# LITTLE DAVID

OWNERS MANUAL



# LEGEND RANDOM

2" AND 3" CARTRIDGES

THE LOVESHAW CORPORATION 2206 EASTON TURNPIKE SOUTH CANAAN, PA 18459

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P/N: PMLDR/2-3

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# **GENERAL SAFETY PRECAUTIONS**

BEFORE INSTALLING, OPERATING OR SERVICING THIS EQUIPMENT READ THE FOLLOWING PRECAUTIONS CAREFULLY:

- \* THIS MACHINE IS EQUIPPED WITH MOVING BELTS. DO NOT PLACE HANDS NEAR THE REAR OF THIS MACHINE WHEN BELTS ARE MOVING, AS FINGERS MAY BE PINCHED WHERE BELTS ENTER FRAME. ALWAYS USE A ROLLER TYPE EXIT CONVEYOR AND <u>ALWAYS</u> REMOVE BOXES AFTER THEY CLEAR THE EXIT END OF THE MACHINE.
- \* FINGER GUARDS ARE PROVIDED TO PREVENT A PINCH-POINT. THEY SHOULD ALWAYS BE IN PLACE WHEN RUNNING THE MACHINE.
- \* OBSERVE CAUTION WHEN NEAR CARTRIDGE KNIFE OR WHEN THREADING TAPE. KNIFE IS VERY SHARP, AUTOMATICALLY OPERATED AND IS LINKED TO THE WIPE DOWN ROLLERS.
- \* DO NOT ATTEMPT TO OPEN OR WORK ON ELECTRICAL BOX, JUNCTION BOXES, OR OTHER ELECTRICAL COMPONENTS WITHOUT FIRST DISCONNECTING POWER TO THE MACHINE. SHOCK HAZARD EXISTS IF POWER IS NOT DISCONNECTED.
- \* DO NOT BYPASS ANY DESIGNED-IN SAFETY FEATURES SUCH AS INTERLOCKS, GUARDS, OR SHIELDS.
- \* DO NOT PLACE HANDS OR BODY INSIDE CONFINES OF RANDOM TYPE MACHINES. THE SIDE RAILS AND HEAD OPERATE AUTOMATICALLY.
- \* DO NOT PLACE HANDS OR BODY INSIDE CONFINES OF UNIFORM TYPE MACHINES UNLESS HEAD IS SECURELY LOCKED AND POWER IS DISCONNECTED.
- \* ALWAYS DISCONNECT POWER SOURCE BEFORE SERVICING MACHINE.
- \* WHEN OPERATING A SEMI-AUTOMATIC MACHINE, HOLD BOX FLAPS DOWN AT THE EDGE OF THE BOX. RELEASE HANDS AS SOON AS THE BELTS TAKE THE BOX.
- \* DO NOT WEAR JEWELRY, LOOSE CLOTHING, SUCH AS TIES, SCARVES, ETC., AND LONG HAIR SHOULD BE PULLED BACK WHEN OPERATING THE MACHINE.
- \* SAFETY GLASSES SHOULD BE WORN WHEN WORKING ON OR AROUND THE MACHINE .

**ARRIVAL INSPECTION** \* \* \* \* N O T E \* \* \* \* WHEN UNCRATING MACHINE, CHECK FOR ANY PHYSICAL DAMAGE. IF ANY DAMAGE HAS OCCURRED, NOTIFY COMPANY IMMEDIATELY.

# MACHINE SPECIFICATIONS

MACHINE DIMENSIONS:		
HEIGHT: (*) WIDTH: LENGTH: (*) FOR HIGH MAST	57 3/16 inches 31 15/16 inches 56 3/4 inches 67 3/16 inches	1453mm 812mm 1442mm 1707mm
TABLE HEIGHT (adjustable):		
MINIMUM: MAXIMUM:	22 ¼ inches 32 ¼ inches	565 mm 819 mm
ELECTRICAL:		
STANDARD: OPTIONAL: (upcharge consult LOVESHAW)	115V/1/60 220V/1/50,60 220V/3/50,60 240V/1/50 380V/3/50 440V/3/50 440V/3/50	
BOX CAPACITY:	440 173/00	
LENGTH:	6.5 inches to	165 mm to
WIDTH: <u>2" MACH.</u>	4.5 inches to	114 mm to
<u>3" MACH.</u>	20 inches 5.5 inches to	508 mm 140 mm to
HEIGHT: (*) (!)	20 inches 4.5 inches to	508 mm 114 mm to
(*) FOR HIGH MAST	24 inches 14.5 inches to 34 inches	610 mm 368 mm to 864 mm
(!) FOR MORE BOX RANGE, CON	SULT LOVESHAW	
OPERATING SPEED:		
TOP AND BOTTOM BELT SPEED: NUMBER OF BOXES/MIN.	80 ft./min. VARIES WITH BOX SIZE	24.4m/min.
AIR REQUIREMENTS:	10 S.C.F.M. AT	70 PSI
CLOSURE MATERIAL - PRESSUR	E SENSITIVE TAPE	
WIDTH:	2" MACH. 1.5 inches 38 mm to 2 inches 51 mm	<u>3" MACH.</u> 2 inches 51 mm 3 inches 76 mm
MAX. ROLL DIAMETER:	15 inches	381 mm
WEIGHT: (uncrated)	275 LBS.	125 KG.

NOTE: THESE MACHINE SPECIFICATIONS ARE FOR A 'STANDARD' MACHINE. IF ORDERING A 'CUSTOM' MACHINE, MACHINE SPECIFICATIONS WILL CHANGE FOR INDIVIDUAL CUSTOMER APPLICATION.

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# INTRODUCTION

THE **LITTLE DAVID LDR UNIFORM PRESSURE SENSITIVE TAPER** IS DESIGNED TO TAPE THE TOP AND BOTTOM FLAPS OF A WIDE VARIETY OF BOX SIZES. AFTER MANUALLY ADJUSTING THE MACHINE FOR THE BOX SIZE, THE OPERATOR ONLY HAS TO FOLD THE FLAPS AND PUSH THE BOX INTO THE MACHINE AFTER WHICH THE MACHINE WILL TAPE THE TOP AND BOTTOM FLAPS AND DISCHARGE THE BOX.

THE SIMPLE BUT SOPHISTICATED DESIGN INSURES A MINIMUM OF MAINTENANCE PROBLEMS, AND THE MACHINE CAN BE EASILY OPERATED BY UNSKILLED OPERATORS. DUE TO ITS SMALL SIZE AND SIMPLE PLUG-IN CONNECTION, IT CAN BE QUICKLY MOVED TO THE AREA WHERE IT IS NEEDED. IT MAY STAND ALONE OR IF DESIRED, BE INCORPORATED IN A CONVEYOR SYSTEM.

THE FINEST MATERIALS AND WORKMANSHIP HAVE BEEN EMPLOYED TO INSURE SATISFACTION. IF ADJUSTMENTS OR REPAIRS BECOME NECESSARY YOU WILL FIND SIMPLE INSTRUCTIONS OUTLINED IN THIS MANUAL. IF A PROBLEM OCCURS WHICH IS NOT COVERED IN THE MANUAL, PLEASE TELEPHONE OUR SERVICE DEPARTMENT AT:

> LOVESHAW CORPORATION 2206 EASTON TURNPIKE BOX 83 SOUTH CANAAN, PA 18459 PHONE: 1-800-962-2633 / 570-937-4921 FAX: 570-937-4370

> LOVESHAW - EUROPE UNIT 9, BRUNEL GATE WEST PORTWAY INDUSTRIAL ESTATE ANDOVER, HAMPSHIRE SP10 3SL ENGLAND

OR YOUR NEAREST LITTLE DAVID DISTRIBUTOR

LOVESHAW an ITW COMPANY

### INSTALLATION

FOR DOMESTIC CUSTOMERS ONLY - THE LITTLE DAVID IS SHIPPED COMPLETELY ASSEMBLED.

THE LITTLE DAVID IS READY FOR OPERATION AFTER PLUGGING IT INTO AN APPROPRIATE GROUNDED ELECTRICAL OUTLET AND SUPPLYING IT WITH THE RECOMMENDED AIR SUPPLY. THE CONNECTION CABLE IS LOCATED ON THE MAST SIDE, EXIT END OF THE MACHINE.

THE HEIGHT OF THE MACHINE CAN BE ADJUSTED FROM 22 <sup>1</sup>/<sub>4</sub> " TO 33 <sup>1</sup>/<sub>4</sub>" (565 mm to 844 mm) IN ANY INCREMENT BY ADJUSTING THE HEIGHT OF THE LEG EXTENSIONS.

THE MACHINE SHOULD BE PLACED ON A FLAT LEVEL FLOOR SO THAT IT DOES NOT ROCK. DUE TO ITS PORTABILITY AND EASY PLUG-IN CONNECTION, THE MACHINE MAY BE QUICKLY MOVED TO VARIOUS LOCATIONS AS THE NEED ARISES. OPTIONAL CASTERS ARE AVAILABLE, IF REQUIRED. THERE ARE HOLES PROVIDED IN THE LEG EXTENSIONS FOR LEVELING BOLTS, IF REQUIRED.

THE INFEED TABLE CAN BE USED SO THAT THE PACKER CAN FILL THE BOXES AND CLOSE THE FLAPS PRIOR TO FEEDING THE BOXES INTO THE MACHINE. A CONVEYOR SHOULD BE PROVIDED AT THE OUTFEED END OF THE MACHINE TO RECEIVE THE BOXES AS THEY ARE DISCHARGED FROM THE MACHINE. IMPORTANT: BE SURE THE TABLE AND CONVEYOR ARE 1/4" (6 mm) BELOW THE MACHINE BELT HEIGHT.

# INSTALLATION AND ADJUSTMENT OF DRIVE COMPONENTS

THE MACHINE CONVEYOR SYSTEM CONSISTS OF (5) KEY COMPONENTS.

- 1. MOTOR / GEARBOX SYSTEM
- 2. DRIVE ROLLERS
- 3. BELTS
- 4. FRONT BELT TENSIONER AND GUIDES

#### MOTOR / GEARBOX SYSTEM:

THE MOTOR AND GEARBOX SYSTEM IS LOCATED IN THE REAR OF THE MACHINE TUCKED UNDER THE FRAME. SEE ASSEMBLY FOR INDIVIDUAL PART NUMBERS. THE SYSTEM CAN BE REMOVED FOR INSPECTION AND REPLACEMENTS BY FOLLOWING THIS PROCEDURE.

- 1. DISCONNECT POWER FROM MACHINE AND LOCK OUT POWER USING LOCKOUT BRACKET ON STARTER SWITCH.
- 2. LOOSEN THE (4) MOUNTING BOLTS AT THE GEARBOX SLIDE BRACKET. THEN SLIDE THE MOTOR AND GEARBOX ASSEMBLY UP TOWARDS THE FRAME. THIS WILL REMOVE THE TENSION FROM THE DRIVE CHAIN AND ALLOW THE DRIVE CHAIN TO BE REMOVED FROM THE ASSEMBLY.
- 3. THE POWER SUPPLY CORD MUST BE REMOVED FROM MOTOR FOR REMOVAL FROM MACHINE.
- 4. THEN REMOVE THE (4) MOUNTING BOLTS WHILE SUPPORTING THE MOTOR AND GEARBOX ASSEMBLY THEM REMOVE FROM THE MACHINE.
- 5. THE MOTOR MAY BE REMOVED FROM GEARBOX ASSEMBLY BY REMOVING THE (4) MOUNTING BOLTS ON THE GEARBOX FLANGE.
- 6. THE PROCESS SHOULD BE REVERSED TO REASSEMBLE THE SYSTEM.

# DRIVE ROLLERS AND BELT REPLACEMENT:

THE DRIVE ROLLERS ARE LOCATED ON THE DRIVE SHAFT AT THE REAR OF THE MACHINE. THEY TRANSFER POWER FROM THE GEARBOX ASSEMBLY TO THE BELTS. EACH BELT IS REPLACED SEPARATELY; HOWEVER, IT IS RECOMMENDED THAT BOTH BELTS BE REPLACED AT THE SAME TIME. IT IS IMPORTANT THAT FACTORY SUPPLIED BELTS BE USED SINCE THEY ARE OF SPECIAL CONSTRUCTION. TO REPLACE BELTS FOLLOW INSTRUCTIONS #1 AND #2 LISTED BELOW.

