LITTLE DAVID

OWNERS MANUAL

LEGEND RANDOM

2″ AND 3″ CARTRIDGES

THE LOVESHAW CORPORATION
2206 EASTON TURNPIKE, BOX 83
SOUTH CANAAN, PA 18459

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44-264-3575-11

REV. 04/18/2006 M.C.R. #06-004

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 ALWAYS 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

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WHEN UNCRATING MACHINE, CHECK FOR ANY PHYSICAL DAMAGE.

IF ANY DAMAGE HAS OCCURRED, NOTIFY COMPANY IMMEDIATELY.

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MACHINE SPECIFICATIONS

MACHINE DIMENSIONS:

HEIGHT:	60 1/2 inches	1537 mm
WIDTH:	35 3/8 inches	899 mm
LENGTH:	56 3/4 inches	1441 mm

TABLE HEIGHT (adjustable):

MINIMUM:	22 ¼ inches	565 mm
MAXIMUM:	32 ¼ inches	819 mm

ELECTRICAL:

STANDARD:	115V/1/60
OPTIONAL:	220V/1/50,60
(upcharge consult LOVESHAW)	220V/3/50,60
	240V/1/50
	380V/3/50
	440V/3/50
	440V/3/60

BOX CAPACITY:

LENGTH:		4.5 inches to unlimited max.	114 mm to unlimited max.
WIDTH:	2" MACH.	4.5 inches to 22 inches	114 mm to 559 mm
	3" MACH.	5.5 inches to 22 inches	140 mm to 559 mm
HEIGHT:		4 7/8 inches to 24 inches	76 mm to 609 mm

OPERATING SPEED:

TOP AND BOTTOM BELT SPEED:	80 ft./min.	18m/min.
NUMBER OF BOXES/MIN.	VARIES WITH BOX SIZE	

AIR REQUIREMENTS: 10 S.C.F.M. AT 70 PSI

CLOSURE MATERIAL - PRESSURE SENSITIVE TAPE

	2" MACH.		3" MACH.	
WIDTH:	1.5 inches	38 mm to	2 inches	51 mm to
	2 inches	50 mm	3 inches	76 mm

MAX. ROLL DIAMETER: 15 inches 380 mm

WEIGHT: (uncrated) 203 LBS. 104 KG.

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
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PHONE: 1-800-962-2633 / 570-937-4921
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ANDOVER, HAMPSHIRE SP10 3SL
ENGLAND

OR YOUR NEAREST LITTLE DAVID DISTRIBUTOR

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 ¼ " TO 33 ¼" (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 OUT-FEED END OF THE MACHINE TO RECEIVE THE BOXES AS THEY ARE DISCHARGED FROM THE MACHINE. **IMPORTANT: BE SURE THE TABLE AND CONVEYOR ARE ¼" (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 BY TURNING 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.

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.

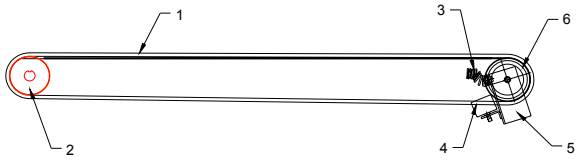
TO REPLACE THE STARTER SWITCH, REVERSE THE ABOVE PROCEDURE.

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 (LS2) ACTIVATING THE SIDE RAIL VALVE (SV2) CLOSING AND CENTERING THE BOX.
- IN ONE SMOOTH LINEAR MOTION STILL HOLDING FLAPS CLOSED, ROLL BOX FORWARD TOWARDS THE CASE SEALER. THE BOX WILL CONTACT THE HEAD PADDLE (LDU-1174-4) 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"

THE CONTROL MODULE IS POSITIONED INSIDE THE ELECTRICAL ENCLOSURE, LOCATED UNDER THE MACHINE FRAME ON THE MAST SIDE AT THE EXIT END OF THE MACHINE. THE CONTROL MODULE HAS (2) ADJUSTABLE CONTROL SCREWS. THE ADJUSTMENT SCREW LABELED (DELAY) CONTROLS THE DELAY TIMER THAT IS ACTIVATED WHEN THE TRAILING EDGE OF THE BOX CLEARS THE EXIT PHOTO EYE (PE2) AND THE HEAD RAISING VALVE (SV1) ACTIVATES. THIS WILL DETERMINE THE TIME THE HEAD STARTS TO RAISE UP (BURP). THE ADJUSTMENT SCREW LABELED (HOLD) CONTROLS THE AMOUNT OF TIME THE HEAD RAISING VALVE (SV1) IS HELD ON. THIS WILL DETERMINE THE DURATION AND HEIGHT OF THE HEAD RELEASE (BURP).

CAUTION:

AS WITH ANY ELECTRICAL DEVICE, SPECIAL CARE SHOULD BE TAKEN.
ONLY QUALIFIED PERSONNEL SHOULD MAKE ADJUSTMENTS.

SPECIAL NOTE:

IF INSTALLING A NEW CONTROL MODULE FOLLOW STEPS 1 THROUGH 7.
IF ADJUSTING AN EXISTING MODULE DO NOT FOLLOW STEPS 4 & 5, BUT FOLLOW STEPS 4A & 5A TO TUNE CONTROL MODULE.

1. SHUT OFF ELECTRICITY AND LOCK OUT / TAG OUT MACHINE.

2. REMOVE THE ENCLOSURE COVER EXPOSING THE CONTROL DEVICE. IT IS A YELLOW RECTANGLE SHAPED BLOCK WITH (2) CONTROL SCREWS.

3. TO ZERO OUT OR SET MODULE TO BASE LINE ADJUSTMENT, YOU WILL NEED TO TURN THE ADJUSTMENT SCREWS COUNTERCLOCKWISE (30) FULL ROTATIONS.

4. SET THE (DELAY) CONTROL SCREW BY TURNING IT CLOCKWISE (3) FULL TURNS. THIS WILL SET IT TO THE FACTORY INITIAL SETTING.

   4A. TURNING THE (DELAY) SCREW CLOCKWISE WILL INCREASE THE DELAY AND COUNTERCLOCKWISE WILL DECREASE THE DELAY. SMALL ADJUSTS OF THE CONTROL SCREW WILL MAKE CHANGES SO CHECK AFTER EACH ADJUSTMENT.

5. SET THE (HOLD) CONTROL SCREW BY TURNING IT CLOCKWISE (2 1/2) FULL TURNS. THIS WILL SET IT TO THE FACTORY INITIAL SETTING.

   5A. TURNING THE (HOLD) SCREW CLOCKWISE WILL INCREASE THE HOLD AND COUNTERCLOCKWISE WILL DECREASE THE HOLD. SMALL ADJUSTS OF THE CONTROL SCREW WILL MAKE CHANGES SO CHECK AFTER EACH ADJUSTMENT.

6. REPLACE ENCLOSURE COVER.

7. 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 THE CONTROLS PRESSURE SENT TO THE ACTIVATING HEAD LIFTING AND SIDE RAIL CYLINDERS. THIS ASSEMBLY ID 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 55 TO 60 PSI FOR 2 INCH TAPE HEAD AND 60 TO 65 PSI FOR 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.

3. ADJUSTING THE HEAD RETURN SPEED BY LOOSENING THE JAM NUT THEN ROTATING THE SPEED CONTROL LOCATED ON THE HEAD LIFTING VALVE (SV1). RUN BOX TO CHECK ADJUSTMENT.

SPECIAL NOTE:

INCREASING HEAD RETURN SPEED WILL RESULT IN AN ACCELERATED RETURN SPEED RESULTING IN EXCESSIVE WEAR. SLOW RETURN SPEED WILL CAUSE POOR BOX SEALING.

SIDE RAIL CYLINDER

1. TURN CLOCKWISE TO INCREASE AND COUNTERCLOCKWISE TO DECREASE UNTIL SIDE RAIL CYLINDER REGULATOR (R2) READS 30 TO 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.

2. ADJUSTING CENTERING AND RETURN SPEED IS ACCOMPLISHED BY TUNING THE SPEED CONTROLS (LD12B-2098) LOCATED NEAR THE SIDE RAIL CYLINDER (N401-70) UNDER THE FRAME ASSEMBLY. RUN BOX TO CHECK ADJUSTMENT.

SPECIAL NOTE:

INCREASING SIDE RAIL CLOSING AND RETURN SPEED WILL RESULT IN AN ACCELERATED CLOSING SPEED RESULTING IN EXCESSIVE WEAR AND BOX STALLING. SLOW CLOSING AND RETURN SPEED CAUSES POOR BOX CENTERING.

3. THE SIDE RAIL CYLINDER IS EQUIPPED WITH AN INTERNAL AIR CUSHION FOR THE OPEN POSITION. THE CUSHION IS LOCATED AT THE PIVOT END OF THE CYLINDER OPPOSITE THE ROD. TURN CUSHION SCREW CLOCKWISE TO INCREASE AND COUNTERCLOCKWISE TO DECREASE UNTIL SIDE RAIL CYLINDER CUSHION IS SET PROPERLY.

SPECIAL NOTE:

REDUCING SIDE RAIL CYLINDER AIR CUSHION WILL RESULT IN EXCESSIVE WEAR AND ABRUPT STOP.

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.

TROUBLE SHOOTING

TAPING DIFFICULTIES:

	PROBLEM:		SOLUTION:
1.	TAPE DOES NOT ADHERE WELL TO BOX:	A.	CHECK THAT BOX IS NOT WAXY OR OILY.
		B.	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.
		B.	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.
		B.	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.

4. TAPE WRINKLES:

A. CHECK THE TAPE ROLL BY PULLING TAPE OFF MANUALLY. THE PULL SHOULD BE EVEN AND SHOULD NOT VARY SUDDENLY.

B. 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.

D. CHECK THE BOX CONTENTS. PARTIALLY FULL BOXES OR VERY COMPRESSIBLE CONTENTS MAY ALLOW THE FLAPS TO EXCESSIVELY DEPRESS CAUSING WRINKLES.

E. 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.

H. CHECK THAT TAPE IS PROPERLY THREADED AND THAT TAPE CORE IS PROPERLY CENTERED.

I. CHECK THE PRESSURE OF THE HEAD AGAINST THE BELTS AND HESITATE AS IT IS BEING FED THROUGH THE MACHINE. ADJUST THE HEIGHT.

J. CHECK THAT THE BELTS ARE NOT SLIPPING.

K. CHECK ADJUSTMENT OF THE GUIDE PLATE AND FINGER PLATE.

5. SHORT TAPE TAB ON BOX:

A. CHECK TAPE TENSION.

B. 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.
		B.	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.
		B.	TAPE TENSION IS SET TOO HIGH.

BOX PROBLEMS:

1.	JAM CLEARING PROCEDURE:	A.	STOP MACHINE.
		B.	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.
		B.	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.
5.	SIDE RAIL PRESSURE TOO HIGH:	A.	OPEN SIDE RAILS SLIGHTLY.

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:	A.	LOWER HEAD SLIGHTLY TO INCREASE PRESSURE ON BOX.
3.	BELTS RUB AGAINST FRAME:	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

TAPE CARTRIDGE MANUAL

.CAC50

THE LOVESHAW CORPORATION
2206 EASTON TURNPIKE
SOUTH CANAAN, PA 18459

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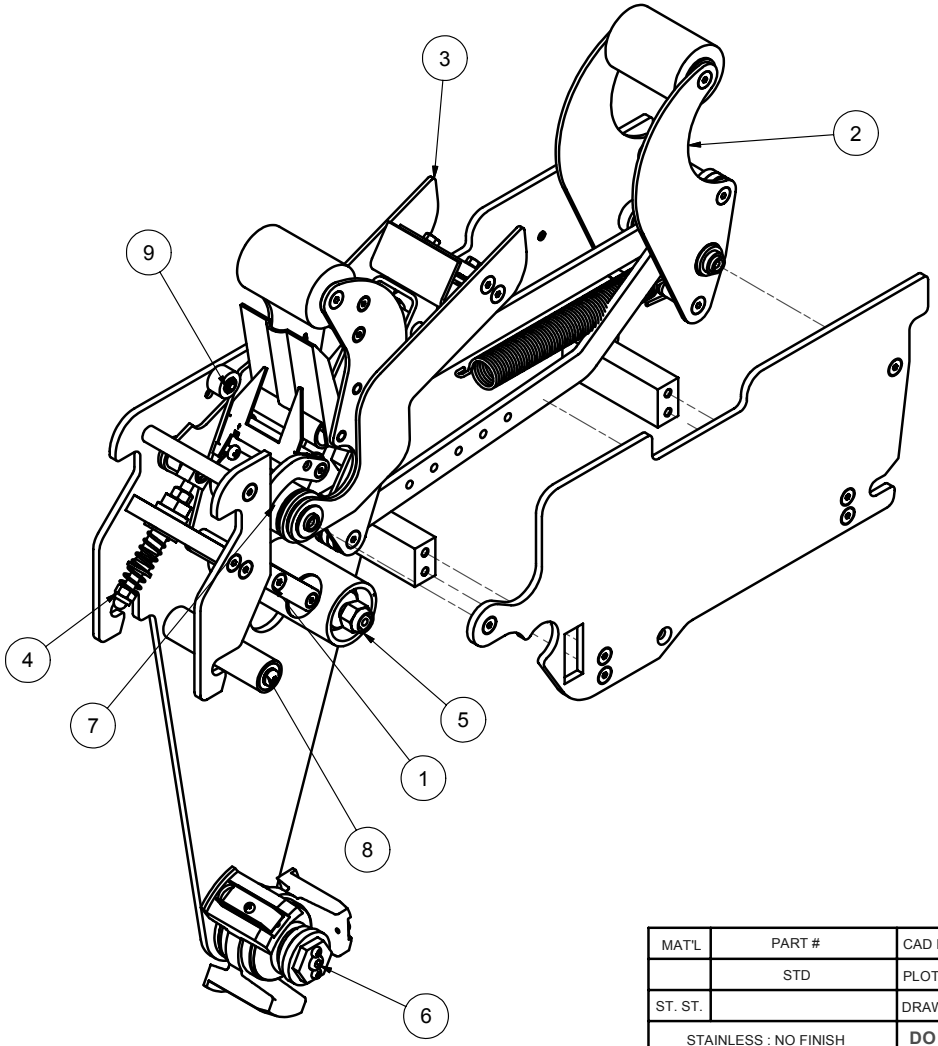
W. PORTWAY INDUSTRIAL ESTATE
ANDOVER, HAMPSHIRE SP103SL
ENGLAND
44-264-3575-11

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/6/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	.FAA-CAC50	FRONT ARM ASSEMBLY
2	1	.RAA-CAC50	REAR ARM ASSY. CAC50
3	1	.KAA-CAC50	KNIFE ARM ASSY
4	1	.KASA-CAC50	KNIFE ARM SPRING ASSY.
5	1	.TRA50	TENSION ROLLER ASSY. CAC50
6	1	.TCA301	TAPE CORE ASSEMBLY 2"
7	1	.KGA-CAC50	KNIFE GUARD ASSEMBLY
8	1	.IRA-CAC50	IDLER ROLLER ASSY. CAC50
9	1	.FRA-CAC50	FRAME ASSEMBLY

MAT'L	PART #	CAD FILE	MAIN ASSEMBLY CAC50 NEW ASSEMBLIES.idw
	STD	PLOT DATE	
ST. ST.		DRAWN DATE	6/6/2005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005, ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm

