a few wire ties to allow some slack in the line. Note there location for replacement later.
3. Hold or support motor while removing (4) hex head bolts between motor and gear box. Before removing motor note orientation for reinstallation. Remove motor by sliding it down out of gear box.

4. Unwire existing motor noting wire locations.
5. Rewire new motor and apply never seize to new key.
6. Install new motor in original orientation \& tighten hardware.
7. Close wire cradles and replace wire ties on motor cable.
8. Re-connect electrical supply or plug in machine and run as normal.

## Replacing bottom belt \& tensioner access.

1. Disconnect electrical or unplug machine.
2. Pull up on center of belt while applying light pressure inward on tensioner lock until it is fully engaged.
3. Slide belt off machine. Exit side first then entrance side.
4. Remove white plastic belt guide by sliding back till key hole slot lines up with pin, then remove.
5. Remove side guard with same procedure.
6. Adjust tensioner by compressing spring for more belt tension. Note that full compression of spring my not allow tensioner lock to engage and or cause damage to it.

7. Replace belts, install guards, wear strips then pull up on belts. While holding up pull tensioner lock pin out. Allow belts to rest on guide but make sure they are aligned with drive roller and idlers.
8. Re-connect electrical supply or plug in machine and run as normal.

## Machine Maintenance:

Daily------- Clean machine (as required)
Inspect bottom belts
Weekly----- Check / Adjust belt tensioner
Inspect area around motor / gearbox
Inspect front tensioner rollers
Monthly---- Check / Adjust head wear pads

Cartridge Maintenance: Refer to cartridge area of manual

## Troubleshooting:

| PROBLEM | CAUSE | CORRECTIVE ACTION |
| :--- | :--- | :--- |
| Machine will not start. | Emergency stop switch(s) activated either <br> No incoming power. <br> Motor overload tripped | Check that E-stop switch is not engaged. <br> Check machine fuses and plant receptacle. <br> Check overload |
| Box jamming in machine. | Box is out of range of machine. <br> Box is voided and head is crushing it. <br> Tape cartridge problems. <br> Bottom drive belting worn. <br> Box is over filled. | Adjust head balance regulator. <br> Check tape cartridge troubleshooting. <br> Replace drive belts. |
| Top head assy. won't move. | Lock knob engaged <br> Guide bearing / wear pad tight.. | Adjust box contents. |
| Drive belts are slipping. | Belts are not tensioned. <br> Tape cartridge adjusted to high <br> Belts are worn. | Adjust tensioner spring. |

## Chapter

## Warranty:

# CASE SEALER, CUSTOM \& SPECIAL APPLICATIONS 

## Little David $®_{\text {Warranty }}$

\author{
For: All Standard Little David® Semi-Automatic Case Sealers. All Standard LD-16 Series Fully Automatic Case Sealers. <br> \section*{All Special Application Case Sealers (Fully \& Semi Automatic).} <br> ```2 YEAR WARRANTY ON DRIVE MOTOR \\ 2 YEAR WARRANTY ON GEAR MOTOR \\ 2 YEAR WARRANTY ON GEAR REDUCER \\ 3 YEAR WARRANTY ON TAPE CARTRIDGE \\ (EXCEPT FOR MOVING PARTS THAT ARE SUBJECT TO NORMAL WEAR, TEAR AND REPLACEMENT WHICH ARE WARRANTED ONLY TO BE FREE \\ FROM DEFECTS IN MATERIAL AND WORKMANSHIP.)``` <br> \section*{1 YEAR ON PLC} <br> ```
1 YEAR ON SERVO DRIVE <br> 1 YEAR ALL OTHER PARTS <br> Except for wear and moving parts. <br> *LIMITED WARRANTY - LOVESHAW (HEREIN AFTER "LOVESHAW") <br> WARRANTS ONLY THAT THE GOODS SOLD BY IT SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP, UNDER PROPER AND NORMAL USE AND MAINTENANCE,

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AS FOLLOWS:
\begin{tabular}{ll} 
DRIVE MOTOR - & 2 YEARS \\
\hline GEAR REDUCER - & 2 YEARS \\
\hline GEAR MOTOR -- & 2 YEARS (THIS APPLIES TO SIDE BELTS ONLY) \\
\hline TAPE CARTRIDGE - & 3 YEARS (EXCEPT FOR MOVING PARTS AND PARTS WHICH \\
\hline ARE SUBJECT TO NORMAL WEAR, TEAR AND REPLACEMENT WHICH ARE \\
WARRANTED ONLY TO BE FREE FROM DEFECTS IN MATERIAL AND \\
WORKMANSHIP); & \\
\hline PLC- - & 1 YEAR \\
\hline SERVO DRIVE - & 1 YEAR \\
\hline ALL OTHER PARTS - & 1 YEAR (EXCEPT FOR MOVING PARTS AND PARTS, WHICH ARE \\
SUBJECT TO NORMAL WEAR, TEAR AND REPLACEMENT WHICH ARE WARRANTED \\
ONLY TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP).
\end{tabular}

OBLIGATION OF LOVESHAW UNDER THIS WARRANTY IS STRICTLY LIMITED TO THE COST OF REPAIRING OR REPLACING, AS LOVESHAW MAY ELECT, ANY PART OR PARTS THAT PROVE IN LOVESHAW'S JUDGMENT TO HAVE BEEN DEFECTIVE IN MATERIAL OR WORKMANSHIP AT THE TIME THE GOODS WERE SHIPPED FROM LOVESHAW'S PLANT. ANY WARRANTY CLAIM NOT MADE IN WRITING TO LOVESHAW AT ITS HOME OFFICE WITHIN THE APPLICABLE WARRANTY PERIOD AND WITHIN 10 DAYS OF FAILURE WILL NOT BE VALID. THIS IS THE SOLE AND EXCLUSIVE REMEDY AVAILABLE UNDER THIS WARRANTY. UNDER NO CIRCUMSTANCES WILL LOVESHAW BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES.

IF REQUESTED BY LOVESHAW, PURCHASER SHALL RETURN ANY DEFECTIVE PART OR PARTS TO LOVESHAW'S PLANT, FREIGHT PREPAID. ALL WARRANTY PART REPLACEMENT AND REPAIRS MUST BE MADE BY LOVESHAW OR A LOVESHAW DEALER AUTHORIZED TO HANDLE THE GOODS COVERED BY THIS WARRANTY. ANY OUTSIDE WORK OR ALTERATIONS DONE WITHOUT LOVESHAW'S PRIOR WRITTEN APPROVAL WILL RENDER THIS WARRANTY VOID. LOVESHAW an ITW COMPANY WILL NOT ASSUME ANY EXPENSE OR LIABILITY FOR ANY REPAIRS MADE TO ITS GOODS OUTSIDE ITS WORKS WITHOUT ITS PRIOR WRITTEN CONSENT. THIS WARRANTY SHALL NOT APPLY TO ANY ITEM THAT HAS NOT BEEN USED, OPERATED, AND MAINTAINED IN ACCORDANCE WITH LOVESHAW'S RECOMMENDED PROCEDURES. LOVESHAW SHALL HAVE NO LIABILITY WHATSOEVER WHERE THE GOODS HAVE BEEN ALTERED, MISUSED, ABUSED OR INVOLVED IN AN ACCIDENT.

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\section*{Chapter}

\section*{ASSEMBLY DRAWINGS AND SCHEMATICS}










THREE PHASE 50/60 HZ MODELS


\section*{Chapter}

\section*{MACHINE A VAIABLE SPECIAL OPTIONS}



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