- 1. TURN ON MACHINE UNTIL THE LACED PORTION OF THE BELT IS SHOWING THEN STOP THE MACHINE. (USE EXTREME CAUTION WHEN WORKING ON THE MACHINE WHILE POWER IS CONNECTED.) PULL UPWARD ON THE BELT TO COLLAPSE THE SELF-TENSIONING ASSEMBLY AT THE FRONT END OF THE MACHINE. PLACE A WEDGE (EXAMPLE: SCREWDRIVER HANDLE) BETWEEN THE FRAME AND BELT TO KEEP THE SELF-TENSIONING ASSEMBLY COLLAPSED. THIS WILL ALLOW THE REMOVAL OF THE PIN IN THE LACED PORTION OF THE BELT.
- 2. SLIDE THE BELT OUT OF THE MACHINE AND REPEAT FOR THE OTHER BELT.
- 3. THE PROCESS SHOULD BE REVERSED TO REASSEMBLE THE SYSTEM.

# FRONT BELT TENSIONER ASSEMBLIES AND GUIDE ADJUSTMENT:

THE FRONT BELT TENSIONER ASSEMBLIES ARE LOCATED AT THE FRONT END OF THE MACHINE TUCKED INSIDE THE FRAME. THIS IS A SELF-TENSIONING SYSTEM THAT CONSTANTLY PLACES FORCE ON THE BELT TO TAKE UP ANY ADJUSTMENT IN LENGTH. THEY CONSIST OF (3) ITEMS - A TENSION ROLLER BRACKET WITH ROLLER, (2) GUIDE ROLLERS, AND (2) COMPRESSION SPRINGS. EACH TENSIONER CAN BE MOVED INDEPENDENTLY IN ORDER TO ACCOMMODATE THE 2" OR 3" TAPE CARTRIDGES. SEE ASSEMBLY FOR INDIVIDUAL PART NUMBERS. THE ADJUSTMENT OF THE FRONT BELT TENSIONER IS AS FOLLOWS.

- 1. DISCONNECT POWER FROM MACHINE AND LOCK OUT POWER USING LOCKOUT BRACKET ON SUPPLIED POWER OR MACHINE POWER CORD.
- 2. REFER TO ASSEMBLY FOR DIMENSIONS TO LOCATE THE POSITION OF THE TENSIONER.
- 3. THERE ARE SPLIT SHAFT COLLARS LOCATED ON EACH SIDE OF THE TENSIONER ASSEMBLY. LOOSEN THE COLLARS AND SLIDE TENSIONER INTO POSITION.
- 4. TIGHTEN COLLARS AFTER IN POSITION AND RESTORE POWER TO MACHINE.

# ADJUSTMENT OF LEG EXTENSIONS

# LEG EXTENSION ADJUSTMENT

THE LEG EXTENSIONS ARE LOCATED ON THE INSIDE OF THE (4) LEGS OF THE MACHINE. THEY HAVE THE ABILITY TO BE ADJUSTED INFINITELY IN THEIR RANGE. SEE ASSEMBLY FOR INDIVIDUAL PART NUMBERS. THE PROCEDURE FOR ADJUSTING IS AS FOLLOWS.

- 1. DISCONNECT POWER FROM MACHINE AND LOCK OUT POWER USING LOCKOUT BRACKET ON STARTER SWITCH.
- 2. REMOVE WEIGHT OFF MACHINE LEG.
- 3. LOOSEN THE 12 mm LOCKING BOLT LOCATED ON THE INSIDE OF THE MACHINE LEG. THIS WILL ALLOW THE LEG EXTENSION TO SLIDE FREELY TO PROPER HEIGHT.
- 4. TIGHTEN THE LOCKING BOLT TO 50 FT/LBS. OF TORQUE TO INSURE PROPER CLAMPING.
- 5. REPEAT PROCESS ON ALL LEGS UNTIL THE DESIRED MACHINE HEIGHT IS OBTAINED.

# OPERATION

AFTER THE TAPE CARTRIDGES ARE LOADED, THE MACHINE IS READY TO SEAL BOXES. PLACE A SAMPLE BOX OF THE SIZE TO BE SEALED ON THE INFEED TABLE, FOLD THE FLAPS AND PUT JUST IN FRONT OF THE TOP TAPE CARTRIDGE. RELEASE THE SIDE RAILS BY TURNING THE SIDE RAIL LOCK HAND WHEEL COUNTERCLOCKWISE AND MOVE SIDE RAILS IN UNTIL BOTH RAILS ARE IN CONTACT WITH THE BOX. LOCK THE SIDE RAILS BY TURNING THE HAND WHEEL CLOCKWISE. RELEASE THE HEAD BY TURNING THE HEAD LOCK HAND WHEEL COUNTERCLOCKWISE. LOWER THE HEAD UNTIL IT MAKES CONTACT WITH THE BOX; THEN PUT A SLIGHT ADDITIONAL PRESSURE ON THE BOX. LOCK THE HEAD LOCK HAND WHEEL CLOCKWISE.

START THE MACHINE WITH START SWITCH LOCATED ON THE OPERATOR SIDE OF THE MACHINE. SAMPLE BOX WILL BE TAPED AND DISCHARGED. MACHINE IS NOW READY TO PROCESS BOXES.

THE OPERATOR SHOULD FOLD THE BOX FLAPS IN THE NORMAL MANNER. WHILE HOLDING THE FLAPS CLOSED ON THE REAR OF THE BOX, THE OPERATOR SHOULD FEED THE BOX INTO THE MACHINE UNTIL THE BELTS TAKE IT. THE MACHINE WILL SEAL THE TOP AND BOTTOM FLAPS AND DISCHARGE THE BOX TO THE OUTFEED CONVEYOR AUTOMATICALLY.

# Machine Maintenance:

Daily----- Clean machine ( as required)
Inspect bottom belt drives.
Weekly---- Check belt tensioner
Inspect area around motor & gearbox
Inspect belt idlers
Adjust finger guards for belts (as required)
Inspect / Lubricate drive chain
Inspect / lubricate drive roller bearings
Monthly---- Check / Adjust head wear pads
Check drive roller belt lagging.

Cartridge Maintenance: Refer to cartridge area of manual

### MAIN FRAME

STARTER SWITCH:

THE STARTER SWITCH IS MOUNTED ON THE OPERATOR SIDE OF THE MACHINE. TO REPLACE THIS SWITCH, FIRST DISCONNECT THE MACHINE FOR THE ELECTRICAL SUPPLY. REMOVE THE SWITCH BY LOOSENING THE TWO FASTENING SCREW AND PULL SWITCH FOR THE ELECTRICAL BOX. REMOVE THE SIRES AFTER FIRST NOTING THEIR CONNECTION TO THE SWITCH.

TO REPLACE THE STARTER SWITCH, REVERSE THE ABOVE PROCEDURE.

SIDE RAILS:

THE SIDE RAILS CENTER AND ALIGN THE BOX AS IT IS BEING PROCESSED. THEY ARE MANUALLY SET BY LOOSENING THE SIDE RAIL LOCK HAND WHEEL COUNTERCLOCKWISE. MOVE THE SIDE RAILS IN UNTIL BOTH SIDE RAILS COME IN CONTACT WITH THE BOX. RE-LOCK THE SIDE RAILS BY TURNING THE SIDE RAIL LOCK HAND WHEEL CLOCKWISE.

#### BELT THREADING DIAGRAM

KEY	PART NUMBER	DESCRIPTION
1	LDU-1128-4	BELT
2	LDU-1064-5	DRIVE ROLLER
3	PSC301232	BELT TENSIONING SPRING
4	K286	GUIDE ROLLER
5	LDU-1092-5	CONV. ROLLER BRACKET
6	PSC196-4	ROLLER



# HEAD

THE HEAD TROLLEY ASSEMBLY TRAVELS ALONG THE MAST ON CAM BEARINGS AND UHMW WEAR PADS. THE HEIGHT OF THE HEAD IS ADJUSTED BY TURNING THE LOCK HAND KNOB COUNTERCLOCKWISE TO RELEASE THE HEAD. TURNING THE HAND WHEEL CLOCKWISE WILL LOCK THE HEAD IN THE DESIRED POSITION.

# ADJUSTMENT OF HEAD ASSEMBLY

#### HEAD TROLLEY WEAR PAD ADJUSTMENT

SEE ASSEMBLY FOR INDIVIDUAL PART NUMBERS. THE ADJUSTMENT OF THE TROLLEY ASSEMBLY IS AS FOLLOWS.

- 1. DISCONNECT POWER FROM MACHINE AND LOCK OUT POWER USING LOCKOUT BRACKET ON STARTER SWITCH.
- 2. THERE ARE (4) NYLON PATCHED SET SCREWS LOCATED ON THE LOCK SIDE OF THE TROLLEY BLOCK. BY ADJUSTING THESE SET SCREWS INWARD THEY WILL REDUCE THE CLEARANCE BETWEEN THE WEAR PAD AND THE MAST. ADJUSTMENT OF THE PAD MUST BE UNIFORM ON ALL (4) SCREWS TO INSURE THAT PAD IS PARALLEL TO THE MAST. THE RECOMMENDED CLEARANCE IS APPROXIMATELY .020" OR .5 mm.
- 3. DURING THE ADJUSTMENT PROCESS SLIDE THE HEAD UP AND DOWN TO INSURE A SMOOTH MOVEMENT.

#### HEAD TROLLEY CAM BEARING ADJUSTMENT

THERE ARE (2) SETS OF CAM BEARINGS LOCATED IN THE TROLLEY ASSEMBLY. THE FIRST SET IS LOCATED IN THE FRONT OF THE HEAD LIFTING TROLLEY ASSEMBLY AND IS FIXED. THE SECOND SET IS LOCATED AT THE REAR OF THE ASSEMBLY AND IS MOVABLE. THE ADJUSTMENT OF THE REAR CAM BEARING ASSEMBLY IS AS FOLLOWS.

- 1. DISCONNECT POWER FROM MACHINE AND LOCK OUT POWER USING LOCKOUT BRACKET ON STARTER SWITCH.
- 2. REMOVE FRONT SPRING GUARD BY REMOVING THE (2) MOUNTING SCREWS LOCATED AT THE TOP OF THE GUARD.
- 3. THEN REMOVE THE MAST GUARD BY REMOVING ITS (8) MOUNTING SCREWS. THERE ARE (4) SCREWS LOCATED ON EACH SIDE OF THE GUARD JUST ABOVE AND BELOW THE SIDE CUT OUT. WITH THESE REMOVED THE GUARD WILL LIFT OFF.
- 4. ON THE TROLLEY ASSEMBLY THERE ARE (4) SET SCREWS. EACH SET SCREW PUSHES ON A TEE NUT THAT HOUSES THE CAM BAR SUPPORT. BY TURNING THE SET SCREW IN, THIS WILL DECREASE THE DISTANCE BETWEEN THE CAM BEARING AND THE MAST.
- 5. DURING THE ADJUSTMENT PROCESS SLIDE THE HEAD UP AND DOWN TO INSURE A SMOOTH MOVEMENT.

# ELECTRICAL SYSTEM

THE ELECTRICAL SYSTEM CONSISTS OF THE DRIVE MOTOR WHICH INCORPORATES A FRACTIONAL HP A.C. MOTOR AND THE STARTER SWITCH. THE MOTOR AND FRAME ARE GROUNDED THROUGH THE STARTER SWITCH. THE STARTER SWITCH IS FASTENED TO THE MACHINE' S FRAME.

THE MOTOR STARTERS OVERLOAD RELAY IS FACTORY SET. IF IT TRIPS, A QUALIFIED ELECTRICIAN SHOULD CHECK THE ELECTRICAL SYSTEM, THEN RESET THE OVERLOAD RELAY.

THE BELTS ARE DRIVEN BY THE DRIVE MOTOR ON THE DISCHARGE END OF THE MACHINE. THE MOTOR IS CONTROLLED BY THE STARTER SWITCH IN WHICH THE HEATER IS FACTORY SET TO THE PROPER TRIP SETTING TO PROTECT THE MOTOR.

IF TROUBLE IS BEING EXPERIENCED WITH THE DRIVE MOTOR, A QUALIFIED ELECTRICIAN SHOULD FIRST CHECK THE STARTER SWITCH, THEN THE ELECTRICAL SYSTEM.