MACH. FINISH 125

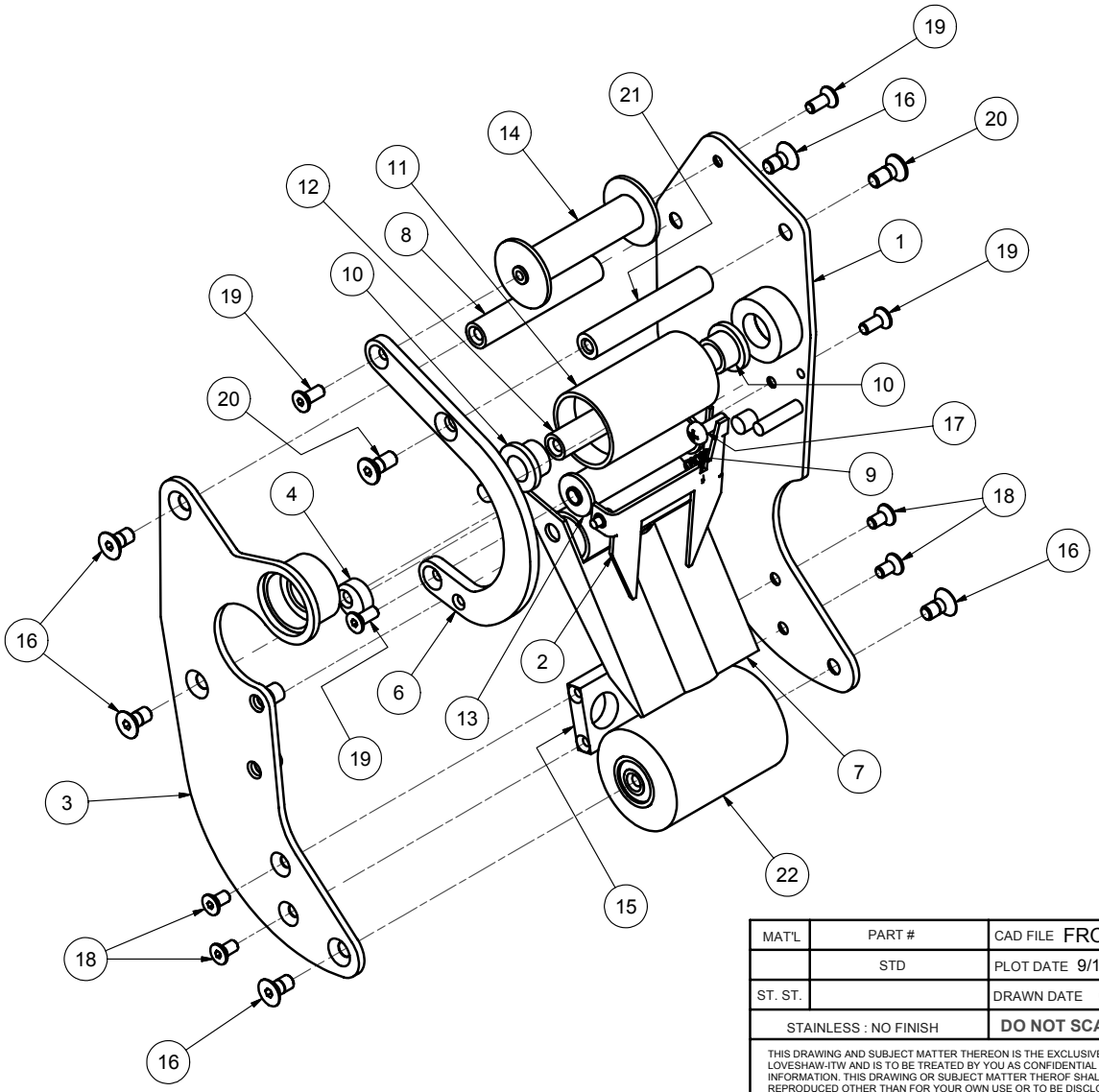
FRACTIONS ± 1/64

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE
CAC50 CARTRIDGE

DWG NO .CAC50	SCALE
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/3/2005	DW
B	CCRP #05-0094	9/15/2005	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-005-4	ARM, FRONT (MAIN)
2	1	PSC311003-4	TAPE HOLD DOWN PLATE
3	1	CAC50-006-4	ARM, FRONT (TOP)
4	1	PSC139-3	STOP, TAPE GUIDE PLATE
5	1	PSC26-3	SPRING, GUIDE PLATE
6	1	JBW1014-4	HORSE SHOE
7	1	CAC50-018-4	TAPE GUIDE PLATE
8	1	CAC50-036-3	SHAFT WIPE ROLLER
9	1	PSC321022-3	SPRING, FINGER PLATE
10	2	50186-039	BUSHING
11	1	CAC50-046-3	ROLLER CENTER
12	1	CAC50-034-3	SHAFT ARM PIVOT
13	1	.KNRA200/50/T	KNURLED ROLLER ASSY.
14	1	.KNRA200/50/B	KNURLED ROLLER ASSY
15	1	CAC51-028A-3	SPACER FRONT ARM
16	5	FFHMF010P10	FLAT HEAD M5 X 10
17	1	FBHME012P10	M4 X .07 BUTTON HEAD PHIL.
18	4	FFHME008P10	M4 X 8 FHCS
19	4	FFHME010P10	M4 X 10 FHCS
20	2	FFHMF012P10	FLAT HD. M5 X 12 LG.
21	1	CAC51-029A-3	SHAFT
22	1	.CRA50	CLUTCH ROLLER ASSY.

MAT'L	PART #	CAD FILE	FRONT ARM ASSY.idw
	STD	PLOT DATE	9/15/2005
ST. ST.		DRAWN DATE	6/3/2005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005, ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm

MACH. FINISH 125

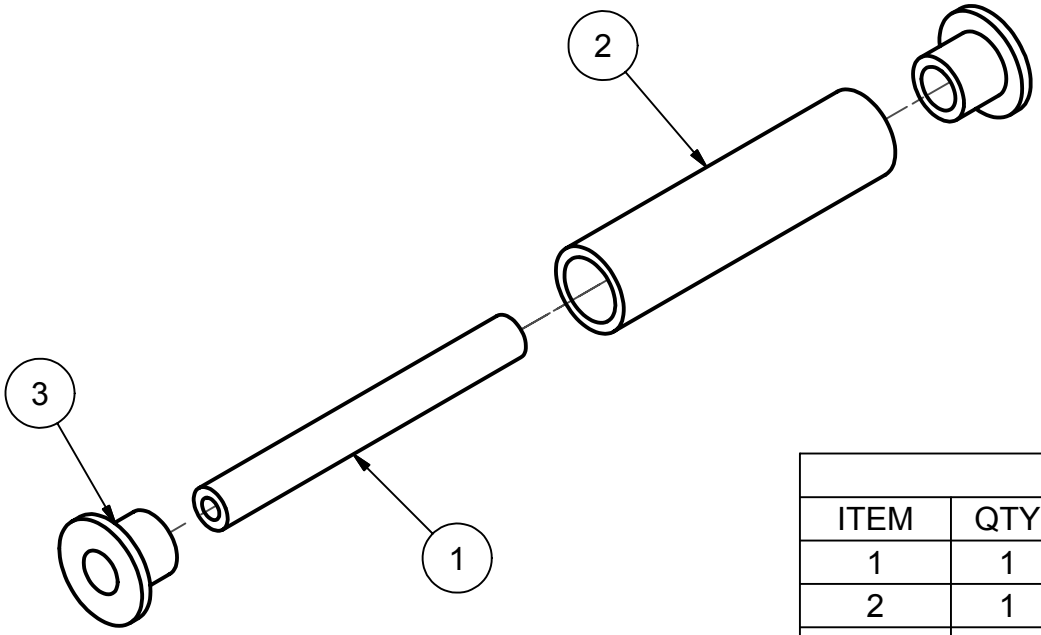
FRACTIONS ± 1/64

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE
FRONT ARM ASSEMBLY

DWG NO .FAA-CAC50	SCALE
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/2/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-044-3	SHAFT, KNURLED ROLLER
2	1	CAC50-045-3	KNURLED ROLLER
3	2	CAC50-116-3	BUSHING, ROLLER TOP

MAT'L	PART #	CAD FILE KNRA200_50_T.idw	TOLERANCES UNLESS OTHERWISE NOTED:
N/A	STD	PLOT DATE 6/2/2005	
ST. ST.	N/A	DRAWN DATE 6/2/2005	INCH .X = ±.050, .XX = ±.015, .XXX = ±.005; ANGLES ± 1/2°
STAINLESS : NO FINISH		DO NOT SCALE PRINT	METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm; MACH. FINISH 125

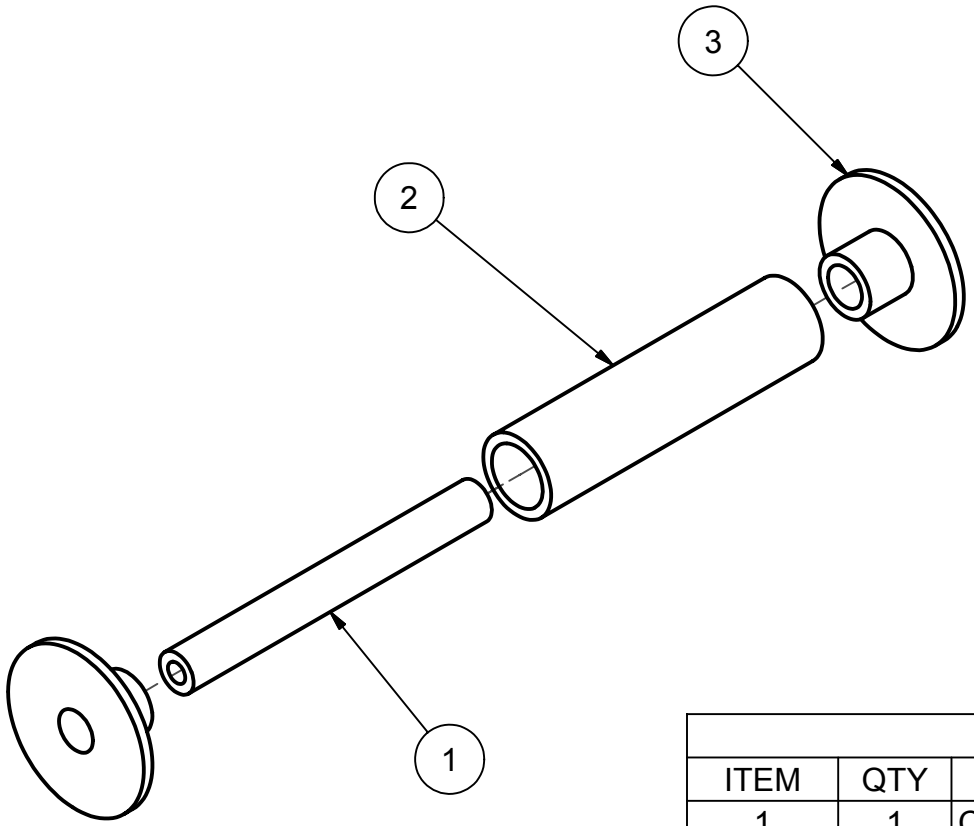
FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE
KNURLED ROLLER ASSY.

DWG NO .KNRA200/50/T	SCALE N/A
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

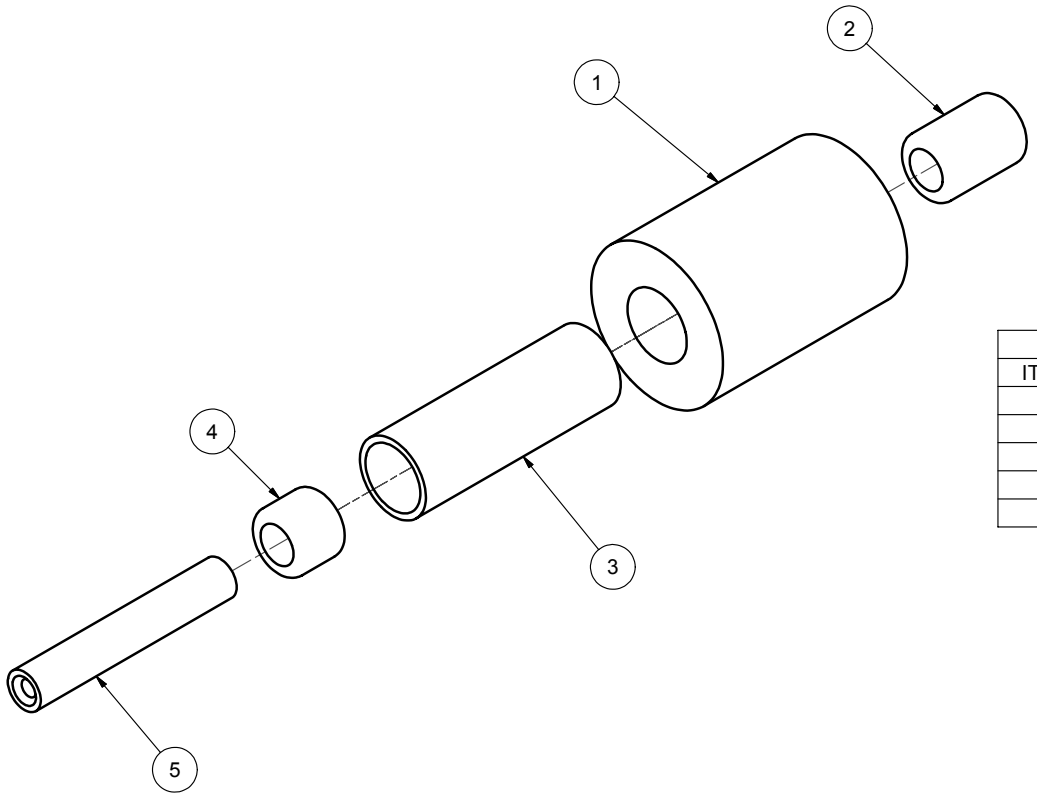
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/2/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-044-3	SHAFT, KNURLED ROLLER
2	1	CAC50-045-3	KNURLED ROLLER
3	2	CAC50-117-3	BUSHING, ROLLER BOTTOM

MAT'L	PART #	CAD FILE KNRA200_50_B.idw	TOLERANCES UNLESS OTHERWISE NOTED:	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.
	STD	PLOT DATE		
ST. ST.		DRAWN DATE 6/2/2005	.X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2° .XXX = ±.005	TITLE KNURLED ROLLER ASSY
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X = ±1.0mm METRIC .XX = ±.3mm MACH. FINISH 125 .XXX = ±.1mm	DWG NO .KNRA200/50/B — SCALE
			FRACTIONS ± 1/64	MATERIAL — CHECKED
				DRAWN DENNISW — APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/25/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC12/1-3	ROLLER, WIPE
2	1	J205-PS	BEARING
3	1	CAC50-039-3	SLEEVE, NEEDLE BEARING
4	1	J206-PS	BEARING
5	1	CAC50-037-3	SHAFT FRONT ROLLER

ITEMS #1 AND #3 ARE NOT SOLD SEPARATLY.

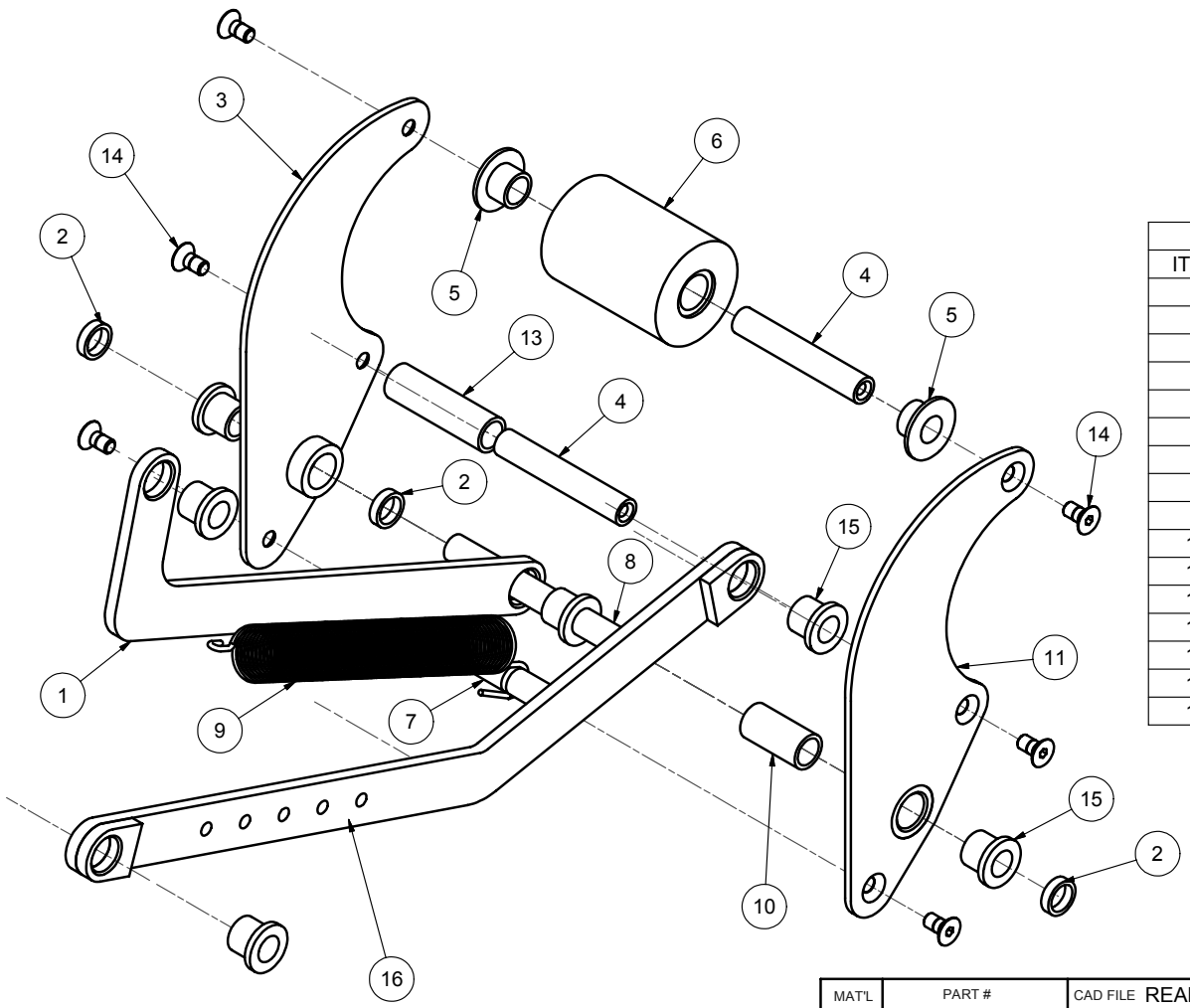
MAT'L	PART #	CAD FILE CRA50.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 5/25/2005	.X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2° .XXX = ±.005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X = ±1.0mm METRIC .XX = ±.3mm .XXX = ±.1mm MACH. FINISH 125
			FRACTIONS ± 1/64

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE
CLUTCH ROLLER ASSY.