TO REPLACE THE DRIVE MOTOR, PROCEED AS FOLLOWS:

- DISCONNECT THE ELECTRICAL CONNECTIONS.
- REMOVE MOTOR FROM GEAR REDUCER, REPLACE MOTOR.
- TO CONNECT MOTOR, REFER TO WIRING DIAGRAM IN MOTOR JUNCTION BOX.
- CHECK MOTOR FOR PROPER ROTATION.

# LUBRICATION

ALL MECHANICAL PARTS ON THE LITTLE DAVID ARE PERMANENTLY LUBRICATED AND SEALED BEARINGS ARE USED THROUGHOUT.

THE REDUCER HAS BEEN PRE-CHARGED AT THE FACTORY WITH SYNTHETIC LUBRICANT.

THE MAST SHOULD BE CLEANED AND SPRAYED WITH A SILICONE LUBRICANT - THIS SHOULD BE DONE ON A WEEKLY BASIS TO ENSURE FREE MOVEMENT OF THE HEAD.

# **SEQUENCE OF OPERATIONS - LEGEND RANDOM**

LISTED BELOW IS THE SEQUENCE OF OPERATIONS FOR A LEGEND RANDOM WITH ROLLER INFEED PACK TABLE. OPERATOR IS TO ASSURE THAT THE APPROPRIATE ELECTRICAL AND PNEUMATIC REQUIREMENTS ARE SUPPLIED.

- PLACE BOX ON ROLLER INFEED TABLE AND CLOSE ALL FLAPS.
- WHILE HOLDING FLAPS CLOSED AT REAR TOP OF BOX, ROLL IT FORWARD TOWARDS THE CASE SEALER. THE BOX WILL DEPRESS THE ROLLER SWITCH (LS2A) ACTIVATING THE SIDE RAIL VALVE (SV2) CLOSING AND CENTERING THE BOX. THIS WILL HELP TO HOLD THE CASE WHILE PACKING. CONTINUE TO ROLL IT FORWARD TOWARDS THE CASE SEALER AND THE BOX WILL DEPRESS THE ROLLER SWITCH (LS2) UNTIL THE BOX IS IN THE MACHINE.
- IN ONE SMOOTH LINEAR MOTION, STILL HOLDING FLAPS CLOSED, ROLL BOX FORWARD TOWARDS THE CASE SEALER. THE BOX WILL CONTACT THE HEAD PADDLE (LDU-1387-4) THIS ACTIVATES THE PADDLE ROLLER SWITCH (LS1). THIS WILL THEN ACTIVATE THE HEAD LIFTING VALVE (SV1) RAISING HEAD TO THE BOX HEIGHT ALLOWING YOU TO FEED THE BOX UNTIL IT IS ABLE TO DRIVE IT THOUGH THE CASE SEALER.
- AS BOX EXITS THE ROLLER PACK TABLE THE SIDE RAIL WILL RELEASE AND RETURN TO THE OPEN POSITION.
- WHEN THE BOX PASSES THE EXIT PHOTO EYE (PE2) THE HEAD WILL RAISE (BURP) TO RELEASE THE BOX.
- THE HEAD WILL LOWER TO ORIGINAL DOWN POSITION AND MACHINE IS NOW READY FOR A NEW BOX TO BE PROCESSED.

#### SEQUENCE OF OPERATIONS - LEGEND RANDOM CONSECUTIVE FEED (BACK TO BACK)

THE LEGEND RANDOM IS EQUIPPED WITH TECHNOLOGY THAT WILL ALLOW BOXES OF THE SAME SIZE TO BE FED CONSECUTIVELY, WITH APPROPRIATE SPACING, WITHOUT THE HEAD RELEASING (BURP).

- FOLLOW STANDARD BOX PROCESSING FOR THE FIRST BOX.
- INTRODUCE THE SECOND BOX AS THE FIRST BOX IS TRAVELING THROUGH THE CASE SEALER ENSURING THAT THERE IS A MINIMUM OF 12 INCHES OF SPACE FROM THE BACK OF THE FIRST BOX TO THE FRONT OF THE SECOND BOX. (THIS PROCESS CAN BE REPEATED IF YOU MAINTAIN THE 12 INCH MINIMUM SPACING).
- WHEN THE SECOND BOX BLOCKS PHOTO EYE (PE1) LOCATED TOWARDS THE FRONT OF THE HEAD, THIS WILL INHIBIT THE HEAD RAISE (BURP) FUNCTION.
- WHEN THE SECOND BOX PASSES THE EXIT PHOTO EYE (PE2), THE HEAD WILL RAISE (BURP) TO RELEASE THE BOX.
- THE HEAD WILL LOWER TO ORIGINAL DOWN POSITION AND MACHINE IS NOW READY FOR A NEW BOX TO BE PROCESSED.

# BASE LINE SETUP & ADJUSTMENT PROCEDURES FOR LEGEND RANDOM HEAD "BURP"

- 1. SHUT OFF ELECTRICITY AND LOCK OUT / TAG OUT MACHINE.
- 2. LOCATE (PE2) PHOTOEYE LOCATED ON THE REAR SIDE OF THE HEAD ASSEMBLY ON THE INSIDE TOWARDS THE MAST.
- TO ADJUST THE AMOUNT OF BURP LOOSEN AND SLIDE THE PHOTOEYE MOUNT. SLIDING THE MOUNT TOWARDS THE EXIT WILL DECREASE THE BURP. SLIDING THE MOUNT TOWARDS THE ENTRANCE WILL INCREASE THE BURP. <u>NOTE:</u> AFTER ANY ADJUSTMENT MAKE SURE PHOTOEYE IS LOOKING THRU THE SLOT SHAPED HOLE IN THE BOTTOM OF THE HEAD PLATE.
- 4. REMOVE LOCK OUT / TAG OUT DEVICE AND RUN BOXES AS NORMAL.

#### BASE LINE SETUP & ADJUSTMENT PROCEDURES FOR LEGEND RANDOM PNEUMATIC ASSEMBLY

THE LEGEND RANDOM IS EQUIPPED WITH A PNEUMATIC ASSEMBLY THAT CONTROLS PRESSURE SENT TO THE ACTIVATING HEAD LIFTING AND SIDE RAIL CYLINDERS. THIS ASSEMBLY IS LOCATED ON THE MAST SIDE NEXT TO THE ELECTRICAL ENCLOSURE TOWARDS THE EXIT END OF THE MACHINE.

#### HEAD LIFTING CYLINDER

- 1. TURN ON MAIN AIR VALVE (PSR706A) LOCATED ON OPERATOR SIDE OF MACHINE.
- 2. TURN CLOCKWISE TO INCREASE AND COUNTERCLOCKWISE TO DECREASE UNTIL THE HEAD LIFTING CYLINDER REGULATOR (R1) READS 75 TO 80 PSI FOR 2 INCH TAPE HEAD AND 3 INCH TAPE HEAD. RUN BOX TO CHECK ADJUSTMENT.

#### **SPECIAL NOTE:**

INCREASING HEAD LIFTING PRESSURE WILL RESULT IN OVER TRAVEL AND CAUSE POOR BOX SEALING.

#### SIDE RAIL CYLINDER

1. TURN CLOCKWISE TO INCREASE AND COUNTERCLOCKWISE TO DECREASE UNTIL SIDE RAIL CYLINDER REGULATOR (R2) READS 35 PSI. RUN BOX TO CHECK ADJUSTMENT.

#### SPECIAL NOTE:

INCREASING SIDE RAIL PRESSURE WILL ACCELERATE CLOSING SPEED RESULTING IN EXCESSIVE WEAR AND BOX STALLING. LOW PRESSURE RESULTS IN SLOW CLOSING SPEED CAUSING POOR BOX CENTERING.

# SETUP PROCEDURE FOR LEGEND RANDOM UNIFORM BOX RUNS

THE LEGEND RANDOM IS EQUIPPED WITH SIDE RAIL AND HEAD LOCKING KNOBS SO YOU WILL BE ABLE TO RUN THE MACHINE IN A UNIFORM MODE:

- 1. PLACE BOX ON ROLLER INFEED TABLE AND CLOSE ALL FLAPS.
- 2. WHILE HOLDING FLAPS CLOSED AT THE REAR TOP OF BOX, ROLL IT FORWARD TOWARDS THE CASE SEALER. THE BOX WILL DEPRESS THE ROLLER SWITCH (LS2) ACTIVATING THE SIDE RAIL VALVE (SV2) CLOSING AND CENTERING THE BOX. TIGHTEN SIDE RAIL LOCKING KNOB LOCATED ON THE OPERATOR SIDE TOWARDS THE ENTRANCE END OF THE MACHINE.
- 3. IN ONE SMOOTH LINEAR MOTION STILL HOLDING FLAPS CLOSED AT THE REAR TOP OF BOX, ROLL IT FORWARD TOWARDS THE CASE SEALER. THE BOX WILL THEN ACTIVATE THE HEAD LIFTING VALVE (SV1), RAISING THE HEAD TO BOX HEIGHT, ALLOWING YOU TO FEED THE BOX UNTIL IT IS ABLE TO DRIVE IT IN THE CASE SEALER. WHEN THE BOX IS UNDER THE HEAD PRESS THE E-STOP LOCATED ON THE OPERATOR SIDE OF THE MACHINE. TIGHTEN THE HEAD LOCK KNOB LOCATED ON THE MAST ASSEMBLY.
- 4. RESTART MACHINE AND ALLOW THE BOX TO EXIT AS NORMAL. THE MACHINE IS NOW LOCKED TO THE ORIGINAL BOX SIZE.

# PROCEDURES FOR RETURNING LEGEND RANDOM FROM UNIFORM TO RANDOM

- 1. MAKE SURE THAT THE PROPER AMOUNT OF AIR IS BEING SUPPLIED TO THE PNEUMATIC ASSEMBLY. THE MAIN AIR VALVE (PSR706A) SHOULD BE IN THE ON POSITION. THE HEAD LIFTING REGULATOR (R1) SHOULD READ 55 TO 60 PSI FOR 2 INCH TAPE AND 60 TO 65 FOR 3 INCH TAPE. SIDE RAIL CYLINDER REGULATOR (R2) SHOULD READ 30 TO 35 PSI.
- 2. SLOWLY LOOSEN THE SIDE RAIL LOCKING KNOB LOCATED ON THE OPERATOR SIDE TOWARDS THE ENTRANCE END OF THE MACHINE. THIS WILL RELEASE THE SIDE RAILS TO RANDOM MODE.

#### CAUTION:

FAILURE TO FOLLOW STEP (3) MAY RESULT IN A HAZARDOUS CONDITION.

- 3. LOCATE THE HEAD RAISING SWITCH LOCATED ON THE OPERATOR SIDE OF THE ROLLER PACK TABLE. TURN SWITCH ON TO APPLY PRESSURE TO THE HEAD LIFTING CYLINDER.
- 4. SLOWLY LOOSEN THE HEAD LOCKING KNOB LOCATED ON THE MAST ASSEMBLY. THE HEAD WILL RAISE TO THE HIGHEST POSITION.
- 5. TURN OFF THE HEAD RAISING SWITCH AND THE HEAD WILL LOWER TO RESET THE RANDOM MODE.

	TRO	UBLE SHO	OTING	
TAPING DIFFICULTIES:				
	PROBLEM:		SOLUTION:	
1.	TAPE DOES NOT ADHERE WELL	A.	CHECK THAT BOX IS NOT WAXY OR OILY.	
	IO BOX:	В.	CHECK THAT BOX IS PROPERLY CUT AND SCORED SO THAT THE FLAPS DO NOT OVERLAP. IF THE TAPE ADHERES TO THE TOP AND BOTTOM BUT NOT TO THE END PANELS, THE BOX MAY BE SKEWED FORMING A PARALLELOGRAM. IF THIS CONDITION EXISTS, BRING IT TO THE ATTENTION OF YOUR BOX SUPPLIER.	
		C.	CHECK THE PRESSURE ON THE WIPE DOWN ROLLERS. IF NECESSARY, INCREASE MAIN SPRING PRESSURE.	
		D.	CHECK THAT THE SPRING IS NOT BROKEN.	
2.	TAPE END STICKS TO ITSELF OR MECHANISM:	A.	CHECK THAT THERE IS NO TOO MUCH DRAG ON THE TAPE CAUSING STRETCHING AND SNAP BACK AT CUT OFF. REDUCE THE TAPE CORE DRAG SETTING.	
		В.	CHECK THE TAPE THREADING PATH.	
		C.	CHECK FOR DEFECTIVE TAPE ROLL BY PULLING TAPE OFF MANUALLY. THE PULL SHOULD BE EVEN AND NOT VARY SUDDENLY.	
		D.	CHECK TAPE GUIDE PLATE SETTING AND FREEDOM OF MOVEMENT.	
		E.	CHECK FOR BINDING.	
3.	TAPE BREAKS OR JAMS:	A.	CHECK THE TAPE ROLL BY PULLING TAPE OFF MANUALLY. THE PULL SHOULD BE EVEN AND SHOULD NOT VARY SUDDENLY.	
		В.	CHECK THE TAPE CORE DRAG SETTING.	
		C.	CHECK THE TAPE THREADING PATH.	
		D.	CHECK FOR NICKS IN EDGE OF TAPE ROLL. PULL OFF DAMAGED TAPE.	
		E.	TAPE TENSION SET TOO HIGH.	

Н

4. TAPE WRINKLES: Α. CHECK THE TAPE ROLL BY PULLING TAPE OFF MANUALLY. THE PULL SHOULD BE EVEN AND SHOULD NOT VARY SUDDENLY. Β. CHECK THE PRESSURE OF THE WIPE DOWN ROLLERS. TOO MUCH OR NO PRESSURE MAY CAUSE WRINKLES. PRESSURE THAT IS TOO GREAT MAY DEPRESS THE FLAPS CAUSING PROBLEMS. IF NECESSARY, RE-ADJUST THE PRESSURE. C. CHECK THAT ALL THE ROLLERS TURN FREELY ON THEIR SHAFTS. CHECK THE BOX CONTENTS. PARTIALLY FULL D. BOXES OR VERY COMPRESSIBLE CONTENTS MAY ALLOW THE FLAPS TO EXCESSIVELY DEPRESS CAUSING WRINKLES. Ε. CHECK THE DRAG OF THE TAPE. TOO MUCH DRAG MAY CAUSE OVERRUNNING OF THE TAPE ROLL. ADJUST THE TAPE CORE DRAG SETTING. F. TAPE TENSION SET TOO HIGH. G. CHECK ROLLER STOP INSIDE CARTRIDGE. Η. CHECK THAT TAPE IS PROPERLY THREADED AND THAT TAPE CORE IS PROPERLY CENTERED. CHECK THE PRESSURE OF THE HEAD AGAINST Ι. THE BELTS AND HESITATE AS IT IS BEING FED THROUGH THE MACHINE. ADJUST THE HEIGHT. CHECK THAT THE BELTS ARE NOT SLIPPING. J. CHECK ADJUSTMENT OF THE GUIDE PLATE AND K. FINGER PLATE. SHORT TAPE TAB ON BOX: 5. A. CHECK TAPE TENSION. Β. CHECK ROLLERS FOR BINDING.

6. TAPE NOT BEING WIPED ON BOTTOM OF BOX.

THERE ARE LARGE ECCENTRIC STOPS THAT ARE FACTORY SET TO INSURE THAT THE FRONT ROLLER ARM CANNOT BE DEPRESSED BELOW BOX HEIGHT. THEY ARE LOCATED INSIDE CARTRIDGE ON BOTH SIDES. WHEN FULLY DEPRESSED, THE FRONT WIPE ROLLER SHOULD PROTRUDE 3/32" ABOVE CARTRIDGE FRAME. IF THIS NEEDS ADJUSTING, ROTATE ECCENTRIC STOPS. USE BOTH STOPS AND MAKE SURE ROLLER ARM CONTACTS FLAT SURFACES. WHEN PROCESSING BOXES LESS THAN 5" HIGH, THE ECCENTRIC STOPS MUST BE MOVED TO THE HOLE IN THE CARTRIDGE FRAME. THE FRONT ROLLER SHOULD THEN PROTRUDE TO BELT LEVEL.

7.	TAPE NOT CUTTING:	A.	CHECK KNIFE ARM FOR MECHANICAL BINDING.
		В.	CHECK THAT KNIFE IS NOT DULL.
		C.	CHECK SPRINGS ON KNIFE STUDS.
		D.	CHECK BUSHINGS IN KNIFE STUDS.
		E.	IF KNIFE STOP BLOCK IS CAUSING FRICTION ON KNIFE ARM STUDS, ROTATE UNTIL FREE.
		F.	TAPE TENSION IS SET TOO LOW.
8.	TAPE NOT CENTERED ON BOX:	A.	USE SCREW IN CENTER OF TAPE CORE TO RE-ALIGN.
9.	TAPE NOT BEING WIPED:	A.	CHECK MAIN SPRING.
		В.	TAPE TENSION IS SET TOO HIGH.
BOX F	PROBLEMS:		
1.	JAM CLEARING PROCEDURE:	A.	STOP MACHINE.
		В.	OPEN SIDE RAILS AND RAISE HEAD.
		C.	REMOVE JAMMED BOX. CUT TAPE FLUSH WITH END OF WIPE ROLLER.
		D.	RESET HEAD/SIDE RAILS TO A SAMPLE SIZE BOX.
		E.	START MACHINE. MACHINE IS NOW READY TO PROCESS THE NEXT BOX.
2.	INCORRECT BOX SIZE OR SHAPE:	A.	CHECK BOXES TO MAKE SURE THE SIZE FALLS WITHIN THE LIMITS OF THE MACHINE.
		Β.	MACHINE WILL NOT PROCESS UNSTABLE BOXES.
3.	CONTENTS BULGING THROUGH TOP OF BOX:	A.	CHECK TO BE SURE BOX IS NOT OVERFILLED WITH CONTENTS.
4.	BOX SLIPPING AGAINST BELTS:	A.	INCREASE HEAD PRESSURE.

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6. HEAD PRESSURE TOO HIGH: A. RAISE HEAD SLIGHTLY.

#### BELT DRIVE PROBLEMS:

CHECK THAT MACHINE IN CONNECTED TO A LIVE ELECTRICAL SOURCE.

- 1.BELTS SLIP.A.RAISE HEAD SLIGHTLY.
  - B. REPLACE IS MISSING OR BROKEN.
- 2. BOX SLIPS AGAINST BELTS:
- 3. BELTS RUB AGAINST FRAME:
- A. LOWER HEAD SLIGHTLY TO INCREASE PRESSURE ON BOX.
  - A. CHECK THAT BELTS ARE POSITIONED CORRECTLY IN BETWEEN THE BELT GUIDE ROLLERS.
  - B. CHECK FOR MISSING OR BROKEN BELT TENSIONING SPRINGS.

# TAPE CARTRIDGE

# TAPE TENSION ROLLER:

THE TAPE TENSION ROLLER MAINTAINS CONSTANT TENSION THROUGHOUT THE LIFE OF THE TAPE ROLL. IT HAS A ONE WAY CLUTCH TO PREVENT PULL BACK ON TAPE. TURNING THE NYLOK NUT CLOCKWISE INCREASES TENSION. COUNTERCLOCKWISE DECREASES TENSION. TOO MUCH TENSION WILL CAUSE PROBLEMS.

# WIPE DOWN ROLLERS:

THE RUBBER WIPE DOWN ROLLERS WIPE THE TAPE ONTO THE BOX AS IT PASSES THROUGH THE MACHINE. THE FRONT ROLLER HAS A ONE WAY CLUTCH TO PREVENT KICKBACK OF TAPE. THE PRESSURE EXERTED BY THE ROLLERS IS ADJUSTABLE BY CHANGING THE POSITION OF THE MAIN SPRING TO A DIFFERENT HOLE ON THE MAIN TIE BAR. THE PRESSURE SHOULD BE SUFFICIENT TO OBTAIN A GOOD WIPE. TOO MUCH PRESSURE CAN CAUSE PREMATURE WEAR. PRESSURE SHOULD BE REDUCED FOR BOXES WITH UNDERFILL OR COMPRESSIBLE CONTENTS.

### TAPE GUIDE PLATE:

THE TAPE IS GUIDED TO THE FRONT ROLLER BY THE TAPE GUIDE PLATE. THE FLAT PORTION OF THIS PLATE MUST BE TANGENT TO THE RUBBER ROLLER FOR PROPER FUNCTION. THIS IS ADJUSTABLE BY ROTATING THE ECCENTRIC STOP IT BEARS AGAINST. THE TAPE GUIDE PLATE IN CONJUNCTION WITH THE FINGER PLATE FORM THE TAPE WHICH ALLOWS IT TO STAND UP. THE TAPE GUIDE PLATE MOVES AS THE BOX PASSES, TO FORM A CORNER. THIS ENSURES SMOOTH TIGHT TAPE APPLICABLE TO THE LEADING CORNER OF THE BOX.

# FINGER PLATE:

THE FINGER PLATE PRESSES AGAINST THE ADHESIVE SIDE OF THE TAPE AND FORCES THE TAPE TO TAKE THE SHAPE OF THE TAPE GUIDE PLATE. IT IS IMPORTANT THAT THE FINGERS JUST MAKE CONTACT WITH THE TAPE GUIDE PLATE, WHEN THERE IS NO TAPE IN CARTRIDGE. IF ADJUSTMENTS ARE NECESSARY,, GENTLY BEND THE FINGERS NEAR THE TIPS. ONLY BEND A SMALL AMOUNT, THEN CHECK. FINGERS MUST CONTACT PLATE. WHEN THE TAPE GUIDE PLATE IS MOVED THE FINGERS SHOULD NOT FOLLOW. **NOTE:** FINGERS SHOULD BE ABLE TO MOVE 1/8" AWAY FROM PLATE.

#### KNIFE ARM:

THE KNIFE ARM IS MOUNTED AT AN ANGLE TO CUT THE TAPE LIKE A SCISSORS. A STUD IS LOCATED ON THE MOUNTING BLOCK TO PREVENT INCORRECT REPLACEMENT OF KNIFE. THE KNIFE SHOULD BE CLEANED PERIODICALLY USING A RAG AND CLEANING FLUID. DO NOT USE A WIRE BRUSH OR OTHER ABRASIVE DEVICES. THE KNIFE ARM SHOULD BE ADJUSTED SO THAT THE TIPS OF THE KNIFE ARE 2 ½" FROM THE CARTRIDGE FRAME. (SEE ASSEMBLY DRAWING). THIS CAN BE ADJUSTED BY LOOSENING THE SMALL NUT ON THE KNIFE ARM STUD AND ROTATING THE STUD UNTIL THE LARGE NUT CONTACTS THE BUMPER AT THE DESIRED SETTING. KNIFE ARM TENSION IS CONTROLLED BY THE COMPRESSION SPRING ON THE STUD. TIGHTEN THE NYLOK NUT FOR GREATER TENSION. ALWAYS POWER DOWN MACHINE FIRST.

# LOADING TAPE: PROCEDURE (TOP AND BOTTOM)

### TOP TAPE:

- 1. REMOVE EXPIRED TAPE ROLL BY SLIDING IT OFF TAPE CORE ON MILL STAND, PULLING IT TOWARD THE REAR OF THE CARTRIDGE.
- 2. LOAD NEW ROLL OF TAPE ON TAPE CORE.
- 3. WITH LEFT HAND, GRAB CARTRIDGE NEAR TAPE CORE AND ROTATE UP/BACK UNTIL CARTRIDGE RESTS AGAINST STOP.
- 4. FOLD TAPE ON ITSELF TO PREVENT ADHESIVE FROM GRABBING CARTRIDGE (ABOUT 1 FT. IN LENGTH).
- 5. THREAD AS PER DIAGRAM.
- 6. ROTATE REAR ROLLER ARM TO EXPOSE KNIFE.
- 7. PULL EXCESS TAPE ACROSS KNIFE TO CUT OFF FOLDED TAPE.
- 8. RELEASE REAR ROLLER ARM.
- 9. GRAB TAPE ROLL WITH LEFT HAND AND ROTATE CARTRIDGE UNTIL IT SETS ON TOP LOAD BRACKET IN HEAD FRAME.