DWG NO .CRA50	SCALE
MATERIAL	CHECKED
DRAWN	APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/6/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-004-4	CONNECTING LINK KNIFE GUARD
2	3	CAC50-049-3	SPACER REAR ARM PIVOT
3	1	CAC50-007-4	REAR ARM RIGHT
4	2	CAC50-036-3	SHAFT WIPE ROLLER
5	2	PSC12/3-3	BUSHING
6	1	PSC12/1-3	ROLLER, WIPE
7	1	CAC50-022-3	STUD- REAR ARM SPRING
8	1	CAC50-034-3	SHAFT ARM PIVOT
9	1	PSC501101-4	MAIN SPRING CARTRIDGE
10	1	CAC50-043-3	SPACER REAR PIVOT ARM
11	1	CAC50-008-4	REAR ARM LEFT
12	1	PSC12/2-3	SLEEVE WIPE ROLLER
13	1	CAC50-042-3	SPACER REAR MAIN CONNENTING ARM
14	6	FFHMF010P10	FLAT HEAD M5 X 10
15	6	50186-007	BUSHING
16	1	CAC50-003-4	CONNECTING LINK ARMS

MAT'L	PART #	CAD FILE	REAR ARM ASSY.idw
	STD	PLOT DATE	
ST. ST.		DRAWN DATE	6/6/2005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005, ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm, MACH. FINISH 125

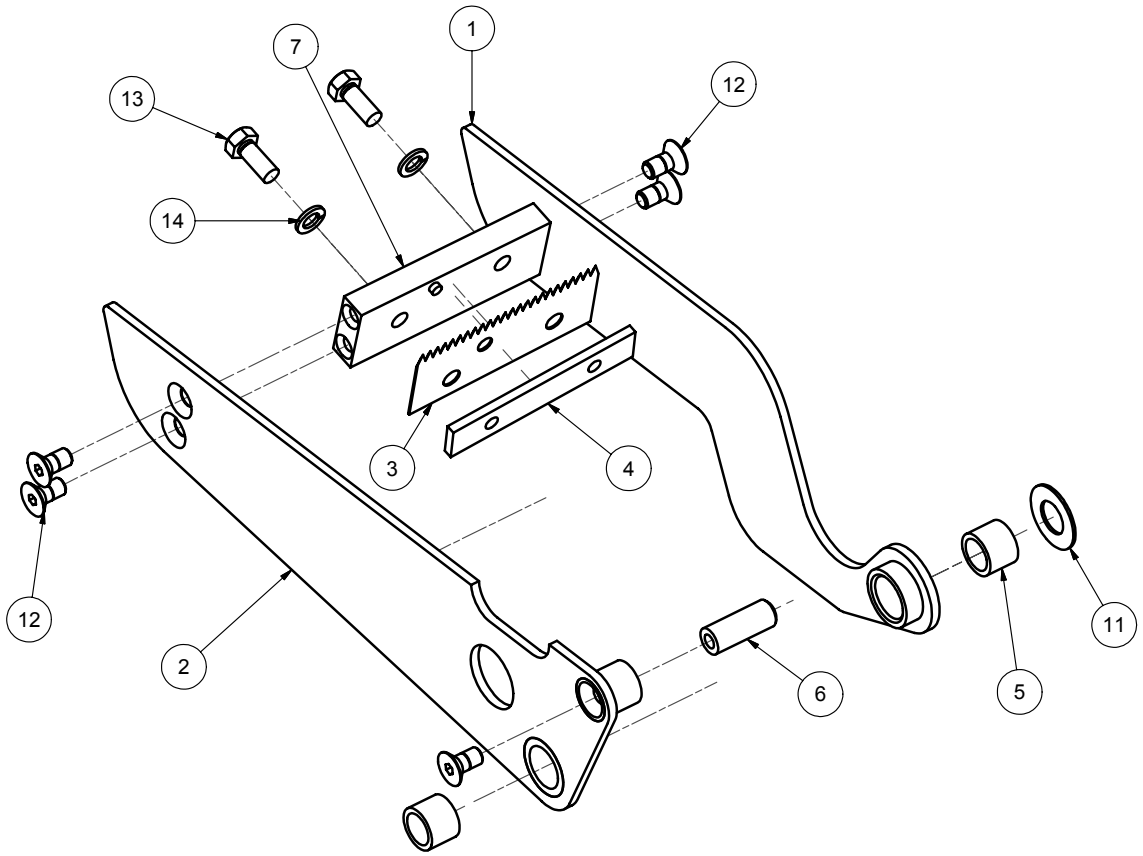
FRACTIONS ± 1/64

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE: REAR ARM ASSY. CAC50

DWG NO .RAA-CAC50	SCALE
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

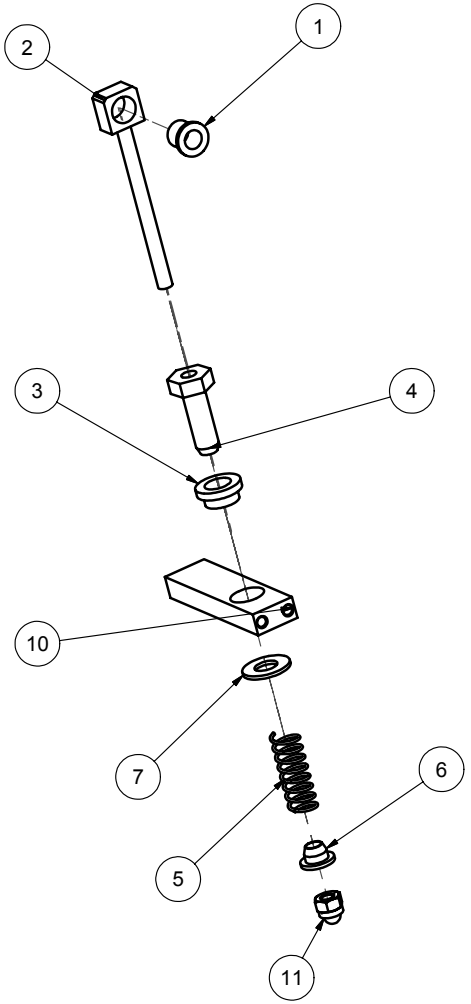
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/3/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-010-4	KNIFE ARM TOP
2	1	CAC50-009-4	ARM, KNIFE (MAIN)
3	1	PSC11B-4	KNIFE
4	1	PSC9-3	KNIFE PLATE CARTRIDGE
5	2	50185-049	BUSHING
6	1	CAC50-017-3	SHAFT KNIFE ARM
7	1	CAC50-013-3	KNIFE BRACKET
11	1	PSC321040	BEARING
12	5	FFHMF010P10	FLAT HEAD M5 X 10
13	2	FHHMF012910	HHS M5 X 12
14	2	FLWMFP	LOCK WASHER M5

MAT'L	PART #	CAD FILE KNIFE ARM ASSY.idw	TOLERANCES UNLESS OTHERWISE NOTED:	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.
	STD	PLOT DATE		
ST. ST.		DRAWN DATE 6/3/2005	INCH .X = ±.050 .XX = ±.015 .XXX = ±.005 ANGLES ± 1/2°	TITLE KNIFE ARM ASSY
STAINLESS : NO FINISH		DO NOT SCALE PRINT	METRIC .X = ±1.0mm .XX = ±.3mm .XXX = ±.1mm MACH. FINISH 125	DWG NO .KAA-CAC50 / SCALE
			FRACTIONS ± 1/64	MATERIAL / CHECKED
				DRAWN DENNISW / APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/3/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC510	BUSHING
2	1	CAC50-038-3	SHAFT THREADED SUPPORT
3	1	PSC321044-3	BUSHING, KNIFE STOP
4	1	PSC321046-3	STOP NUT, KNIFE ARM
5	1	X111-PS	SPRING
6	1	PSC321045-3	SPRING GUIDE
7	1	AV960C616C	FLAT WASHER
8	1	FHFNMGP	HEX NUT M6
10	1	CAC50-016-3	BLOCK KNIFE ARM SPRING
11	1	FHDNMGP	HEX DOME NUT M6

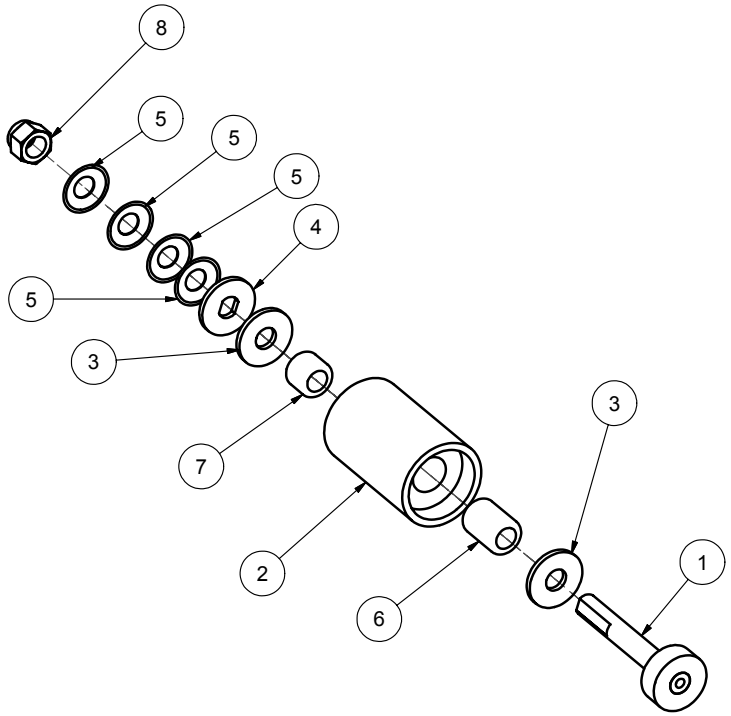
MAT'L	PART #	CAD FILE KNIFE ARM SPRING ASSY.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 6/3/2005	.X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2° .XXX = ±.005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X = ±1.0mm METRIC .XX = ±.3mm MACH. FINISH 125 .XXX = ±.1mm
			FRACTIONS ± 1/64

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE
KNIFE ARM SPRING ASSY.

DWG NO .KASA-CAC50	SCALE
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/6/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-021-3	SHAFT, KNURLED ROLLER
2	1	PSC321023-3	KNURLED ROLLER
3	2	PSC321031-3	BRAKE WASHER
4	1	PSC321032-3	LOCKING WASHER
5	4	PSC321039	WASHER, SPRING
6	1	J205-PS	BEARING
7	1	J206-PS	BEARING
8	1	50299-028	3/8-16 LOCKNUT

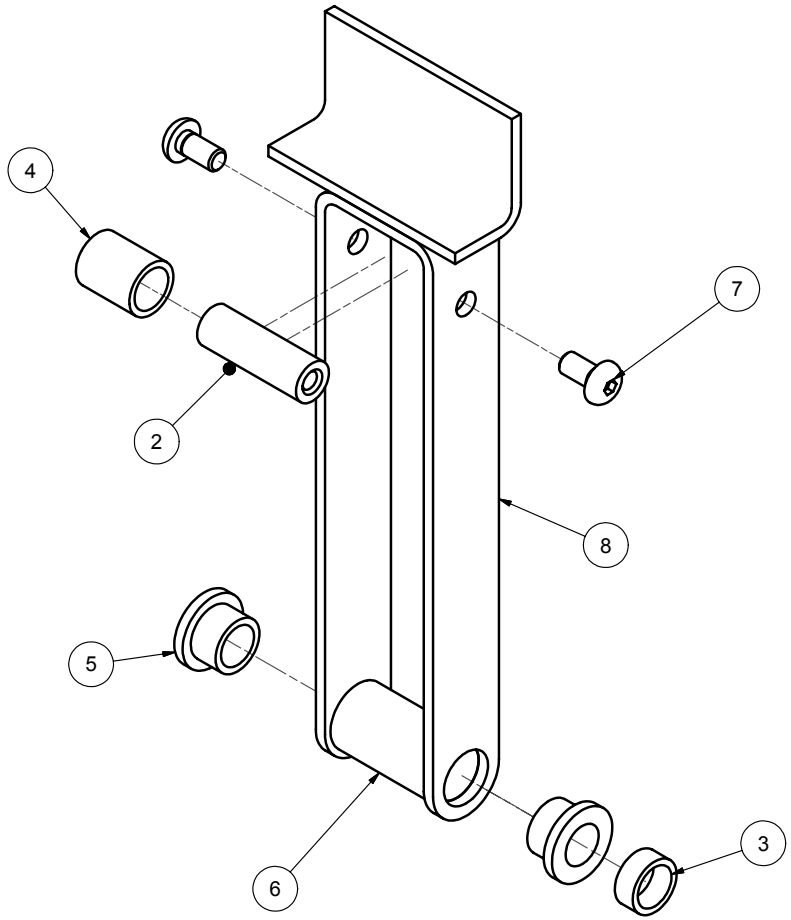
MAT'L	PART #	CAD FILE TRA50.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 6/6/2005	INCH .X = ±.050, .XX = ±.015, .XXX = ±.005 ANGLES ± 1/2°
STAINLESS : NO FINISH		DO NOT SCALE PRINT	METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm MACH. FINISH 125
			FRACTIONS ± 1/64

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE TENSION ROLLER ASSY. CAC50

DWG NO .TRA50	SCALE
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/3/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
2	1	CAC50-048-3	SHAFT KNIFE GUARD
3	1	CAC50-040-3	SPACER CONN ARM KNIFE COVER
4	1	CAC50-041-3	SPACER KNIFE GUARD
5	2	50186-039	BUSHING
6	1	PSC301110-3	SPACER
7	2	FBHMF010P10	BUTT. HD. SCREW M5 X 10
8	1	CAC50-011-4	KNIFE GUARD

MAT'L	PART #	CAD FILE KNIFE GUARD ASSY.idw	
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 6/3/2005	
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005 ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm MACH. FINISH 125