# BOTTOM TAPE:

- 1. GRAB REAR ROLLERS. GRAB FRONT SHAFT OF CARTRIDGE.
- 2. RAISE REAR OF CARTRIDGE AND MOVE CARTRIDGE UP AND OUT OF MACHINE.
- 3. THREADING IS THE SAME AS TOP CARTRIDGE.
- 4. GRABBING THE CARTRIDGE BY REAR ROLLER AND FRONT SHAFT, ANGLE FRONT OF CARTRIDGE ONTO MOUNTING BOLTS AND THEN LOWER REAR OF CARTRIDGE.

#### Little David® Warranty

**For:** All Standard Little David® Semi-Automatic Case Sealers. All Standard LD-16 Series Fully Automatic Case Sealers. All Special Application Case Sealers (Fully & Semi-Automatic).

#### 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.)

#### 1 YEAR ON PLC 1 YEAR ON SERVO DRIVE 1 YEAR ALL OTHER PARTS

(EXCEPT FOR WEAR AND MOVING PARTS.)

\*LIMITED WARRANTY – *LOVESHAW,* AN *ITW* COMPANY (HEREIN AFTER "*LOVESHAW*") WARRANTS ONLY THAT THE GOODS SOLD BY IT SHALL BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP, UNDER PROPER AND NORMAL USE AND MAINTENANCE, AS FOLLOWS:

2 YEARS	
2 YEARS	
2 YEARS	(THIS APPLIES TO SIDE BELTS ONLY)
3 YEARS	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.)
1 YEAR	
1 YEAR	
1 YEAR	(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.)
	2 YEARS 2 YEARS 2 YEARS 3 YEARS 1 YEAR 1 YEAR 1 YEAR

THE WARRANTY PERIOD SHALL COMMENCE AS OF THE DATE OF DELIVERY TO THE PURCHASER. THE 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 REPLACEMENTS AND/OR 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 FACILITY WITHOUT 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.

NO PERSON IS AUTHORIZED TO MAKE ANY WARRANTY OR TO CREATE ANY LIABILITY BINDING UPON *LOVESHAW,* WHICH IS NOT STATED IN THIS WARRANTY. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, *WHICH ARE HEREBY EXCLUDED*. IN PARTICULAR, THE IMPLIED WARRANTY OF MERCHANTABILITY AS WELL AS THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED.

# LOVESHAW AN ITW COMPANY

ROUTE 296, SOUTH CANAAN, PA 18459 TEL: 570.937.4921 - 800.572.3434 - FAX: 570.937.3229

# ILLUSTRATED ASSEMBLY DRAWINGS TABLE OF CONTENTS

MACHINE OVERVIEW

BASE FRAME ASSEMBLY

DRIVE ASSEMBLY - STANDARD

BELT DRIVE ASSEMBLY

DRIVE/MOTOR ASSEMBLY

HEAD ASSEMBLY

SIDE RAIL ASSEMBLY

MAST AND TROLLEY ASSEMBLY

TROLLEY ASSEMBLY

ROLLER PACK TABLE ASSEMBLY

PNEUMATIC SCHEMATIC





		2	1	
			REVISION HISTORY	
			REV DESCRIPTION DATE BY	
			A RELEASED 3/14/2005 AJS	5
				[
			Darta Liat	
ITEM	ΟΤΥ	PART NUMBER	DESCRIPTION	
1	1	.FRM/LDR/2/EXT	BASE FRAME ASSY. (2" TAPE)	
OR	1	.FRM/LDR/3/EXT	BASE FRAME ASSY, (3" TAPE)	
2	1	.MTA/LDR/D	MAST AND TROLLEY ASSY.	
3	1	.ITA/RB/LDR2STD	PACK TABLE ASSY.	
4	1	HDA/LDR/2RS	HEAD ASSY LDR 2" w/ FRT ROLLER SWITCH	
OR	1	HDA/LDR/3RS	HEAD ASSY LDR 3" w/ FRT ROLLER SWITCH	
5	1	PNFU/LDR	PNEU ASSY LEGEND BANDOM	0
6	2	.CAC50	CARTRIDGE 2"	
OR	2	CAC51	CARTRIDGE 3"	
7	1	.BDA/LDU/EXT	BELT DRIVE ASSY.	
8	1	SRA/LDR/EXT18	SIDE RAIL ASSY.	
-	· ·			

PART #	CAD FILE	TOLERANCES UNLESS	LOVESHAW an <i>ITW</i> Company RT. 296, SOUTH CANAAN, PA.	
STD	PLOT DATE 3/15/2005	OTHERWISE NOTED:		
	DRAWN DATE 3/14/2005	.X = 1.050 INCH .XX = 1.015 ANGLES 1/2		
NO FINISH	DO NOT SCALE PRINT	.XXX = 1.005		
UBJECT MATTER THER	EON IS THE EXCLUSIVE PROPERTY OF YOU AS CONFIDENTIAL PRPRIETARY	.X = 1.0mm MACH. 12 METRIC.XX = 1.3mm FINISH	DWG NO .LDR/2 OR .LDR/3	SCALE N/A
A USE THRAFIED TO USE OWNITER THEROF SHALL NOT BE THAN FOR YOUR OWN USE OR TO BE DISCLOSED TO OTHER SEED WRITTER CONSENT OF LOVESHAW-ITW AND WILL BE 4AW-ITW UPON REQUEST.		.XXX =±.1mm	MATERIAL NOTED	CHECKED
		FRACTIONS ± 1/64	DRAWN tonys	APPROVED
	2		1	



	REVISION HISTORY	
	REV DESCRIPTION DATE BY	
	A RELEASED 4/5/2004 AMYR	
	B M.C.R. #07-001 1/31/2007 AMYR	
		D
	Device Line	-
_	Parts List	
	DESCRIPTION	
	MAIN FRAME WELDMENT (RANDOM) EXT DRIVE	
L	EG - FRAME	1
h	EG - ERAME	
+		-
1		$\vdash$
1E	BRACE HORIZONTAL FRONT/REAR	
E	BRACE HORIZONTAL OPER./MAST	
E	BRACE HORIZONTAL OPER./MAST	
Ī	EG EXTENSION	
		1
		-
E	BRACKET - MAST/BASE	
F	FILL PLATE - FRONT	
F	PLATE - ELECTRICAL BOX	
15	STOP - LEG EXTENSION	
F		1c
		-
19	JARTRIDGE STANDOFF (*) FOR 2* ONLY)	-
F	FINGER GUARD (*) SWITCH WITH #17 FOR 3")	
F	FINGER GUARD (*) SWITCH WITH #16 FOR 3")	
19	STIFFENER GUARD	
1	FG RULE 22 25 TO 36	1
+		-
	HEX HEAD M12 X 20	
E	BRACKET - CONVEYOR	
L	LOCK WASHER M8	1
		ĸ
5	SPRING WASHER M10	H
S	SPRING WASHER M10 HEX NUT M10	4
F	SPRING WASHER M10 HEX NUT M10	4
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5 	SPRING WASHER M10           HEX NUT M10           BUT HEAD M10 X 20           HEX HEAD M10 X 20           HEX HEAD M8 X 35	
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S           H	SPRING WASHER M10           HEX NUT M10           BUT HEAD M10 X 20           HEX HEAD M10 X 20           HEX HEAD M8 X 35           LOCK WASHER M6           HEX NUT M6           HSK M6 X 16           SHCS M10 X 30           HSH M5 X 8           BHCS M8 X16           SNAP BUSHING           PHOTOEYE BRACKET - BOTTOM           PHOTOELECTRIC SENSOR           LOCK WASHER M5           ELAT WASHER M5           HEX HEAD M5 x 16           LOCK WASHER M3           SHCS M3 X12           LOCK WASHER M3           SHCS M3 X 12           LOCK WASHER M8           HEX NUT, M8           BHCS M8 X 12           LOCK WASHER M8           HEX JAM NUT M8 X 1.25	B
S         H <td< td=""><td>SPRING WASHER M10           HEX NUT M10           BUT HEAD M10 X 20           HEX HEAD M10 X 20           HEX HEAD M8 X 35           JOCK WASHER M6           HEX NUT M6           FHSC M6 X 16           SHCS M10 X 30           FHSC M6 X 16           SNAP BUSHING           PHOTOEYE BRACKET - BOTTOM           PHOTOELECTRIC SENSOR           JOCK WASHER M5           FLAT WASHER M5           HEX HEAD M5 x 16           JOCK WASHER M3           SHCS M3 X 12           JOCK WASHER M8</td><td></td></td<>	SPRING WASHER M10           HEX NUT M10           BUT HEAD M10 X 20           HEX HEAD M10 X 20           HEX HEAD M8 X 35           JOCK WASHER M6           HEX NUT M6           FHSC M6 X 16           SHCS M10 X 30           FHSC M6 X 16           SNAP BUSHING           PHOTOEYE BRACKET - BOTTOM           PHOTOELECTRIC SENSOR           JOCK WASHER M5           FLAT WASHER M5           HEX HEAD M5 x 16           JOCK WASHER M3           SHCS M3 X 12           JOCK WASHER M8	
S         S           F         F           F         S           S         S           F         F           S         S	SPRING WASHER M10           HEX NUT M10           BUT HEAD M10 X 20           HEX HEAD M10 X 20           HEX HEAD M8 X 35           LOCK WASHER M6           HEX NUT M6           HSC M6 X 16           SHCS M10 X 30           HSH M5 X 8           BHCS M8 X16           SNAP BUSHING           PHOTOELECTRIC SENSOR           LOCK WASHER M5           LAT WASHER M5           HEX HEAD M5 x 16           LOCK WASHER M5           LAT WASHER M5           HEX NUT, M8           BHCS M8 X 12           LOCK WASHER M8           BHCS M8 X 12           LOCK WASHER M8           HEX NUT, M8           BHCS M8 X 12           LOCK WASHER M8           HEX JAM NUT M8 X 1.25	
S         S           F         F           F         S           F         F	SPRING WASHER M10           HEX NUT M10           BUT HEAD M10 X 20           HEX HEAD M10 X 20           HEX HEAD M8 X 35           OCK WASHER M6           HEX NUT M6           HSC M6 X 16           SHCS M10 X 30           HSH M5 X 8           BHCS M8 X16           SNAP BUSHING           PHOTOELECTRIC SENSOR           OCK WASHER M5           LAT WASHER M5           HEX HEAD M5 x 16           OCK WASHER M5           SHCS M3-18mm LG           HEX NUT, M8           BHCS M8 X 12           OCK WASHER M8	
S         S           F         F           F         S           F         S           F         F           S         F           F         L           F         S           F         F           S         F           F         L           L         F           S         F           F         L           L         F           S         F           F         L           L         F           L         F           L         F           L         F           L         F           L         F           L         F           L         F           L         F	SPRING WASHER M10 HEX NUT M10 3UT HEAD M10 X 20 HEX HEAD M10 X 20 HEX HEAD M8 X 35 OCK WASHER M6 HEX NUT M6 HEX NUT M6 HSC M6 X 16 SHCS M10 X 30 HSH M5 X 8 3HCS M8 X16 SNAP BUSHING PHOTOELECTRIC SENSOR OCK WASHER M5 HEX HEAD M5 X 16 OCK WASHER M3 SHCS M3-18mm LG HEX NUT, M8 BHCS M8 X 12 OCK WASHER M8 HEX JAM NUT M8 X 1.25	
S         S           F         F           F         F           S         S           F         F           F         F           F         F           F         F           F         F           F         F           F         F           F         F           F         F           L         S           F         F           L         F           F         F           L         F           F         F           L         F           F         F           L         F           F         F           L         F           F         F           L         F           F         F           L         F           L         F           F         F           L         F           L         F           L         F           L         F	SPRING WASHER M10 HEX NUT M10 3UT HEAD M10 X 20 HEX HEAD M10 X 20 HEX HEAD M8 X 35 OCK WASHER M6 HEX NUT M6 HEX NUT M6 HSC M6 X 16 SHCS M10 X 30 FHSH M5 X 8 3HCS M8 X16 SNAP BUSHING PHOTOELECTRIC SENSOR OCK WASHER M5 HEX HEAD M5 x 16 OCK WASHER M3 SHCS M3 - 18mm LG HEX NUT, M8 3HCS M8 X 12 OCK WASHER M8 HEX JAM NUT M8 X 1.25	
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S     S       F     F       F     F       S     F       F     F       L     L       F     F       L     L       F     F       L     L       F     F       L     L       F     F       L     L       F     F       L     L       F     F       L     L       F     F       L     L       F     F       L     L       F     F       L     L    L <td>SPRING WASHER M10 HEX NUT M10 BUT HEAD M10 X 20 HEX HEAD M10 X 20 HEX HEAD M8 X 35 OCK WASHER M6 HEX NUT M6 THSC M6 X 16 SHCS M10 X 30 THSH M5 X 8 BHCS M8 X16 SNAP BUSHING PHOTOELECTRIC SENSOR OCK WASHER M5 TEX HEAD M5 x 16 OCK WASHER M5 HEX NUT, M8 SHCS M3 X 12 OCK WASHER M8 HEX NUT, M8 SHCS M8 X 12 OCK WASHER M8 HEX JAM NUT M8 X 1.25 ELOVESHAW an <i>ITW</i> Company RT. 296, SOUTH CANAAN, PA. TITLE BASE FRAME ASSY LDR 2"-OR- 3" DWG NO _FRM/LDR/2-3/EXT SCALE N/A MATERIAL N/A CHECKED</td> <td></td>	SPRING WASHER M10 HEX NUT M10 BUT HEAD M10 X 20 HEX HEAD M10 X 20 HEX HEAD M8 X 35 OCK WASHER M6 HEX NUT M6 THSC M6 X 16 SHCS M10 X 30 THSH M5 X 8 BHCS M8 X16 SNAP BUSHING PHOTOELECTRIC SENSOR OCK WASHER M5 TEX HEAD M5 x 16 OCK WASHER M5 HEX NUT, M8 SHCS M3 X 12 OCK WASHER M8 HEX NUT, M8 SHCS M8 X 12 OCK WASHER M8 HEX JAM NUT M8 X 1.25 ELOVESHAW an <i>ITW</i> Company RT. 296, SOUTH CANAAN, PA. TITLE BASE FRAME ASSY LDR 2"-OR- 3" DWG NO _FRM/LDR/2-3/EXT SCALE N/A MATERIAL N/A CHECKED	
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REVISION HISTORY			
REV DESCRIPTION DATE BY			
А	RELEASED	5/5/2004	AMYR
В	M.C.R. #05-011	3/10/2005	AMYR