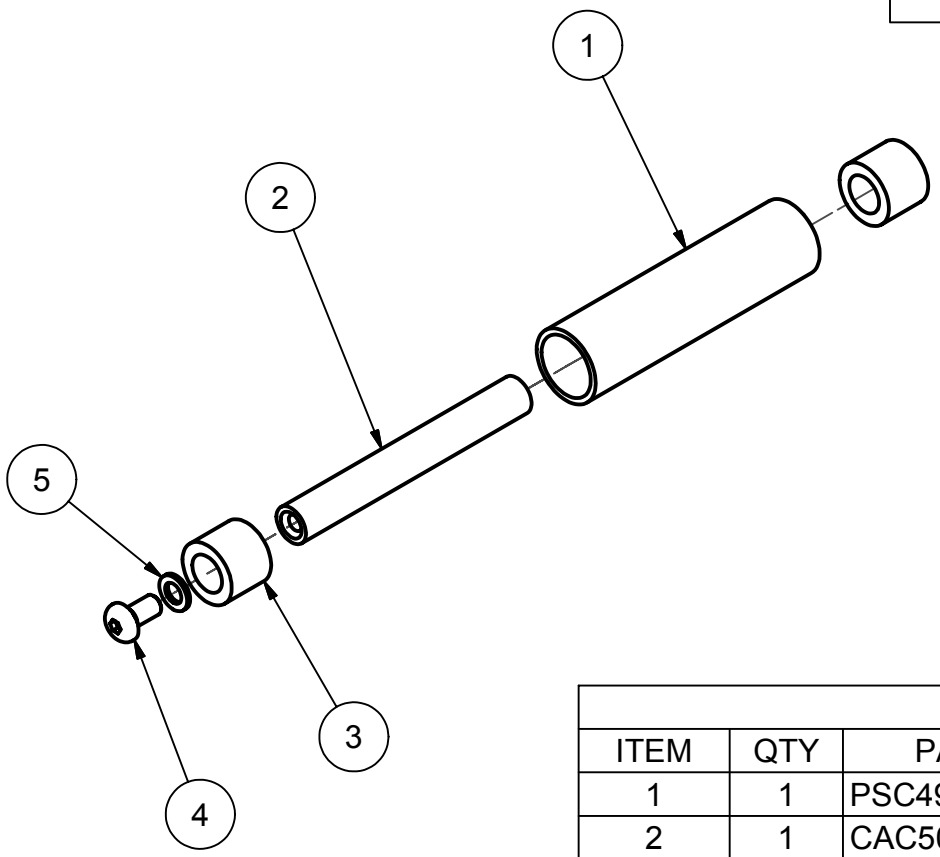
FRACTIONS ± 1/64

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE
KNIFE GUARD ASSEMBLY

DWG NO .KGA-CAC50	SCALE
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

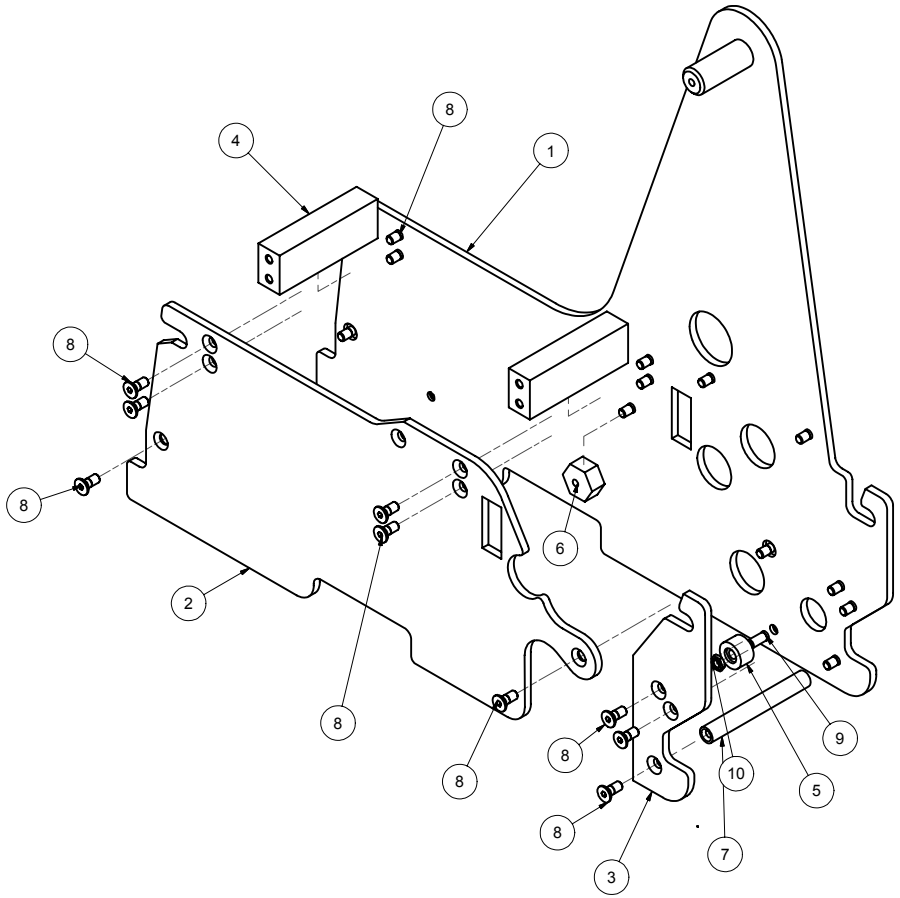
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/6/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC49-3	ALUM. ROLLER CARTRIDGE
2	1	CAC50-024-3	SHAFT IDLER ROLLER
3	2	PSC606	BUSHING
4	1	FBHMF010P10	BUTT. HD. SCREW M5 X 10
5	1	FFWMFP	FLAT WASHER M5

MAT'L	PART #	CAD FILE IDLER ROLLER ASSY.idw	TOLERANCES UNLESS OTHERWISE NOTED:	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.
	STD	PLOT DATE		
ST. ST.		DRAWN DATE 6/6/2005	.X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2° .XXX = ±.005	TITLE IDLER ROLLER ASSY. CAC50
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X = ±1.0mm METRIC .XX = ±.3mm MACH. FINISH 125 .XXX = ±.1mm	DWG NO .IRA-CAC50 / SCALE
			FRACTIONS ± 1/64	MATERIAL / CHECKED
				DRAWN DENNISW / APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/31/2005	DW



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-102-6	MAIN FRAME
2	1	CAC50-002-5	FRAME, TOP
3	1	CAC50-012-4	FRAME TOP EXCESS
4	2	CAC50-015-3	BLOCK FRAME
5	1	CAC50-050-3	STOPPER FRONT ARM
6	1	PSC301117-3	STOP ROLLER ARM
7	1	PSC321025B-3	SHAFT, CARTRIDGE PLATES
8	21	FFHMF012P10	FLAT HD. M5 X 12 LG.
9	1	FFHMF016P10	FLAT HEAD CAP SCREW M5 X 16 LG.
10	1	FHJNMFP	M5 HJN

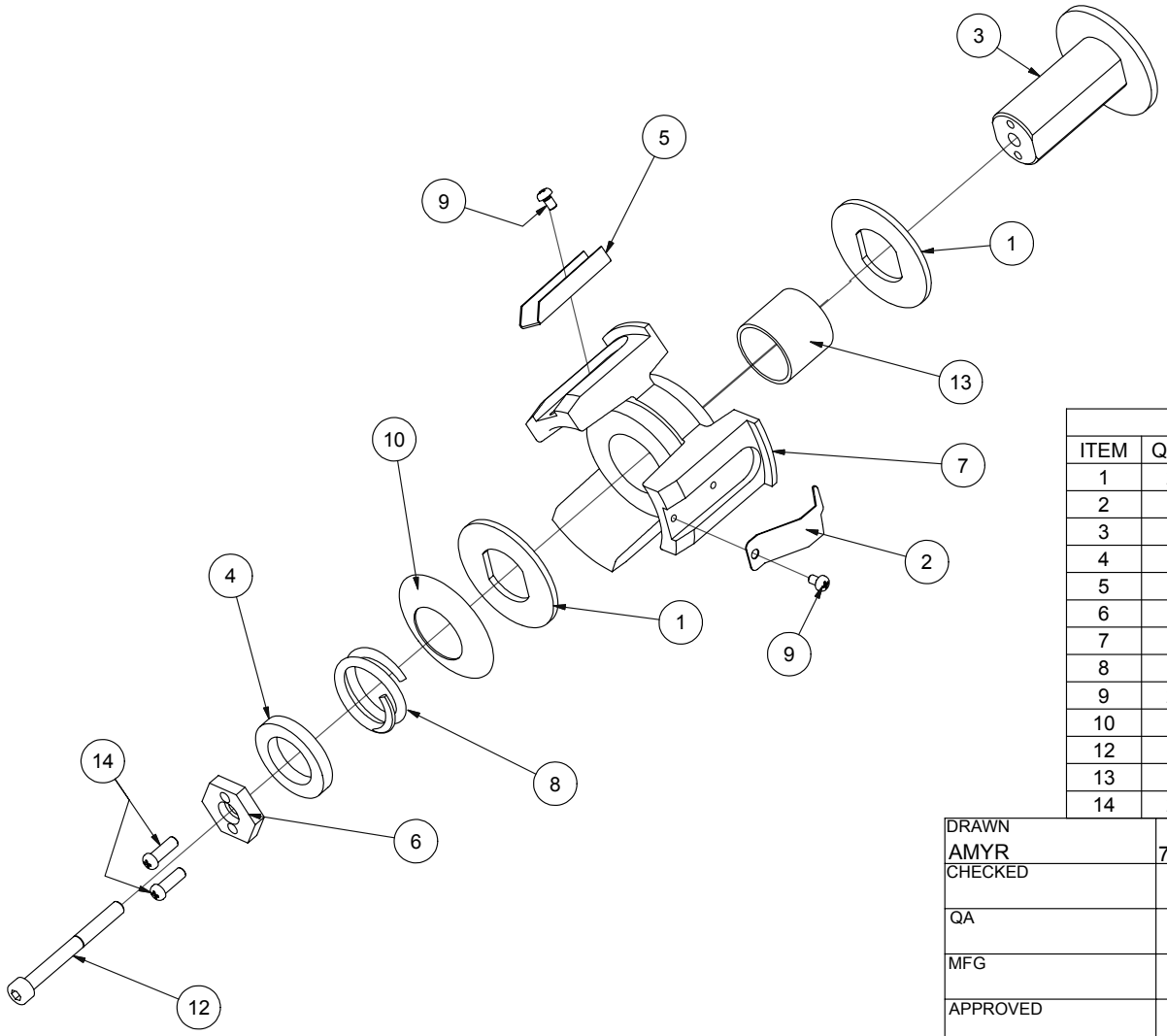
MAT'L	PART #	CAD FILE FRA-CAC50.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 5/31/2005	INCH .X = ±.050, .XX = ±.015, .XXX = ±.005; ANGLES ± 1/2°
STAINLESS : NO FINISH		DO NOT SCALE PRINT	METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm; MACH. FINISH 125
			FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE
FRAME ASSEMBLY

DWG NO .FRA-CAC50	SCALE
MATERIAL	CHECKED
DRAWN DENNISW	APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	7/3/2003	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	PSC28-3	BRAKE WASHER
2	1	PSC88-3	TAPE CORE SPRING
3	1	CAC50-096-4	TAPE CORE SHAFT (THREADED)
4	1	PSC142-3	TAPE CORE NUT
5	1	PSC144-3	TAPE HOLDER
6	1	CAC50-095-3	HEX LOCK NUT
7	1	PSC30A-5	TAPE CORE CASTING
8	1	PSC33B-3	COMPRESSION SPRING
9	2	MS7M3-5	PAN HEAD SCREW M3 X 5
10	1	PSC33	SPRING DISC
12	1	SPH-1030	SOC. HEAD CAP SCREW M5 X 50
13	1	PSC625	BUSHING
14	2	SPH-1221	M4-.7 x 12 mm LG. PAN HD BOLT (FULL THREAD)

DRAWN	AMYR	7/3/2003
CHECKED		
QA		
MFG		
APPROVED		

TITLE

TAPE CORE ASSEMBLY

SIZE	DWG NO	REV
B	.TCA301	A

SCALE

SHEET 1 OF 1

TAPE CORE ASSEMBLY ADJUSTMENT PROCEDURES

(.TCA201 = 3” TAPE CORE AND .TCA301 = 2” TAPE CORE)

STEP 1: UNLOCKING THE TAPE CORE FOR ADJUSTMENT:

THERE IS A LOCKING BOLT USED TO MAINTAIN THE HEIGHT ADJUSTMENT OF THE TAPE CORE. THIS MUST BE LOOSENED TO CHANGE THE HEIGHT OF THE TAPE CORE. THIS WILL ALLOW YOU TO ADJUST THE HEIGHT OF THE TAPE (TRACKING) THROUGH THE CARTRIDGE. USING A 3 mm HEX KEY WRENCH TURN IN A COUNTERCLOCKWISE DIRECTION TO LOOSEN THE SOCKET HEAD CAP SCREW (SPH-1030). THEN TURN THE TAPE CORE NUT LP06B-039-3 (3”) OR PSC142-3 (2”) IN A COUNTERCLOCKWISE DIRECTION TO REMOVE DRAG FROM THE DISC SPRING (PSC33). BE SURE TO LOOSEN ENOUGH TO ALLOW THE TAPE CORE INTERNAL ASSEMBLY TO SPIN FREELY AND ADJUST UP AND DOWN.

STEP 2: ADJUSTING THE TAPE CORE HEIGHT:

THE INTERNAL ASSEMBLY IS THREADED ON A STUD MOUNTED ON THE CARTRIDGE MILL STAND. BY HOLDING THE EXTERNAL PART OF THE TAPE CORE ASSEMBLY AND ROTATING THE HEX LOCK NUT CAC50-101-3 (3”) OR CAC50-095-3 (2”) THE INTERNAL ASSEMBLY WILL ROTATE CHANGING THE HEIGHT OF THE TAPE CORE ASSEMBLY. TURN IN A CLOCKWISE DIRECTION TO DECREASE THE HEIGHT AND IN A COUNTERCLOCKWISE DIRECTION TO INCREASE THE HEIGHT. *DO NOT OVER TIGHTEN THE INTERNAL ASSEMBLY.* THIS MAY CAUSE DAMAGE TO THE TAPE CORE ASSEMBLY. RUN THE TAPE THROUGH THE CARTRIDGE AND CHECK FOR PROPER TAPE POSITION. REPEAT ADJUSTMENT AS REQUIRED TO CENTER TAPE.

STEP 3: ADJUSTING TAPE ROLL BACK LASH OR FREE SPIN:

THERE IS A DISC SPRING (PSC33) AND A SET OF BRAKE WASHERS (PSC28-3) USED TO SLOW THE FREE SPINNING OF THE TAPE ROLL CAUSED WHEN THE TAPE IS PULLED THROUGH THE CARTRIDGE. BY ROTATING THE TAPE CORE NUT LP06B-039-3 (3”) OR PSC142-3 (2”) IN A CLOCKWISE DIRECTION THIS WILL INCREASE THE DRAG FROM THE DISC SPRING (PSC33) RESTRICTING THE AMOUNT OF FREE SPIN. THIS SHOULD BE SET WITH JUST ENOUGH DRAG TO STOP THE FREE SPINNING. TOO MUCH OR TOO LITTLE WILL AFFECT THE CARTRIDGE TAPING PERFORMANCE. RUN TAPE THROUGH THE CARTRIDGE AND CHECK FOR TAPE ROLL FREE SPIN. REPEAT ADJUSTMENT AS REQUIRED TO SET TAPE ROLL FREE SPIN.

STEP 4:LOCKING THE TAPE CORE:

AFTER THE TAPE IS CENTERED AND THE TAPE ROLL FREE SPIN IS PROPERLY ADJUSTED THE TAPE CORE SHOULD BE LOCKED INTO POSITION. USING A 3 mm HEX KEY WRENCH TURN IN A CLOCKWISE DIRECTION TO TIGHTEN THE SOCKET HEAD CAP SCREW (SPH-1030). THIS WILL INSURE THAT THE HEIGHT ADJUSTMENT IS MAINTAINED DURING OPERATION.

LITTLE DAVID

TAPE CARTRIDGE MANUAL

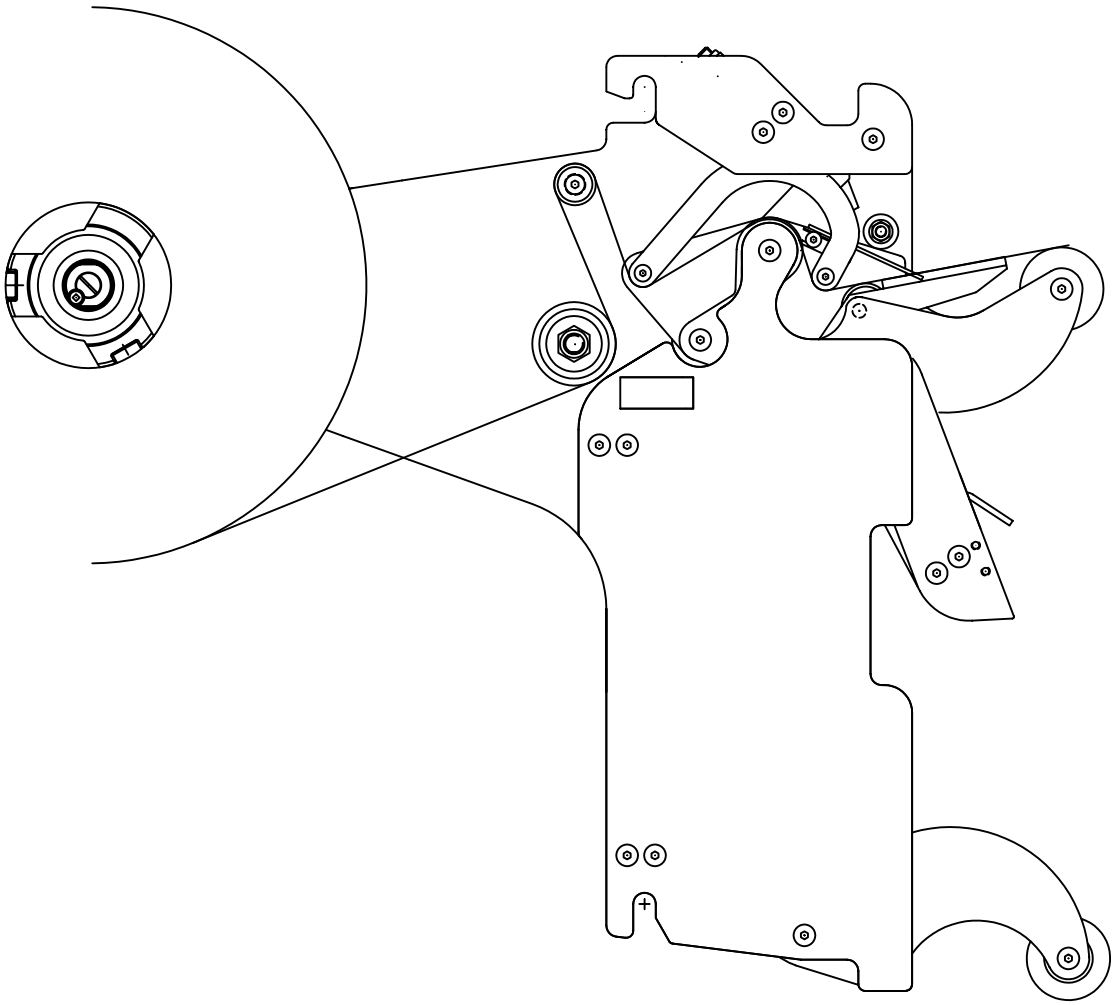
.CAC51

THE LOVESHAW CORPORATION
2206 EASTON TURNPIKE, BOX 83
SOUTH CANAAN, PA 18459

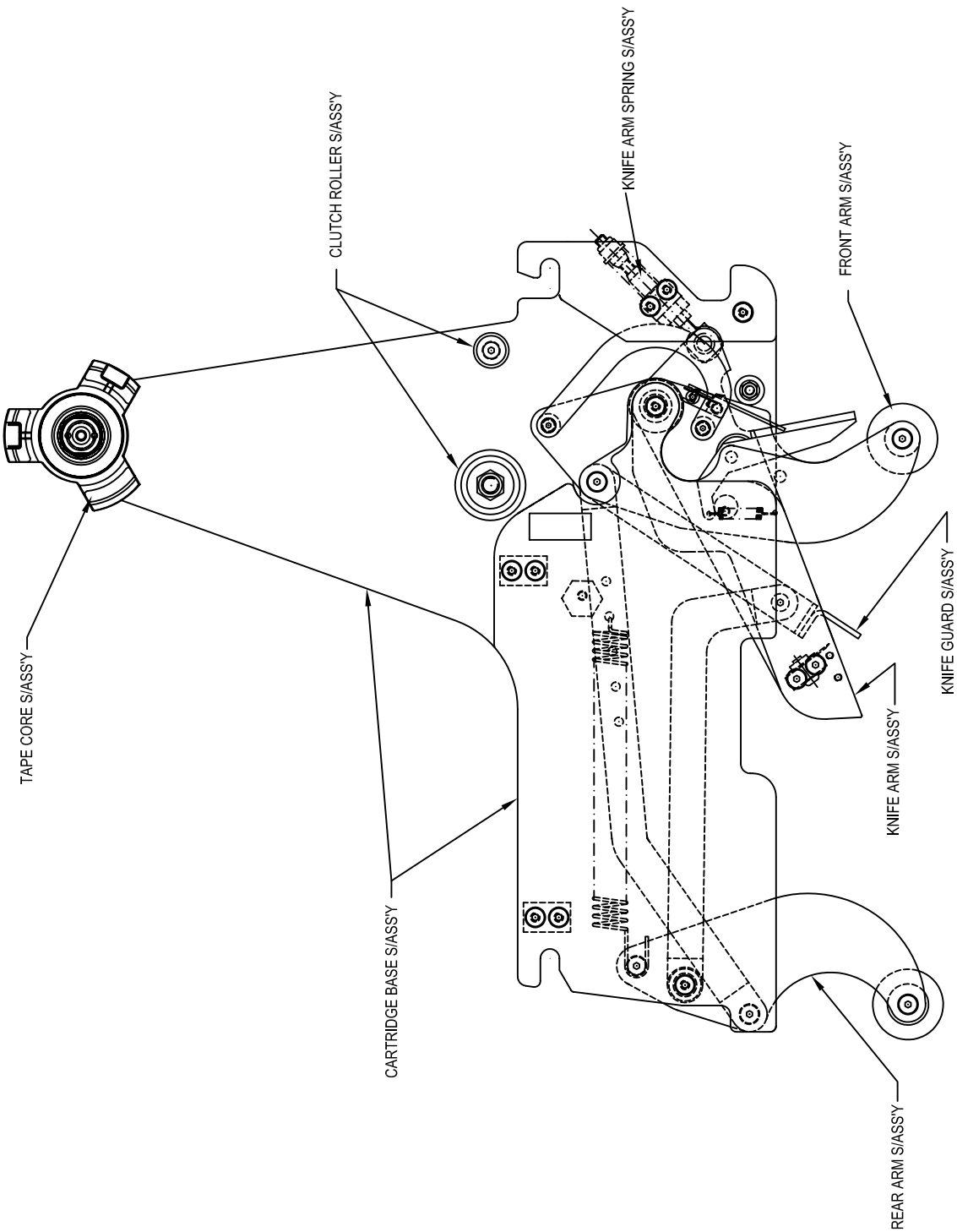
TEL: (570) 937-4921
FAX: (570) 937-4370

LOVESHAW - EUROPE
UNIT 9, BRUNEL GATE
W. PORTWAY INDUSTRIAL ESTATE
ANDOVER, HAMPSHIRE SP103SL
ENGLAND
44-264-3575-11

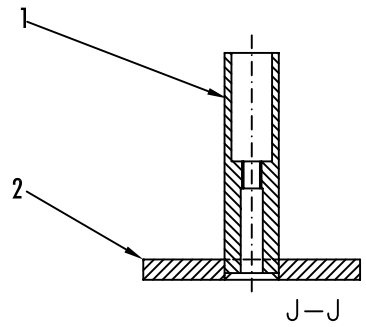
TAPE THREADING DIAGRAM

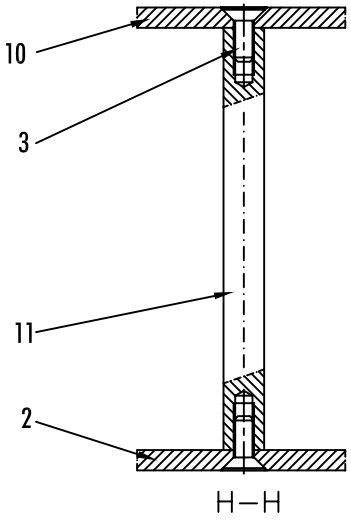


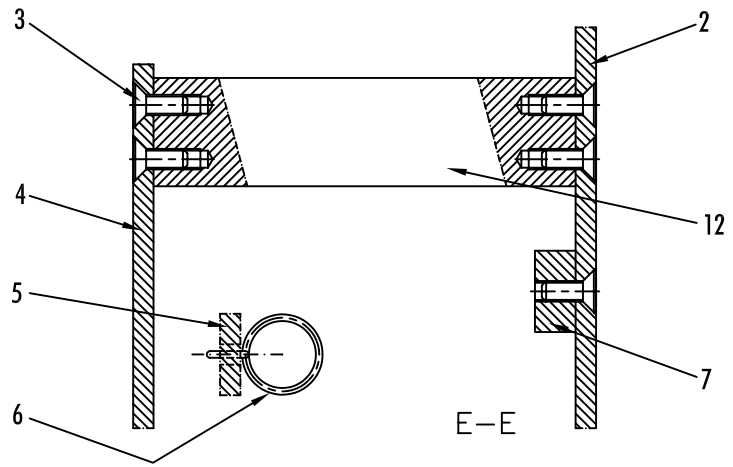
CARTRIDGE OVERVIEW

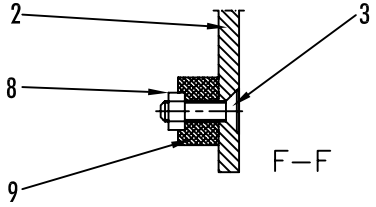


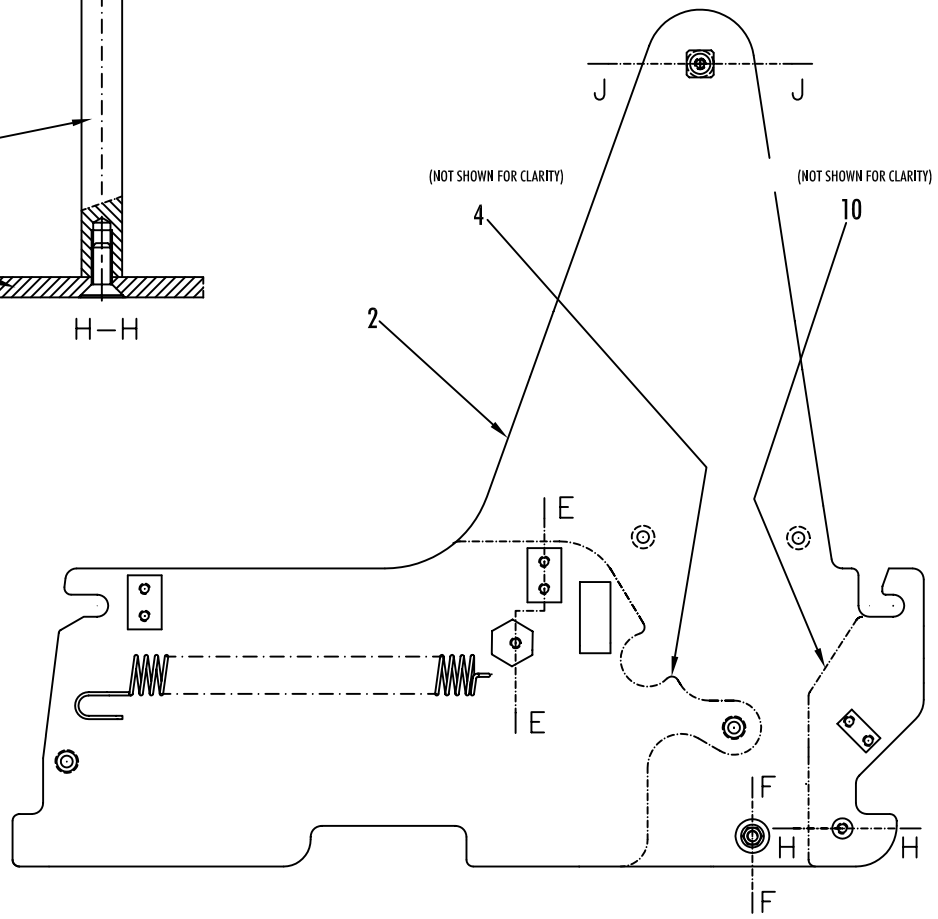
CARTRIDGE BASE ASS'Y







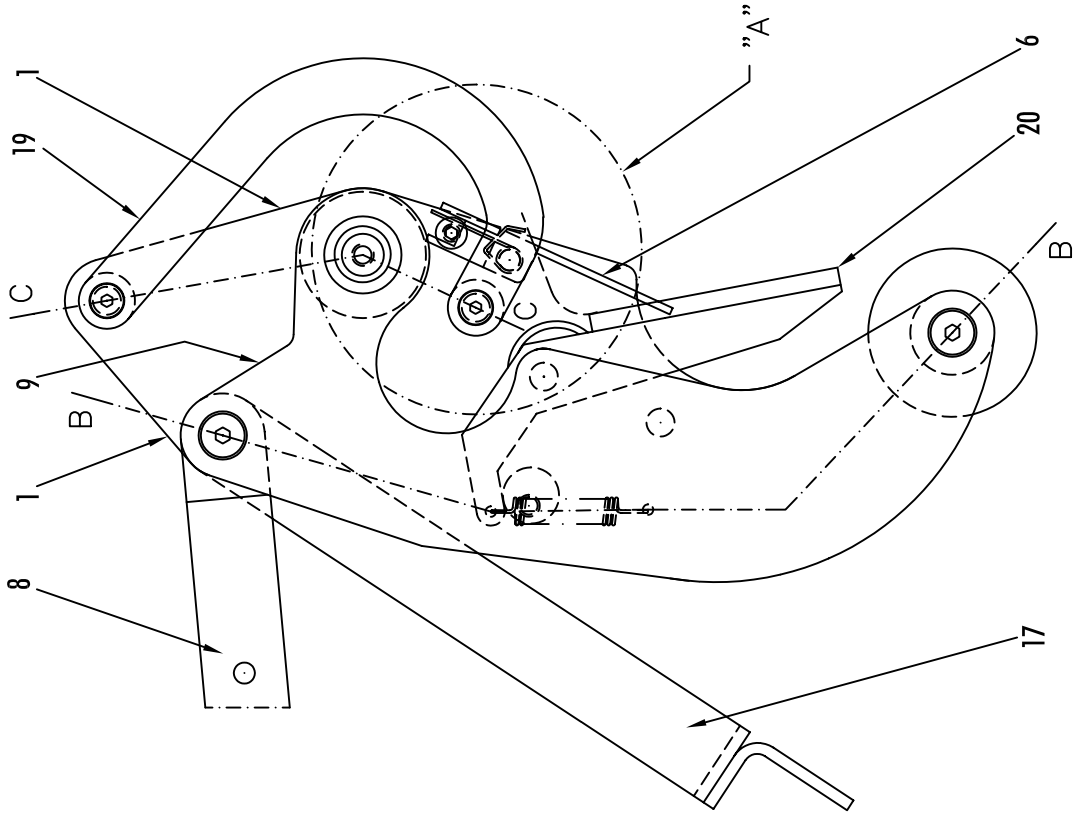


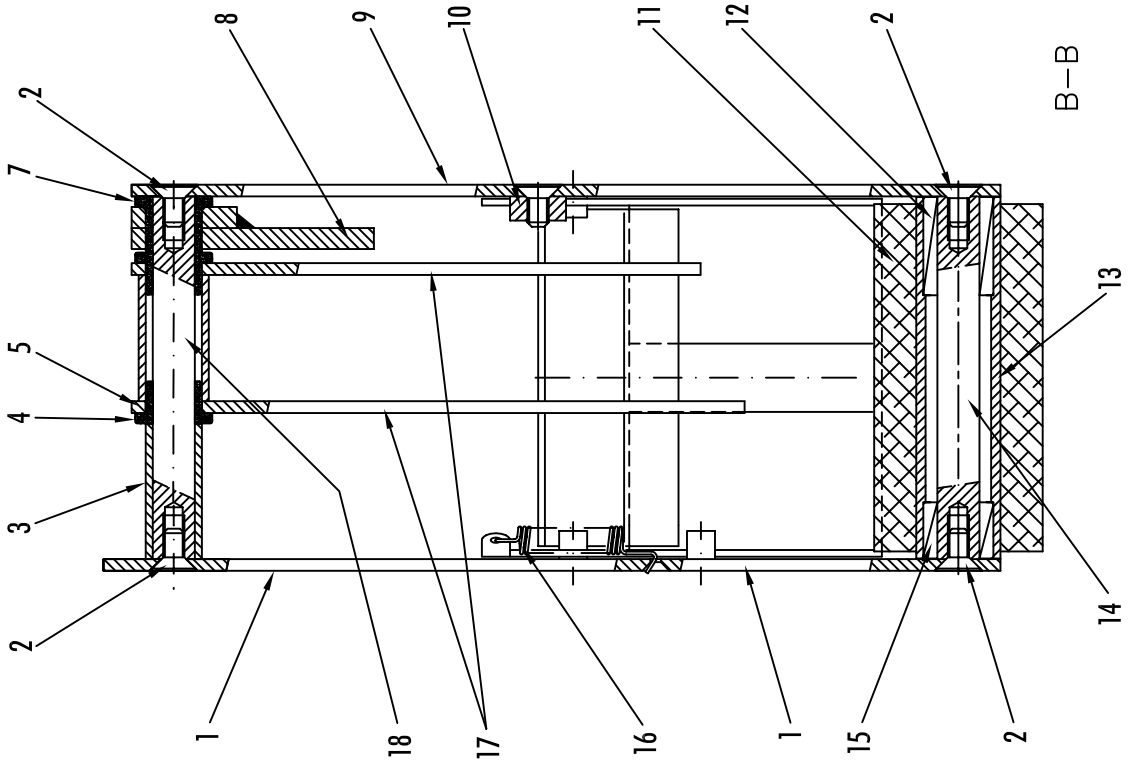


CARTRIDGE BASE ASSEMBLY

KEY	PART NUMBER	DESCRIPTION	QTY
1	CAC50-047-3	SLEEVE	1
2	CAC50-102-6	FRAME - MAIN	1
3	----------	M5 X FH. SCREW	23
4	CAC50-002-5	FRAME - TOP	1
5	CAC50-003-4	CONNECTING LINK - ARMS	1
6	PSC501101-4	CARTRIDGE MAIN SPRING	1
7	PSC301117-3	STOP ROLLER ARM	2
8	----------	M5 HEX NUT	1
9	CAC50-050-3	STOPPER - FRONT ARM	2
10	CAC50-012-3	FRAME - TOP EXCESS	1
11	CAC51-017-4	SHAFT - CARTRIDGE PLATE	1
12	CAC51-008-3	BLOCK - FRAME	2

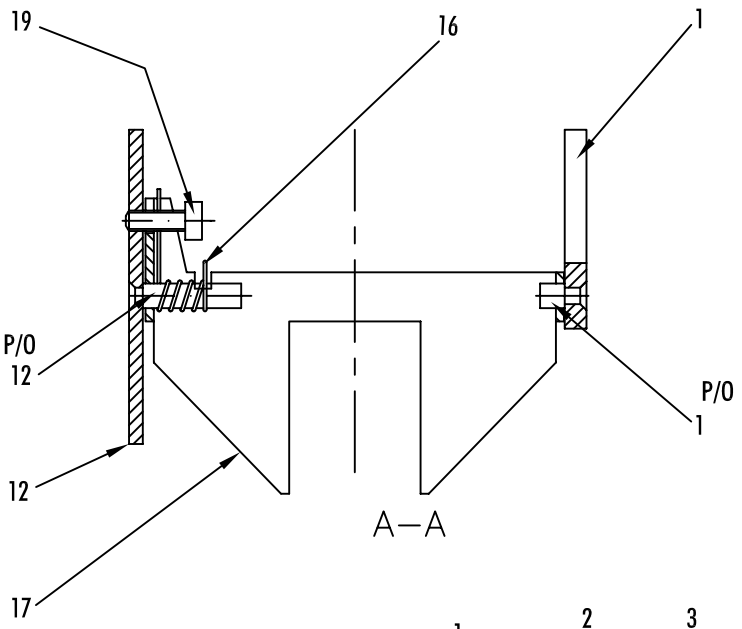
FRONT ARM ASS'Y – 1

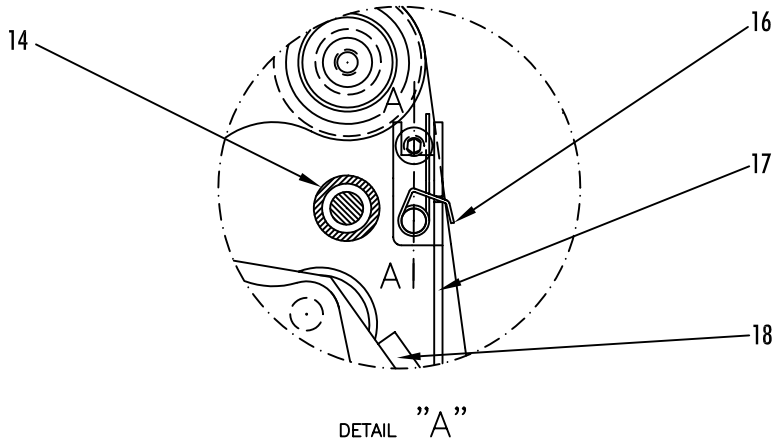


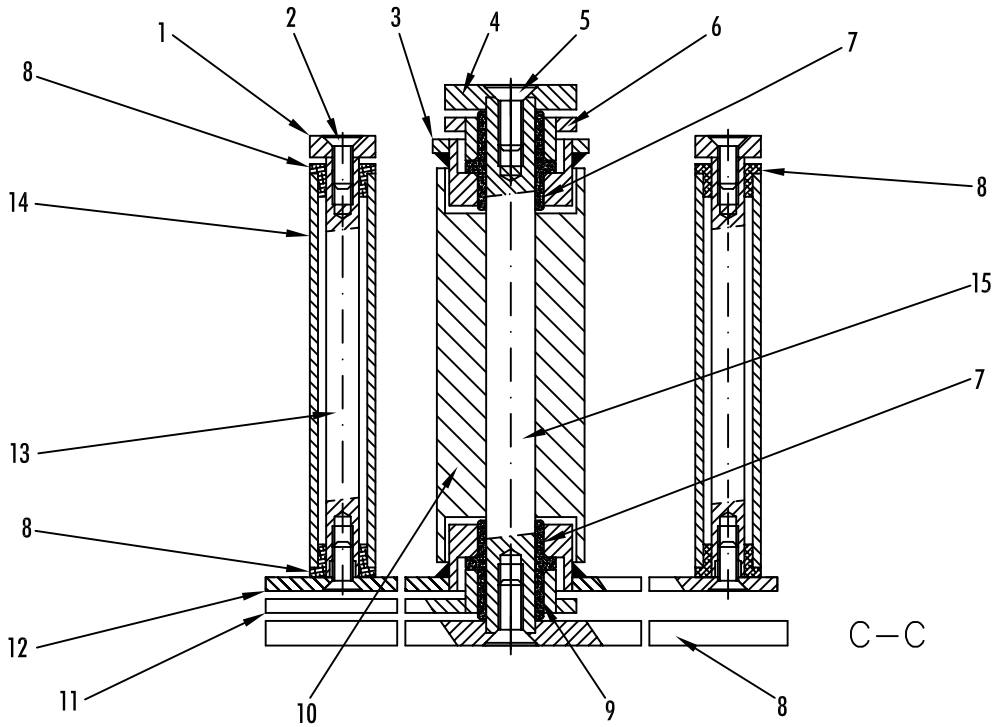


FRONT ARM ASSEMBLY

KEY	PART NUMBER	DESCRIPTION	QTY
1	CAC50-005-4	FRONT ARM - MAIN	1
2	----------	M5 X 10 FH. SCREW	3
3	CAC51-013-3	SPACER - CONN. ARM	1