В

 $\blacksquare$ 

А

DESCRIPTION
BASE FRAME ASSEMBLY
BELT
ELECTRICAL BOX
HEX HEAD M8 X 20
LOCK WASHER M8
HEX HEAD M8
REDUCER
HEX HEAD 3/8-16 X 1" LG.
LOCK WASHER 3/8
MOTOR
START/STOP SW. PLATE
START/STOP SW. BOX

R	SPROCKET	GEAR BOX	FT./MIN.
	SPK-0023	RED-1001	80
	SPK-0049	RED-1005	60

iS :	<b>LOVESHAW</b> an <i>ITW</i> Company RT. 296, SOUTH CANAAN, PA.			
1/2	DRIVE MOTOR ASSEMBLY LDR			
125	DWG NO DRIVE MOTOR ASSEMBLY	SCALE N/A		
•	MATERIAL N/A	CHECKED		
4	DRAWN AMYR	APPROVED		

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							REV	REVISIO DESCRIPTIO	N HISTORY	BY
				0 0 0g			A B	RELEASED	$\frac{0}{008} \frac{4}{10}\frac{4}{15}20$	
			$\sim$						00 10/10/20	
		(25)								
		23					Pa	arts List		
				$\square$	ITEM	QTY	PART NUMBE	R [	DESCRIPTIC	)N
				$\left(\begin{array}{c}7\end{array}\right)$	1	1 L	.DU-1126-5	BRACKET	, GEAR BOX	MOUNT
В					2	1 L	.DU-1127-5	BRACKET	, GEAR BOX	SLIDE
	5		(11)		3	1 L	.DU-1051-5	BRACE, B	OTTOM MO	FOR
			Ŭ		4	1 L	DU-1052-5	BRACE, M		
	(25)				5	1 L	DU-1064-5			
	(24)	× h	(14)		6 7		DU-1080-3			JR
			$\bigcirc$		8		PK-0050			
					9	1 5	SEE CHART	SPROCKE	- ' T	
					10	1 L	.DU-1116-4	GUARD, C	HAIN	
					11	2 E	3RG-1019A	BEARING		
					12	2 E	3SG-1041	PLANE BE	ARING	
					14	2 L	.P09-056	BELT LAG	GING	
₽			$\sim$		15	2 F	LWMFP	LOCK WAS	SHER M5	
	o b of g part		1)		16	2 F	BHMF010P10	BUTTON H	HEAD SCRE	W M5 X 10
					17	6 F	FWMHP	FLAT WAS	SHER M8	
			$\frown$		18					3x16 LG.
			(4)		19					 8v20
					21					5820
					23	4 F			SHER 5/16	
	<b>O</b>				24	4 F	HHMH035P10	HEX HEAD	D M8x35	
					25	2 5	SP-12-F	COLLAR		
					26	2 F	HFNMHP	HEX NUT,	M8	
			(26)		ASSY. NU	JMBER	SPROCKET	GEAR BOX	FT./MIN.	
А			20		.LDUC1	110	SPK-0023	RED-1001	80	
					.LDUC	110A	SPK-0049	RED-1005	60	
	(16)		MAT'L PART #	CAD FILE Idr drive std	TOLERAN			VESHAW	an <i>ITW</i>	Company
			C.R.S. STD	PLOT DATE 10/15/2008	OTHERV	WISE NOTE	ED:	RT. 296, SOUTI	H CANAAN, PA	۹.
	(22)		ST. ST. N/A	DRAWN DATE 4/14/2004	.X =±.050 INCH .XX =±.01	0 15 ANGLE				
	$\bigcirc$	(19)	STAINLESS : NO FINISH	DO NOT SCALE PRINT	.XXX =±.0	005				<u> </u>
			THIS DRAWING AND SUBJECT MATTER THER LOVESHAW-ITW AND IS TO BE TREATED BY Y	ON IS THE EXCLUSIVE PROPERTY OF OU AS CONFIDENTIAL PRPRIETARY	.X =±1 METRIC .XX =±	.0mm MAC .3mm FINIS		LDR/DRIVE/STD	SCALE	N/A
			INFORMATION. THIS DRAWING OR SUBJECT I REPRODUCED OTHER THAN FOR YOUR OWN WITHOUT THE EXPRESSED WRITTEN CONSE	IA I LER THEROF SHALL NOT BE USE OR TO BE DISCLOSED TO OTHER IT OF LOVESHAW-ITW AND WILL BE	.XXX =	=T.1mm	MATERIAL	N/A	CHECK	ŒD
			RETURNED TO LOVESHAW-ITW UPON REQUE	ST.	FRACTI	IONS ±1/	64 drawn	AMYR	APPR	OVED
	4	1 3	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	2			I		1	

	4	3		$\forall$		2			I	1 REVISION H	IISTORY	
									REV A B C	DESCRIPTION RELEASED M.C.R. #04-035 ADDED ITEM #16	DATE 5/6/2004 12/14/2004 2/24/2009	BY AMYR AMYR AMYR
						0000						
			Rol	(16)	, ſ				Parts List	:		
	y where		$\overline{)}$		-	ITEM	QTY	PART NUMB	ER	DESCRIPT	ION	
		V dr ~	-			1	2	LDU-1335-5	TEN	ISION ROLLER BR	ACKET	
	(6)	Nord	$\frown$		$\frown$	2	1	LDU-1098-4	BAF	R - BELT TENSIONE	ER	
			$\sim$	(	8	3	2	LDU-1099-4		CKET - TENSIONE		
					-	4	2	PSC196-4			RGE	
					-	<u> </u>	4	K286D	BOI			
					-	7	4	SPB-1016		APRESSION SPRIN		
		<b>G</b>		$\sim$	-	8	2	EHHMH120P10	HEX	(HD M8 x 120	10	
1				4	-	9	4	PSR609	ROL	L PIN		
					-	10	4	FLWSDP	LOC	K WASHER 1/4		
					T T	11	4	FHFNSEP	HEX	(NUT 1/4-20		
	0 6				Ī	12	4	FLWMHP	LOC	K WASHER M8		
0	R O					13	2	FHHMH020P10	HHC	CS M8x20		
-						14	4	SPC-1001	SPL	IT COLLAR 5/8"		
					_	15	2	FHFNMHP	HEX	(NUT, M8		
					L	16	2	LDU-1549-3	BEL	TROLLER		
			MATH	DADT #	CADEUE bda	du ovt						
			CBS	STD		2009	TOLEF OTHE	RANCES UNLESS ERWISE NOTED:		DV ESHAW	an <i>ITW</i> Com	npany
			S.T.S.	N/A		2009	.X =±	.050	TITLE	RT. 290, SOUTH C	JANAAN, PA.	
			51.51. et			F PRINT	INCH .XX = .XXX	±.015 ANGLES ± 1/2° =±.005	BEL	T DRIVE ASS	SEMBLY	
			THIS DR		IEREON IS THE EXCLUSIVE PI	ROPERTY OF	.X	=±1.0mm MACH. 12E			SCALE N	I/A
				AW-ITW AND IS TO BE TREATED B	Y YOU AS CONFIDENTIAL PR	PRIETARY	METRIC.X	K = <sup>±</sup> .3mm FINISH ∜ KX = <sup>±</sup> .1mm	Divano			w//~\
			INFORM	ATION. THIS DRAWING OR SUBJEC					MATERIAL	N/A	CHECKED	
			INFORM REPROL WITHOU RETURN	ATION. THIS DRAWING OR SUBJEC DUCED OTHER THAN FOR YOUR O T THE EXPRESSED WRITTEN CON IED TO LOVESHAW-ITW UPON REC	IT MATTER THEROF SHALL N WN USE OR TO BE DISCLOSE ISENT OF LOVESHAW-ITW AN QUEST.	D TO OTHER D WILL BE	FRAC	CTIONS + 1/64				

REVISION HISTORY							
REV	DESCRIPTION	DATE	BY				
А	RELEASED	5/6/2004	AMYR				
В	M.C.R. #04-035	12/14/2004	AMYR				
С	ADDED ITEM #16	2/24/2009	AMYR				



		REVISION HISTORY					
Γ	REV	DESCRIPTION	DATE	BY			
Γ	А	RELEASED	9/11/2006	AMYR			
Γ	В	M.C.R. #07-003	5/3/2007	AMYR			
	С	M.C.R. #07-009	1/17/2008	AMYR			
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	071	F	Parts List
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LDU-1409-6	HEAD PLATE
2	3	LDU-1153-3	SHAFT - CARTRIDGE STOP
3	1	LDU-1157-5	HEAD NECK
4	1	LDU-1047-4	STIFFENER - HEAD NECK
5	2	LDU-1284-4	SPACER - HEAD L/R (2" CART.)
OR	0	REMOVED	REMOVED FOR (3" CART.)
6	1	BSG-1045	BUSHING
7	39	FLWMFP	LOCK WASHER M5
8	21	FHDNMFP	HEX DOME NUT M5
9	1	LDU-1325-4	PHOTOEYE BRACKET
10	1	LDU-1325BMI-4	PHOTOEYE BRACKET
11	3	SPH-1123	CABLE HOLDER
12	11	FFWMFP	FLAT WASHER M5
13	17	FHFNMFP	HEX NUT M5
14	3	FFHMI020P88	HEX SOC. CNTRSNK HD. SCREW
15	3	FLWMIP	LOCK WASHER M10
16	3	FHFNMIP	HEX NUT M10
17	6	FHFNMGP	HEX NUT M6
18	8	FLWMGP	LOCK WASHER M6
19	8	FFWMGP	FLAT WASHER M6
20	3	FHHMG016P10	HEX HD. CAP SCREW M6 X 16 LG.
21	2	FHDNMGP	HEX DOME NUT M6
22	2	FSHMG025P10	SOC. HD. CAP SCREW M6 X 25 LG.
23	2	FBHMF016P10	BUTT. HD. CAP SCREW M5 X 0.8 X 16 LG.
24	1	LDU-1410-6	HEAD PLATE
25	1	LDU-1350-4	HEAD GUARD REAR (OFFSET CART.)
26	5	FBHMF012P10	HEX SOC. BUTT. HD. SCREW
27	1	SPH-1188	BUMPER
28	34	FFHMF012P10	FL, HD, CAP SCREW M5 X 0.8 X 12 LG.
29	2	A219BA-30	PHOTOELECTRIC SENSOR
30	4	FSHMD018P10	SOC, HD, CAP SCREW, M3 X 18mm LG.
31	4	FLWMDP	SPRING WASHER
32	1	FEHME025P10	FL HD CAP SCREW M5 X 25 LG
OR	0	REMOVED	REMOVED FOR (3" CART.)
33	1	FEHME030P10	FL HD CAP SCREW M5 X 30 LG
OR	0	REMOVED	REMOVED FOR (3" CART.)
34	9	FEHME016P10	FL HD CAP SCREW M5 X 16 LG
35	1	I DU-1055-5	BRACE HEAD NECK
36	1	LDU-1003-0	HEAD PLATE WEAR STRIP (2" CAPT )
OP	1		
37	1	LDUL1408.4	HEAD PLATE WEAR STRIP (3 CART.)
	1		
39	2	LDU-1400IVII-4	
30	2	LDU-1302-3	
39	2	RSC 1028	
40	4	10111406 4	
41	1	LDU-1400-4	
42		LDU-1405-4	
43	1	LDU-1404-3	
44	1		
45	2	LDU-1398B-3	SPACER - NUSE PADDLE
40	1	LDU-1403A-4	
47	2	FFHME012P10	FL. HD. SOC. HD. SCREW M4 X 12 LG.
48	3	FFHMG020P10	FL. HD. CAP SCREW M6 X 20 LG.
49	1	SPR-1040	COMPRESSION SPRING
50	1	LDU-1516-4	WIRE GUARD (HEAD)
51	2	AH206	WIRE / HOSE CRADLE
52	2	FFHMG030P10	FHCS M6 X 30
53	1	A100N-MS	JUNCTION BOX
54	2	AH199F	FITTING, STRAIN 1/2 NPT