4	50186-039	BRONZE FLANGE BUSHING 3/8 X 1/2 X 3/8	2
5	PSC301110-3	SPACER - 1/2 ID X 1 1/8 LONG	1
6	PSC441013-4	TAPE HOLD DOWN PLATE	1
7	50186-007	BRONZE FLANGE BUSHING 3/8 X 1/2 X 1/2	1
8	CAC50-003-4	CONNECTING LINK - ARMS	1
9	CAC50-006-4	FRONT ARM - TOP	2
10	PSC139-3	STOP - TAPE GUIDE PLATE	1
11	LP06B-003B-3	WIPE ROLLER	2
12	J205-PS	TORRINGTON BEARING	1
13	CAC51-003-3	SLEEVE - NEEDLE BEARING	1
14	CAC51-002-3	SHAFT - FRONT ROLLER	1
15	J206-PS	TORRINGTON BEARING	1
16	PSC26-3	SPRING EXT. - GUIDE PLATE	1
17	CAC51-018-4	KNIFE GUARD	1
18	CAC51-001-3	SHAFT - WIPE ROLLER	3
19	JBW1014-4	HORSE SHOE	1
20	CAC51-019-4	TAPE GUIDE PLATE	1





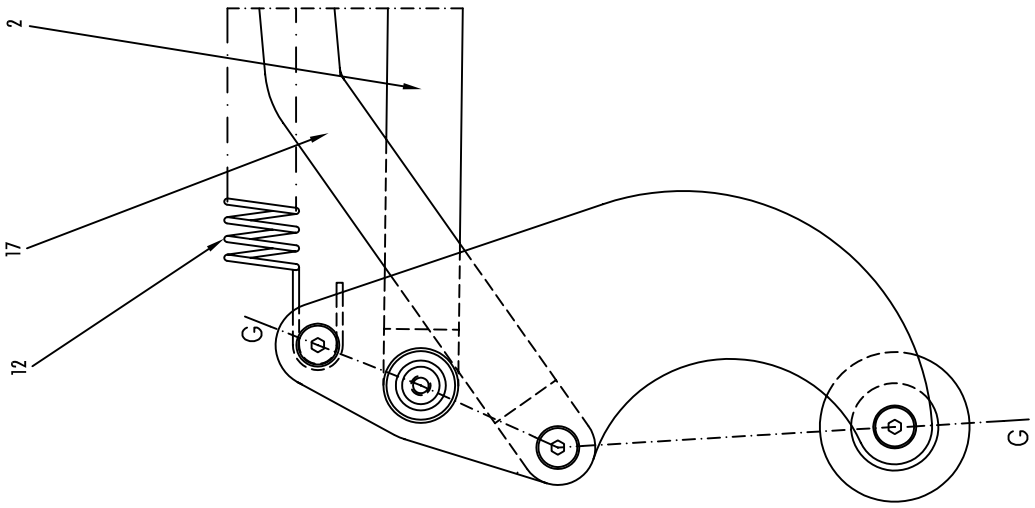


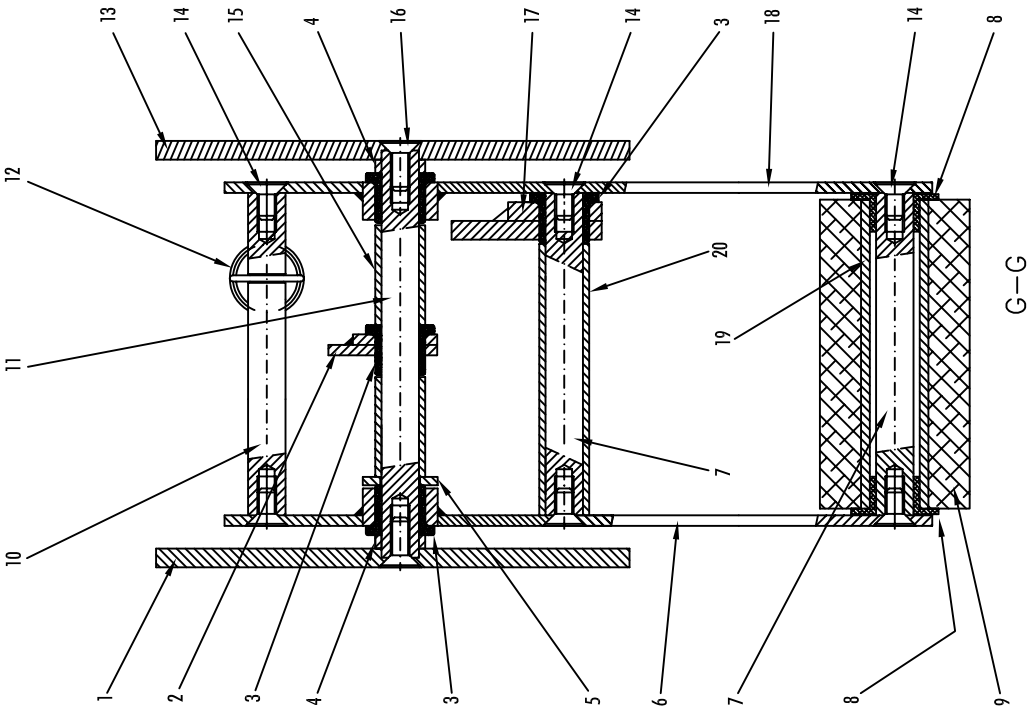
FRONT ARM ASS'Y — 2

FRONT ARM ASSEMBLY 2

KEY	PART NUMBER	DESCRIPTION	QTY
1	JBW1014-3	HORSE SHOE	1
2	----------	M4 X FH. SCREW	3
3	CAC50-006-4	FRONT ARM - TOP	2
4	CAC50-002-5	FRAME - TOP	1
5	----------	M5 X FH. SCREW	23
6	CAC50-010-4	KNIFE ARM - TOP	1
7	50186-039	BRONZE FLANGE BUSHING 3/8 X 1/2 X 3/8	4
8	PSC599	NYLON BUSHING	5
9	50185-049	BRONZE FLANGE BUSHING 3/8 X 1/2 X 3/8	2
10	CAC51-016-3	CENTER ROLLER - 1.12 DIA.	2
11	CAC50-009-4	KNIFE ARM - MAIN	1
12	CAC50-005-4	FRONT ARM - MAIN	1
13	CAC51-015-3	SHAFT KNURLED ROLLER	2
14	CAC51-012-3	KNURLED ROLLER - 1/2” DIA.	2
15	CAC51-011-3	SHAFT - PIVOT ARM	2
16	PSC321022-4	FINGER PLATE SPRING	1
17	PSC441013-4	TAPE HOLD DOWN PLATE	1
18	CAC51-019-4	TAPE GUIDE PLATE	1
19	----------	M4 X 15 ROUND HD. SCREW	1

REAR ARM ASS'Y

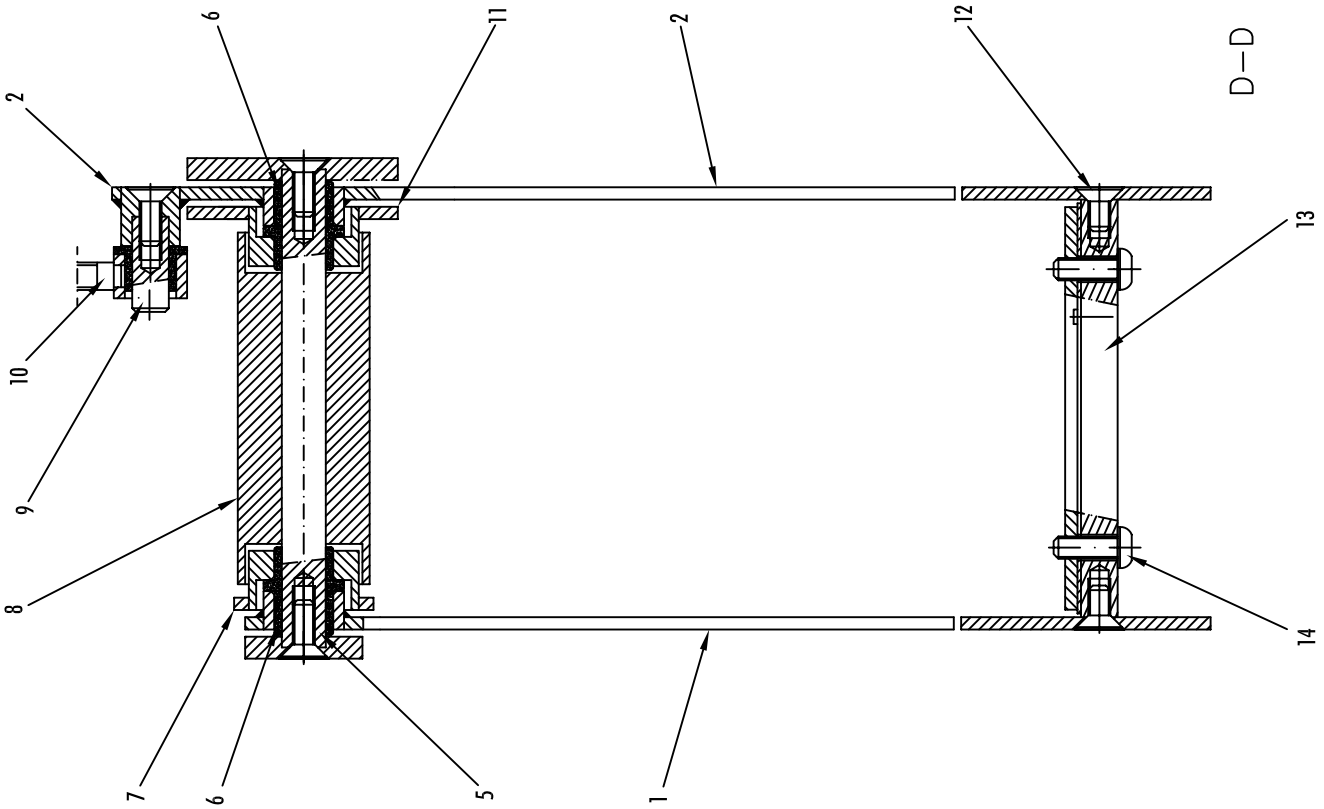


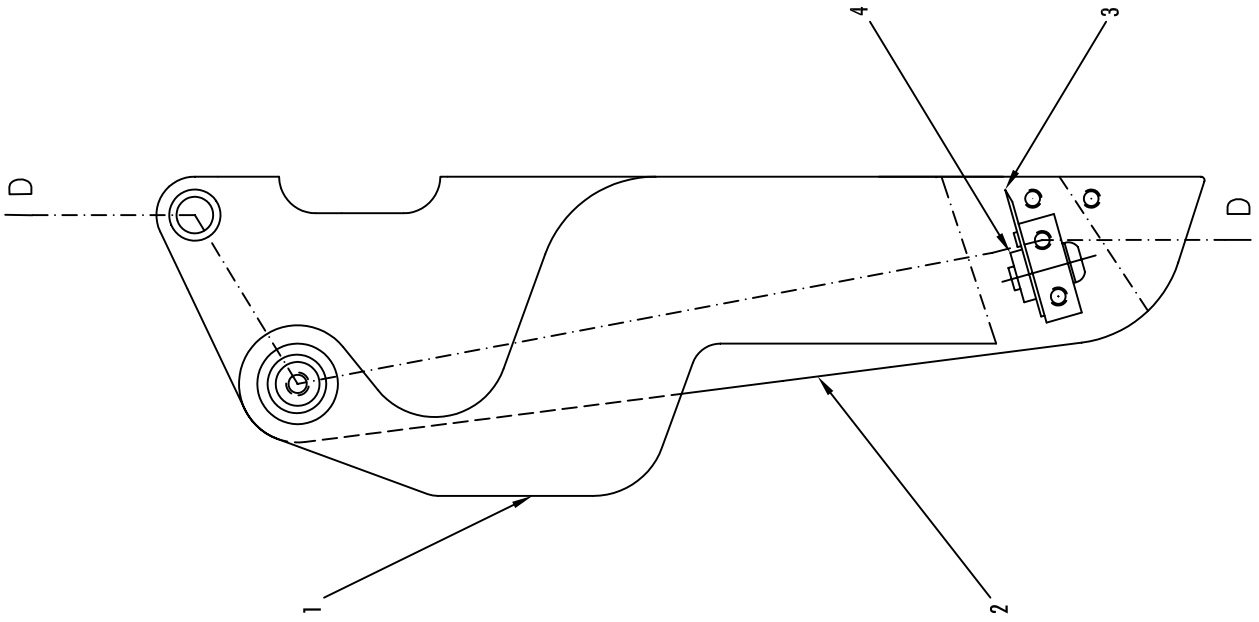


REAR ARM ASSEMBLY

KEY	PART NUMBER	DESCRIPTION	QTY
1	CAC50-102-6	FRAME - MAIN	1
2	CAC50-004-4	CONN. LINK - KNIFE GUARD	1
3	50186-007	BRONZE FLANGE BUSHING 3/8 X 1/2 X 1/2	6
4	CAC50-049-3	SPACER - REAR ARM PIVOT	2
5	----------	3/8 DIA. NOM SAE WASHER	1
6	CAC50-007-4	REAR ARM - TOP	1
7	CAC51-001-3	SHAFT - WIPE ROLLER	3
8	PSC12/3-3	BUSHING - WIPE ROLLER	2
9	LP06B-003B-3	WIPE ROLLER	2
10	CAC51-010-3	STUD - REAR ARM SPRING	1
11	CAC51-011-3	SHAFT - PIVOT ARM	2
12	PSC501101-4	CARTRIDGE MAIN SPRING	1
13	CAC50-002-5	FRAME - TOP	1
14	----------	M5 X 10 FH. SCREW	13
15	CAC50-043-3	SPACER - REAR PIVOT ARM	1
16	----------	M5 X 12 FH. SCREW	23
17	CAC50-003-4	CONNECTING LINK - ARMS	1
18	CAC50-008-4	REAR ARM - LEFT	1
19	LP06B-003A-3	SLEEVE - WIPE ROLLER	1
20	CAC51-014-3	SPACER - REAR CONN. ARMS	1

KNIFE ARM ASS'Y

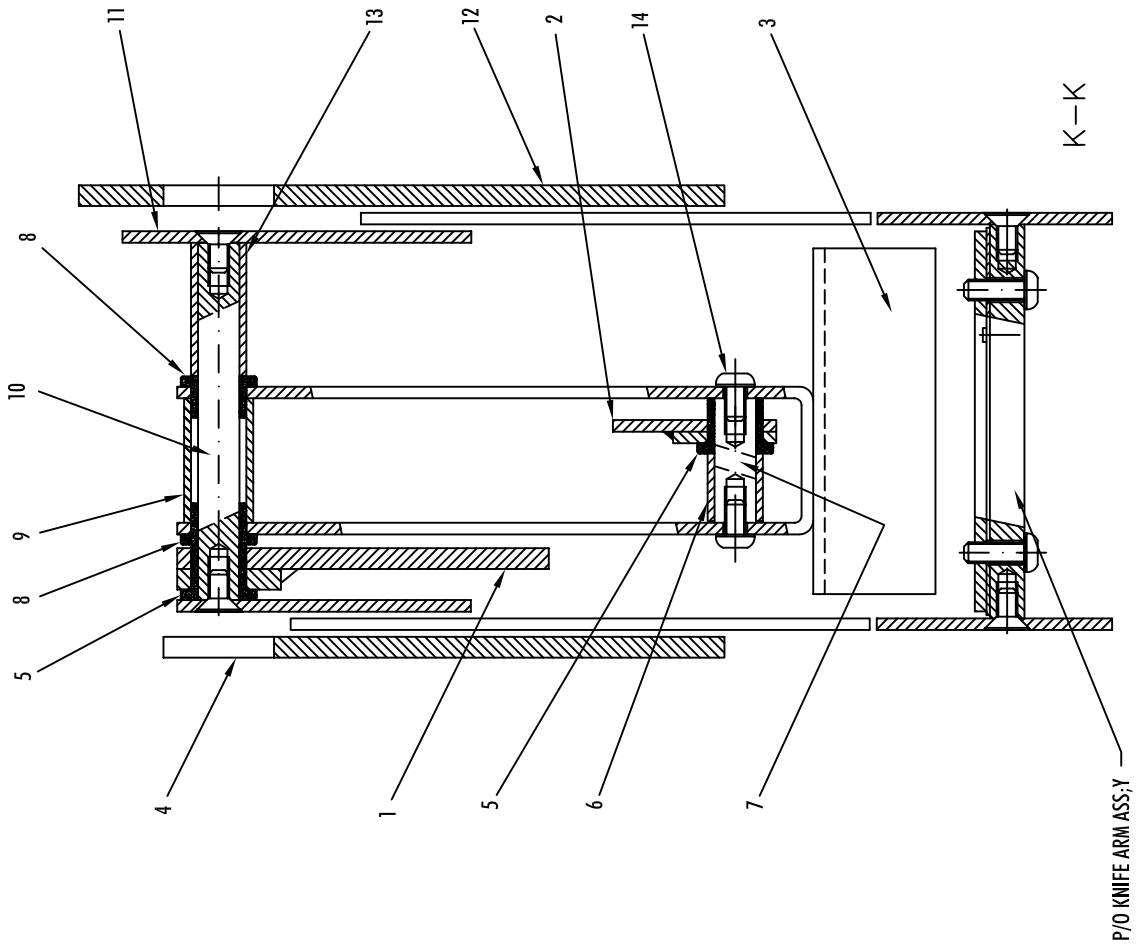


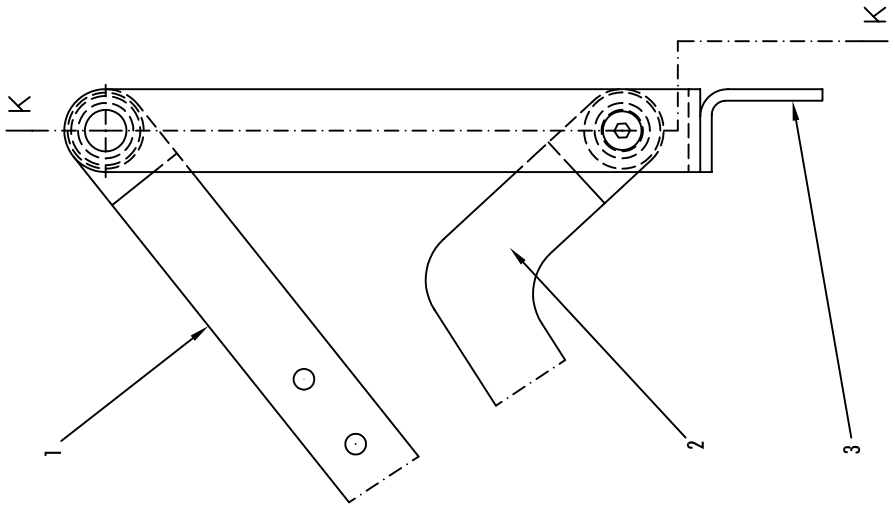


KNIFE ARM ASSEMBLY

KEY	PART NUMBER	DESCRIPTION	QTY
1	CAC50-010-4	KNIFE ARM - TOP	1
2	CAC50-009-4	KNIFE ARM - MAIN	1
3	PS4117A-3	KNIFE	1
4	LP06B-005-3	PLATE - KNIFE	1
5	CAC51-011-3	SHAFT - PIVOT ARM	2
6	50185-049	BRONZE FLANGE BUSHING 3/8 X 1/2 X 3/8	2
7	CAC50-006-4	FRONT ARM - TOP	2
8	CAC51-016-3	CENTER ROLLER - 1.12 DIA.	1
9	CAC50-017-3	SHAFT - KNIFE ARM	1
10	CAC50-038-3	THREADED SUPPORT SHAFT	1
11	CAC50-005-4	FRONT ARM - MAIN	1
12	----------	M5 X FH. SCREW	13
13	CAC51-007-3	KNIFE BRACKET	1
14	----------	M5 X 12 BUT. HD. SCREW	2

KNIFE GUARD ASS'Y

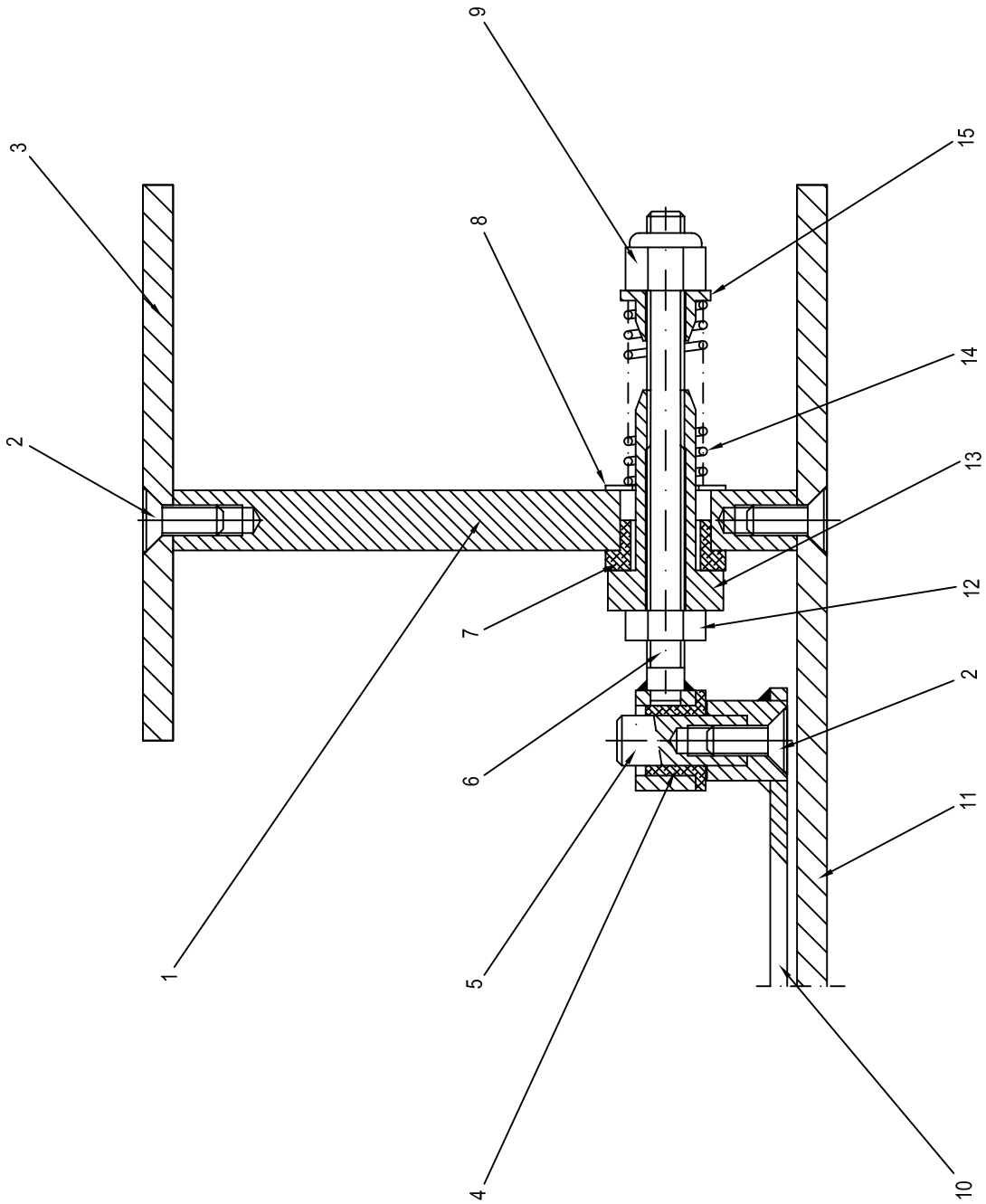




KNIFE GUARD ASSEMBLY

KEY	PART NUMBER	DESCRIPTION	QTY
1	CAC50-003-4	CONNECTING LINK - ARMS	1
2	CAC50-004-4	CONNECTING LINK - KNIFE GUARD	1
3	CAC51-018-4	KNIFE GUARD	1
4	CAC50-002-5	FRAME - TOP	1
5	50186-007	BRONZE FLANGE BUSHING 3/8 X 1/2 X 1/2	6
6	CAC50-041-3	SPACER - KNIFE GUARD	1
7	CAC50-048-3	SHAFT - KNIFE GUARD	1
8	50186-039	BRONZE FLANGE BUSHING 3/8 X 1/2 X 3/8	4
9	PSC301110-3	SPACER 1/2 ID X 1 1/8 LONG	1
10	CAC51-001-3	SHAFT - WIPE ROLLER	3
11	CAC50-005-4	FRONT ARM - MAIN	1
12	CAC50-102-6	FRAME - MAIN	1
13	CAC51-013-3	SPACER - CONN. ARM KNIFE COVER	1
14	----------	M5 X 10 BUTTON HD. SCREW	3