#### NOTE:

#### INDICATES PARTS THAT WILL CHANGE FOR CONVERSION FROM 2" WIDTH TAPE CARTRIDGE TO 3" WIDTH TAPE CARTRIDGE.

				/			
PART #	CAD FILE HDA LDR 2AP OFFSET L	TOLERANCES UNLESS	LOVESHAW	an ITW Company			
STD	PLOT DATE 1/17/2008	OTHERWISE NOTED:	RT. 296, SOUTH CANAAN, PA.				
	DRAWN DATE 9/11/2006	.X = 1.050 INCH .XX = 1.015 ANGLES 1/2	TITLE HEAD ASSY LDR 2"/3" (SPRING)				
NO FINISH	DO NOT SCALE PRINT	.XXX =±.005	w/ OFFSET CART & FRT	ROLLER SWITCH			
UBJECT MATTER THER	EON IS THE EXCLUSIVE PROPERTY OF YOU AS CONFIDENTIAL PRPRIETARY	.X = 1.0mm MACH. 125 METRIC.XX = 1.3mm FINISH	DWG NO .HDA/LDR2-3LF	SCALE			
RAWING OR SUBJECT THAN FOR YOUR OWN	MATTER THEROF SHALL NOT BE USE OR TO BE DISCLOSED TO OTHER	.XXX =t.1mm	MATERIAL	CHECKED			
SHAW-ITW UPON REQUI	EST.	FRACTIONS ± 1/64	DRAWN AMYR	APPROVED			
	2			1			

Parts List					
ITEM	QTY	PART NUMBER	DESCRIPTION		
1	1	LDU-1104-5	SIDE RAIL (RH SIDE)		
2	1	LDU-1203-5	SIDE RAIL (LH SIDE) PNEU.		
3	2	LDU-1032-4	SIDE RAIL BRACKET REAR		
4	1	LDU-1043-4	LOCK ROD		
5	1	LDU-1084-5	SIDE RAIL BRACKET (PNEU)		
6	1	N401-118	CYLINDER		
7	4	BRG-1012	BEARING		
8	1	LDU-1167LE-5	SIDE RAIL TUBE EXT (18") LH		
9	1	LDU-1167RE-5	SIDE RAIL TUBE EXT (18") RH		
10	4	PSC511A	S.R. CAP		
11	1	LDU-1031L-4	SIDE RAIL BRACKET FRONT		
12	4	LDU-1107-3	SIDE RAIL SUPPORT STUD		
13	10	FLWMGP	LOCK WASHER M6		
14	10	FHFNMGP	HEX NUT M6		
15	1	LDU-1042-4	LOCK BLOCK		
16	2	FLWMFP	LOCK WASHER M5		
17	2	FHHMF025P10	HEX HEAD M5x25		
18	1	PSU166-4	SIDE RAIL HAND KNOB		
19	4	FFHMG016P10	FL. HD. SOC. CAP SCREW M6x16		
20	4	FLWMHP	LOCK WASHER M8		
21	4	FHHMH020P10	HEX HEAD M8x20		
22	4	FSHMH016P10	SOC. HEAD CAP SREW M8x16		
23	1	FHHSJ175P08	HEX HEAD 3/8-16 x 1 3/4		
24	2	FFWSFP	WASHER 3/8		
25	3	FFWSEP	FLAT WASHER 5/16		
26	1	FNLNSHP	STD NC NYLOCK NUT 5/16		
27	1	FHHSH275P08	HEX HEAD 5/16-18 x 2 3/4		
28	3	FHJNSIP	HEX JAM NUT 5/16-24		
29	1	FHJNMIP	HEX JAM NUT M10		
30	1	FNLNSJP	STD NC NYLOCK NUT 3/8		
31	1	FNLNSEP	STD NC NYLOCK NUT 1/4		
32	2	N400-46	FITTING		
33	3	PSC552	SPHERICAL ALIGN BEARING		
34	1	LDU-1075A-3	CYLINDER EXTENSION		
35	1	LDU-1258-4	SIDE RAIL BRACE		
36	2	FHHMG016P10	HHCS M6 X 16		
37	1	LDU-1059L-4	SIDE RAIL BRACKET LEFT		
38	1	LDU-1059R-4	SIDE RAIL BRACKET RIGHT		
39	1	LDU-1422-4	LINK BAR (J)		
40	4	FHFNMHP	HEX NUT, M8		



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					REVISION F	IISTORY		]
		$\frown$		REV	DESCRIPTION	DATE	BY	
	、 、	(10)	(22)	A	RELEASED	5/1/2004	AMYR	
( 19		$\checkmark$	$\searrow$	B	M.C.R. #04-035	12/14/2004	AMYR	
				B 6 30 6 8 6	24 36	9 21 5 14		в
		29			35 (17) (37)	38		A
MAT'L	PART #	CAD FILE <b>sra_ldr_ext18</b>	TOLERANCES UNLESS	LO	VESHAW	an ITW Cor	npany	
C.R.S.	STD	PLOT DATE 12/14/2004	UTHERWISE NOTED:		RT. 296, SOUTH C.	ANAAN, PA.		
ST. ST.	N/A	DRAWN DATE 5/1/2004	X = 1.050 INCH .XX = $\frac{1}{2}.015$ ANGLES $\frac{1}{2}.1/2^{\circ}$	SIDE	RAIL ASSE	MBI Y		
STA	INLESS : NO FINISH	DO NOT SCALE PRINT	.XXX = 1.005 X = 1.0mm					
THIS DRA LOVESHA	AWING AND SUBJECT MATTER THER AW-ITW AND IS TO BE TREATED BY Y	EON IS THE EXCLUSIVE PROPERTY OF OU AS CONFIDENTIAL PRPRIETARY	METRIC XX = 1.3mm MACH. 125 FINISH	DWG NO	SRA/LDR/EXT18	SCALE	N/A	
INFORMA REPROD	ATION. THIS DRAWING OR SUBJECT I	MATTER THEROF SHALL NOT BE USE OR TO BE DISCLOSED TO OTHER	.XXX =t.1mm	MATERIAL	N/A	CHECKED		
WITHOUT RETURNE	I THE EXPRESSED WRITTEN CONSE ED TO LOVESHAW-ITW UPON REQUE	NT OF LOVESHAW-ITW AND WILL BE EST.	FRACTIONS ± 1/64	DRAWN /	AMYR	APPROVE	D	
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	RELEASED 1/21/2008 AMYR	_
~	RELEASED 1/21/2000 AWITK	
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Pa	arts List	
UMBER	DESCRIPTION	
1	MAST SPACER	
3	MAST RANDOM	
-5	MAST GUARD	
-4	MAST CAP	
1	MAST SPACER BOTTOM	
-4	MOUNT, CYLINDER	
1	BRKT. CYL. PIVOT	
-4	BRACKET, CYL. TOP (SINGLE)	
1	MAST NUT PLATE	
-4	GUARD SPRING	
P10	FHCS M6 X 1.0 X 16 LG.	−lc
	LOCK WASHER M6	
	HEX NUT M6	
	HEX NUT M12	
	LOCK WASHER M12	
P88	HEX HEAD M12 X 50 LG	
P10	HHCS M8 X 40	
110	FLAT WASHER M8	
	NYLOCK NUT M8	_
P10	HHCS M8 X 20	-4
P10	BHCS M5 X 0 8 X 10 L G	
P10	BUTT HD CAP SCERW M6 X 10 LG	
	FLOW CONTROL	
	MUFFLER	
	7/16-20 HEX JAM NUT	
	BUMPER - S.B. CYLINDER ROD END	_
	FLAT WASHER 1/2"	В
-3		_
P10	HEX HEAD M8 X 45mm LG	_
1		_
r	SET SCREW (SOFT POINT)	_
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1		_
<u>r</u> 1		_
•		_
P10	BHCS M6 X 16	
1 10		
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	HEX DOME NOT MS	_
<u> </u>		
T	OVESHAW an ITW Company	A
	RT. 296, SOUTH CANAAN, PA.	
TITLE		
″∣MA	AST ASSEMBLY	
		-

MASTASSEMBLY						
DWG NO .MTA/LDR/F	SCALE					
MATERIAL	CHECKED					
DRAWN	APPROVED					
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TO RE-ORDER THESE PARTS ORDER PART # .TRA/LDU (THIS INCLUDES (1) LDU-1261B-3 & (2) J206-PS.

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		REVISION	HISTORY	
	REV	DESCRIPTION	DATE	BY
	А	RELEASED	3/14/2005	AJS

Parts List					
ITEM	QTY	PART NUMBER	DESCRIPTION		
1	1	PSC301322	CLAMP SW. SCREW		
2	1	LDU-1142-4	TROLLEY GUARD		
3	1	LDU-1023-3	WEAR STRIP (LOCK SIDE)		
4	1	LDU-1025-3	STRIP, WEAR (FIXED SIDE)		
5	1	PSC301324-3	CLAMP NUT HEAD		
6	1	LDU-1073-4	SPRING BLOCK		
7	3	SPH-1123	CABLE HOLDER		
8	1	LDU-1276-5	TROLLEY PLATE (FIXED SIDE)		
9	1	LDU-1275-5	PLATE, TROLLEY (LOCK SIDE)		
10	4	LDU-1190-3	T-NUT		
11(*)	4	LDU-1261B-3	ROLLER, ST. STEEL		
12	2	LDU-1191-3	SHAFT, SUPPORT		
13	2	LDU-1191A-3	SHAFT, SUPPORT		
14(*)	8	J206-PS	BEARING		
15	8	PSC311013	THRUST BEARING		
16	1	LDU-1139-4	TROLLEY PLATE FRONT		
17	8	FFHMH020P10	FHCS M8x20 LG.		
18	2	FFHMG035P10	FHSC M6x35 LG.		
19	2	FLWMGP	LOCK WASHER M6		
20	2	FHDNMGP	HEX DOME NUT M6		
21	4	FHFNMGP	HEX NUT M6		
22	4	FSHMG025P10	SOC. HD. CAP SCREW M6 X 25		
23	4	FFHMG016P10	FHSC M6x16		
24	3	FFHME012P10	FHSH M4x12 LG		
25	4	FFHF012P10	FLAT HD. M5 X 12 LG.		
26	4	FSSSH038B08	SET SCREW 5/16-18 x 5/16 LG.		

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PART #	CAD FILE trolley assy ldr_e.idw	TOLERANCES UNLESS	LOVESHAW an <i>ITW</i> Company RT. 296, SOUTH CANAAN, PA.		
STD	PLOT DATE 4/18/2006	OTHERWISE NOTED:			
	DRAWN DATE 3/14/2005	.X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2	TROLLEY ASSY. LDR/E		
NO FINISH	DO NOT SCALE PRINT	.XXX = 1.005			I. LUR/E
UBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF IS TO BE TREATED BY YOU AS CONFIDENTIAL PRPRIETARY RAWING GR SUBJECT MATTER THEROF SHALL NOT BE IT THAN FOR YOUR OWN USE OR TO BE DISCLOSED TO OTHER SSED WRITTEN CONSENT OF LOVESHWWITTW AND WILL BE HAWHTW UPON REQUEST.		.X = ±1.0mm MACH. METRIC.XX = ±.3mm FINISH V .XXX = ±.1mm	DWG NO trolle	ey assy ldr_d	SCALE N/A
			MATERIAL	NOTED	CHECKED
		FRACTIONS ± 1/64	DRAWN to	inys	APPROVED
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EVISION HISTORY	
RIPTION DATE BY	
EASED 10/17/2002 AMYR	1
R. #03-001 08/19/2003 AMYR	4
R. #05-020 09/02/2005 AMYR	
R. #06-008 07/25/2006 AMYR	
R. #08-001   01/22/2008   AMYR	10
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arts List	
DESCRIPTION	
SHUTTLE VALVE	
AIR BALL VALVE	c
VALVE	1
	1
	-
SPEED CONTROL	-
FITTING	
CROSS FITTING	
	1
	4
ELBOW	
FILTER/REG (TOTAL ASSY)	
BRACKET	]
GAUGE	1
	1
	-
PUSH LUCK (NUT SHOWN)	
PUSH LOCK (NOT SHOWN)	
VALVE	
HOSE (NOT SHOWN)	1
MUEELER	1
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SPEED CONTROL	
QUICK EXHAUST	
FLOW CONTROL	Γ
FITTING	1
	1
SHUTTLE VALVE	-
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ATIC ASSEMBLY LDR	
DWG NO REV	1
PNEU_LDR	
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				A RELEASED 5	5/4/2004 AMYR	
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	ITEM	ΟΤΥ		DESCRIPTION	_	Í
	1	1	LDU-1336-6	PACK TABLE (ROLLER) EXT. DR	-	
	2	1	LDU-1231-5	FRAME, ROLLER PADDLE		Í
	3	1	LDU-1232-5	SUPPORT, BRACE		Í
	4	2	SC31	COLLAR		
	5	1	LDU-1345L-4	BRKT. ROLLER SUPPORT (DUAL)	_	Í
	6 7	1	LDU-1345R-4	UMIT SWITCH ASSY	_	
	8	1	LDI 500		—	
	9	7	LDU-1007-4	ROLLER, PACK TABLE	-	Í
	10	24	50299-029	ROLLER END PLUG		Í
	11	9	LDU-1008-4	SHAFT, ROLLER		Í
	12	2	LDU-1230-3	SHAFT, ROLLER (SWITCH) SS		Í
	13	2			_	Í
	14	4	F3MB		-	Í
	16	12	FHFNMFP	M5 HFN	-	4
	17	4	FLWMIP	SPRING WASHER M10		P
	18	4	FHHMI020P88	HEX HD M10x20		Í
	19	4	SPR-1023	SPRING EXT.	_	İ
	20	2	BSG-1060	THRUST BEARING	_	Í
	21	4	FBHMH012P10	BH M8x12   G	_	Í
	23	8	FLWMFP	LOCK WASHER M5	-	Í
	24	8	FFWMEP	FW M4		Í
	25	4	FNLNMEP	NLN M4		
	26	4	FHHME030P10		_	
	21	2	LDU-1354-3	ROLLER PACK TARLE		
	29	1	LDU-1007D-4	ROLLER, PACK TABLE	—	Í
	30	8	FFHMF016P10	FHCS M5x16		Í
	31	2	FFHF012P10	FH M5x12 LG.		Í
	32	1	PSR173-4		_	Í
	33	2			_	Í
	54	2				L
)	<sup>FILE</sup> ita rb l	dr2std	TOLERANCES UNLE	ss LOVESHAW an	ITW Company	А
)	T DATE 5/4/20	)04	UTHERWISE NOTE	D: RT. 296, SOUTH CANA	AN, PA.	
1	WN DATE 5/4	/2004	.X = ±.050 INCH .XX = ±.015 ANGLES		ROLLER)	
	NOT SCAL	E PRINT	.XXX = 1.005 .X = 1.0mm		, 	
ŝ	THE EXCLUSIVE PR CONFIDENTIAL PRP THEROF SHALL NO	OPERTY OF RIETARY DT BE	METRIC.XX =±.3mm XXX =±.1mm	DWG NO .ITA/RB/LDR2STD	SCALE N/A	
2	R TO BE DISCLOSED	TO OTHER		MATERIAL N/A	CHECKED	
			TRACHONS 1/6	DRAWN AMYR	APPROVED	i i

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					A RELEASED 5/4/2004 AMYR	-
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			ΟΤΥ			
		1	1		PACK TABLE (ROLLER) EXT. DR	
		2	1	LDU-1231-5	FRAME, ROLLER PADDLE	
		3	1	LDU-1232-5	SUPPORT, BRACE	
		4	2	SC31	COLLAR	
		5	1	LDU-1345L-4	BRKT. ROLLER SUPPORT (DUAL)	1
		6	1	LDU-1345R-4	BRKT. ROLLER SUPPORT (DUAL)	
		7	2	LDF506	LIMIT SWITCH ASSY	С
		8	1	LDU-1344-5	FRAME, ROLLER PADDLE	
		9	1	LDU-1007-4		
		10	24	50299-029		
		12	9	LDU-1008-4	SHAFT, ROLLER SHAFT, ROLLER (SWITCH) SS	
		13	2	LDU-1007A-4	ROLLER, PACK TABLE	
		14	4	FLWMHP	M8 LOCK WASHER	
		15	2	F3MB	RUBBER BUMPER	
		16	12	FHFNMFP	M5 HFN	4
		17	4	FLWMIP	SPRING WASHER M10	
		18	4	FHHMI020P88	HEX HD M10x20	
		19	4	SPR-1023	SPRING EXT.	
		20	2	BSG-1060		
		21	2	FSHMF025P10		
10		23	8	FI WMEP	LOCK WASHER M5	
		24	8	FFWMEP	FW M4	
		25	4	FNLNMEP	NLN M4	
		26	4	FHHME030P10	HH M4x30	В
		27	2	LDU-1354-3	ROLLER SPACER	1
		28	2	LDU-1007C-4		1
		29		LDU-1007D-4		1
		30	8			
		32	1	PSR173-4		
		33	2	FLWMEP	LOCK WASHER M4	
		34	2	FPHME008P10	M4 x 8mm LG	
			I	1		L
ΜΑΤΊ	PART# CA	DELLE itarb	ldr2etd			
CRS	STD DU			TOLERANCES UNLE OTHERWISE NOTE	ES LOVESHAW an ITW Company	l^
5.14.5. ST ST	N/A DD	AWN DATE F	1/2004	.X =±.050	TITLE	1
				INCH .XX = ±.015 ANGLES .XXX = ±.005	INFEED TABLE LDR (ROLLER)	1
SI A	AWING AND SUBJECT MATTER THEREON	IS THE EXCLUSIVE PR		X =±1.0mm MACH		1
LOVESH/	AW-ITW AND IS TO BE TREATED BY YOU A TION. THIS DRAWING OR SUBJECT MATT	S CONFIDENTIAL PRE ER THEROF SHALL NO	PRIETARY OT BE	METRIC.XX = 1.3mm .XXX = 1.1mm FINIS		1
KEPROD WITHOU RETURN	THE EXPRESSED WRITTEN CONSENT OF THE EXPRESSED WRITTEN CONSENT OF ED TO LOVESHAW-ITW UPON REQUEST.	F LOVESHAW-ITW ANI	D WILL BE	FRACTIONS ± 1/	64 DRAWN AMYR	1
	2 1					



	REVISION RE	CORD	-		
REV	DESCRIPTION	DATE	ATH	DR	СК
A	RELEASED	12/4/00		AJS	
В	E.C.O. 02-133	10/3/02		AJS	
С	E.C.O. 03-174	8/13/03		AJS	
D	E.C.O. 05-041	3/15/05		AJS	
E	E.C.O. 06-177	6/29/06		AJS	
F	E.C.O. 07-021	2/27/07		AJS	

S	LOVESHAW an <b>M</b> Company RT. 296, SOUTH CANAAN, PA.				
	TITLE:				
	PNEU. SCHEMATIC LDU/R				
	DWG. #: PNEU-00	)59–4	SCALE: N/A		
1/64	MATERIAL: NOTED		CHECK'D:		
	DESIGNED:	DRAWN: AJS	APPRV'D:		



KEY	PART NUMBER	PART DESCRIPTION	
1	A100N-1210P-R1	ELECTRICAL PANEL	
2	SS6-FUSE	FUSE HOLDER	
3	SS6-FUSE-EB	FUSE HOLDER BARRIER	
4	A125SB-1/2-326	FUSE 1/2 AMP SLOW BLO	
5	A125SB-2/10-312	FUSE 200m AMP, FAST BLO	
6	SS6-L-1	DIN RAIL	
7	SS2-A-1	CONTACTOR	
8	SS3-J-1	OVERLOAD RELAY	
9	A241GE-NANO-1	PLC	
10	SS6-C	TERMINAL ANCHOR	
11	SS6-B	GROUND TERMINAL	
12	SS6-TB1	TERMINAL BLOCK	
13	SS6-D-2	TERM. LINK BAR 2 POLE	
14	SS6-D-3	TERM. LINK BAR 3 POLE	
15	SS6-A1	TERMINAL SEPARATOR	
16	SS6-MC	TERMINAL MARKER CARD	
17	A125SB-10-326	FUSE 10 AMP SLOW BLO	

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	REVISION	RE	CORD			
REV	DESCRIPTION		DATE	ATH	DR	СК





	REVISION RECORD
	REV DESCRIPTION DATE ATH DR CK
Ъ	FUNCTILIN
	EMERGENCY STOP SWITCH
	MAIN POWER PROTECTION
	120 VAC CONTROL POWER PROTECTION
	24 VDC POWER PROTECTION
ГСН	HEAD TRAVEL TRIGGER SENSOR
ГСН	PACK TABLE SIDERAILS LIMIT SWITCH (NEAR)
ГСН	PACK TABLE SIDERAILS LIMIT SWITCH (FAR)
	MAIN DRIVE MOTOR
RTER	MAIN DRIVE MOTOR MANUAL MOTOR STARTER
RELAY	MAIN DRI∨E MOTOR THERMAL PROTECTOR
IN	MACHINE START
TRIC	MACHINE ENTRANCE (HEAD ASSY.)
TRIC	HEAD RELEASE PULSE
TRIC	MACHINE EXIT SENSOR
VALVE	HEAD LIFTING VALVE
VALVE	SIDERAILS CONTROL VALVE

HEAD	JUN	ICT.	BΠX
L W	IRE	CHA	RT
WIRE	ND.	100	RED
WIRE	ND.	101	BLUE
WIRE	ND.	3	YEL.
WIRE	ND.	6	DRG.
WIRE	ND.	7	BRN.
NDT l	JSED		BLK.

ALL 120VAC LINE WIRES WILL BE 16AWG BLACK UNLESS OTHERWISE NOTED.
 ALL 120VAC CONTROL WIRES WILL BE 16AWG RED UNLESS OTHERWISE NOTED.
 ALL 120VAC NEUTRAL WIRES WILL BE 16AWG WHITE UNLESS OTHERWISE NOTED.
 ALL DC CONTROL WIRING WILL BE 20AWG BLUE UNLESS OTHERWISE NOTED.

ES	THE LOVES	SHAW CORP	ORATION	
ED	RT 296,	SOUTH CANAAN	I, PA.	
L )	TITLE: ELECTRICAL SCHEMATIC			
, 05	LEGEND RANDOM – 120/1/60			
IAL	DWG. NO.ED137	2	SCALE: N/A	
64	MATERIAL: N/A	DATE:01/14/08		
/2 <sup>°</sup>	DESIGNED:	DRAWN: WM	APPRVD:	