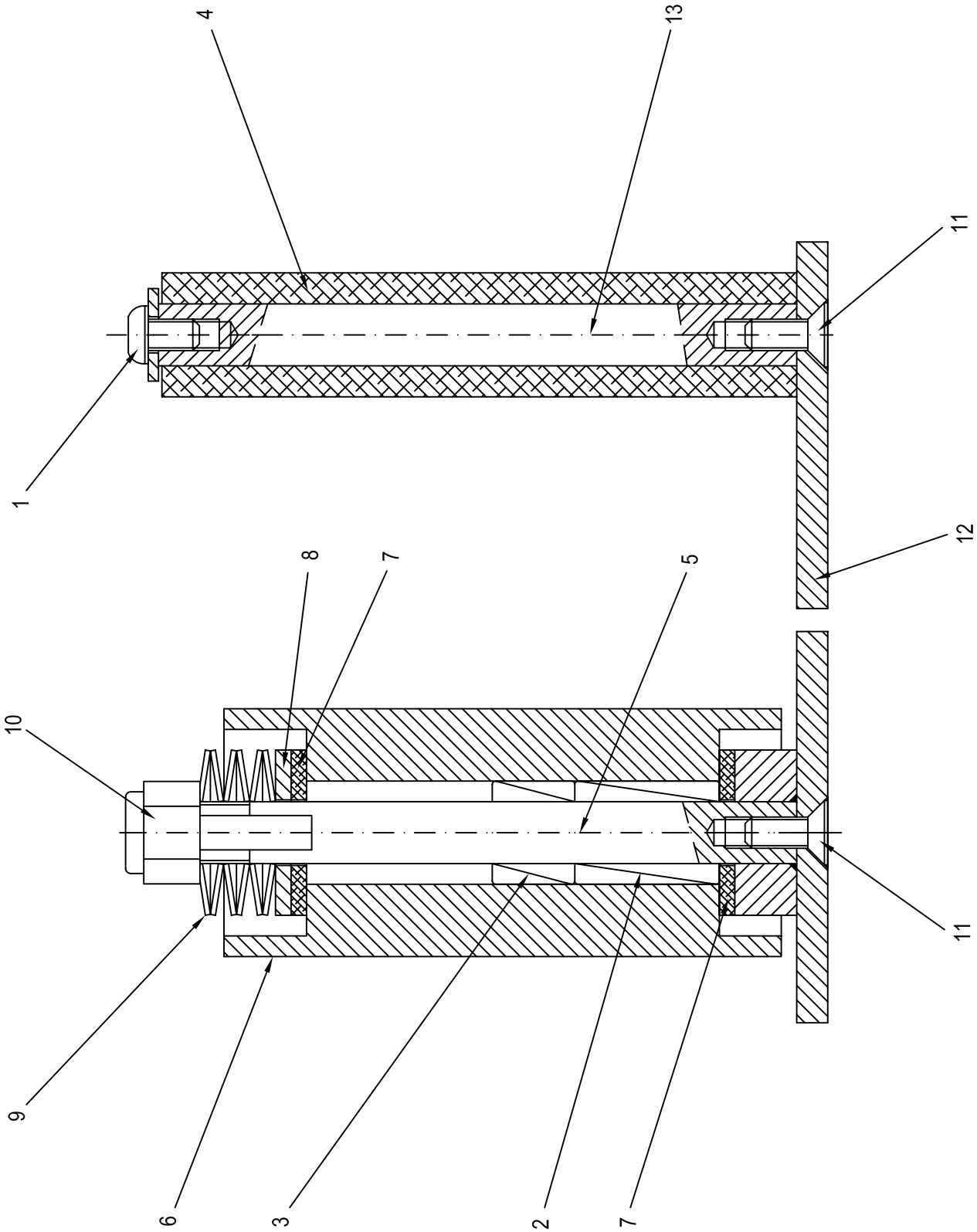
KNIFE ARM SPRING ASS'Y



KNIFE ARM SPRING ASSEMBLY

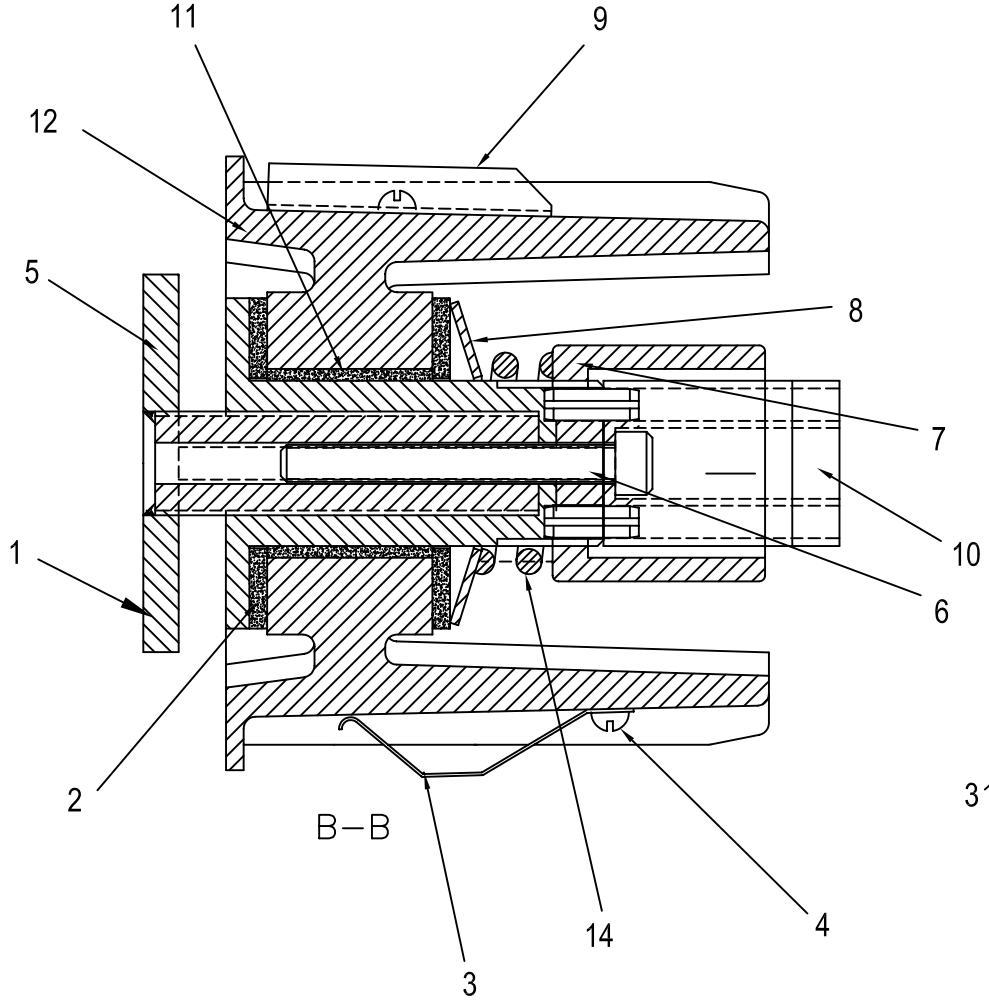
KEY	PART NUMBER	DESCRIPTION	QTY
1	CAC51-009-3	BLOCK - KNIFE ARM SPRING	1
2	----------	M5 X 12 FH. SCREW	23
3	CAC50-002-5	FRAME - TOP	1
4	PSC510	BUSHING TIE BAR	1
5	CAC50-017-3	SHAFT - KNIFE ARM	1
6	CAC50-038-3	THREADED SUPPORT SHAFT	1
7	PSC321044-3	BUSHING - KNIFE STOP	1
8	AV960C616C	FLAT WASHER	1
9	----------	M6 HEX NYLON INSERT NUT	1
10	CAC50-009-4	KNIFE ARM - MAIN	1
11	CAC50-102-6	FRAME - MAIN	1
12	----------	M5 HEX NUT	1
13	PSC321046-4	STOP NUT	1
14	X111-PS	SPRING KNIFE ARM	1
15	PSC321045-4	SPRING GUIDE	1

CLUTCH ROLLER ASS'Y



CLUTCH ROLLER ASSEMBLY

KEY	PART NUMBER	DESCRIPTION	QTY
1	----------	M5 X 10 BUTTON HD. SCREW	3
2	J205-PS	TORRINGTON BEARING	1
3	J206-PS	TORRINGTON BEARING	1
4	LP06B-010-3	IDLER ROLLER 3/4” DIA.	1
5	CAC51-004-3	KNURLED ROLLER SHAFT	1
6	PSC441014-4	KNURLED ROLLER	1
7	PSC321031-3	BRAKE WASHER	2
8	PSC321032-3	LOCKING WASHER	1
9	PSC321039	SPRING WASHER	6
10	50299-028	NYLON INSERT LOCKOUT	1
11	----------	M5 X 12 FH. SCREW	23
12	CAC50-102-6	FRAME - MAIN	1
13	CAC51-005-3	SHAFT - IDLER ROLLER	1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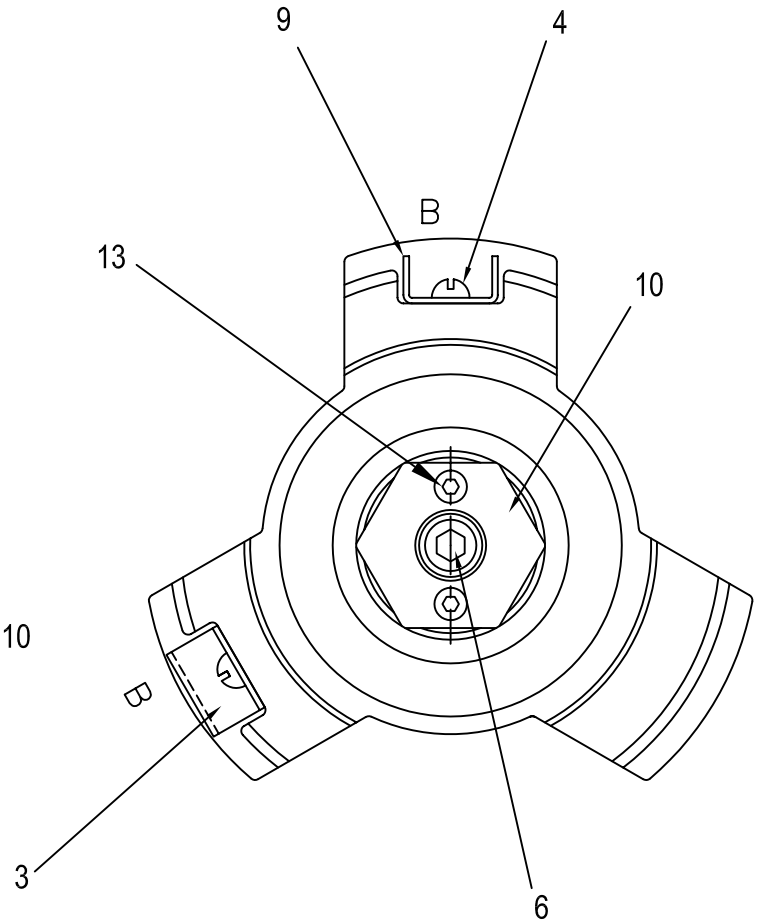
9
12
5
8
7
10
1
6
2
B–B
3
14
4


9
4
B
13
10
B
3
6

TAPE CORE ASSEMBLY

KEY	PART NUMBER	DESCRIPTION	QTY
1	CAC50-102-6	FRAME - MAIN	1
2	PSC28-3	BRAKE WASHER	2
3	PSC88-3	TAPE SPRING	4
4	MS7M3-5	PHIL. HD. M3 X 5	3
5	CAC50-096-4	TAPE CORE SHAFT THREADED	1
6	SPH-1030	SOCKET HD. CAP SCREW	1
7	LP06B-039-3	TAPE CORE NUT	1
8	PSC33	DISC SPRING	1
9	PSC144-3	TAPE HOLDER	1
10	CAC50-101-3	HEX LOCK NUT	1
11	PSC625	BUSHING	1
12	LP06B-038-5	TAPE CORE CASTING	1
13	SPH-1049	DOWEL PIN	2
14	PSC33B-3	SPRING	1

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:

DRIVE MOTOR -	2 YEARS	
GEAR REDUCER -	2 YEARS	
GEAR MOTOR -	2 YEARS	(THIS APPLIES TO SIDE BELTS ONLY)
TAPE CARTRIDGE -	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.)
PLC -	1 YEAR	
SERVO DRIVE -	1 YEAR	
ALL OTHER PARTS -	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.)

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.

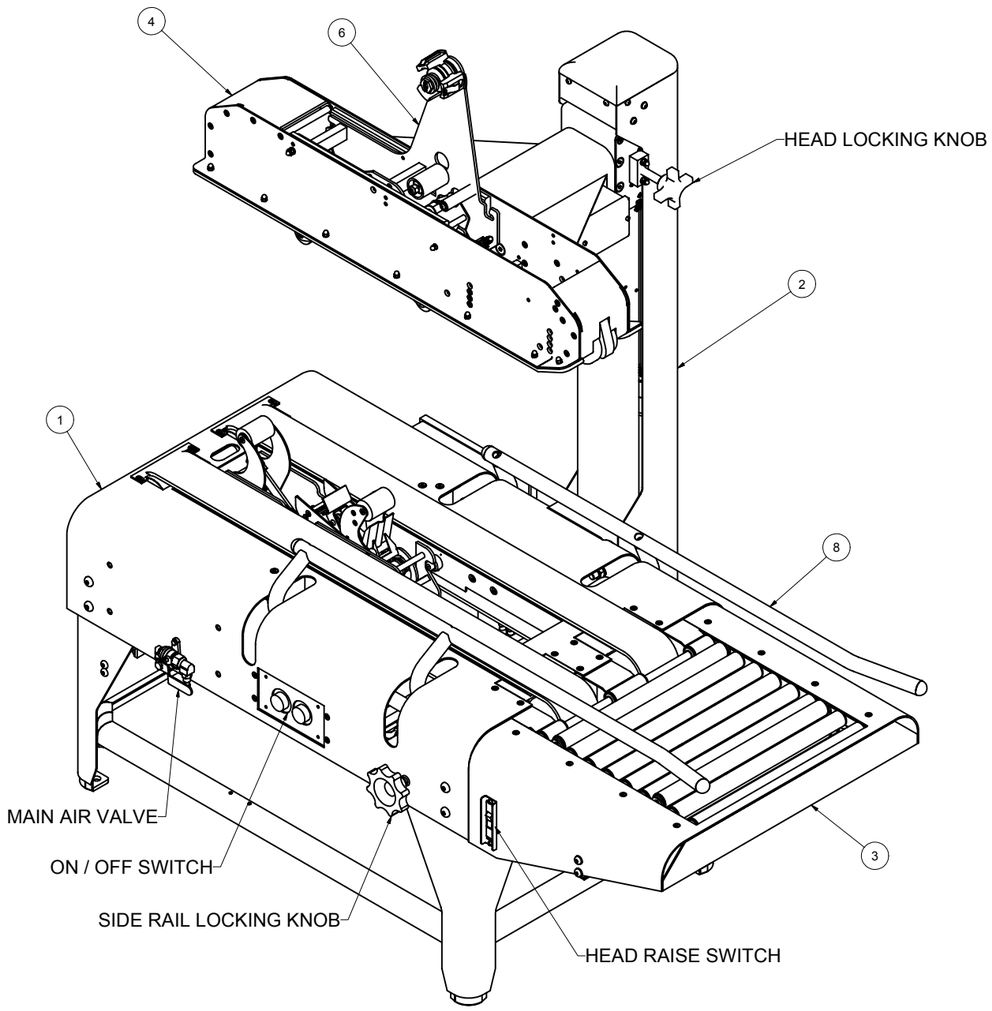
NO PERSON IS AUTHORIZED TO MAKE ANY WARRANTY OR TO CREATE ANY LIABILITY BINDING UPON ***LOVESHAW,*** WHICH IS NOT STATED IN THIS WARRANTY. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, *WHICH ARE HEREBY EXCLUDED*. IN PARTICULAR, THE IMPLIED WARRANTY OF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

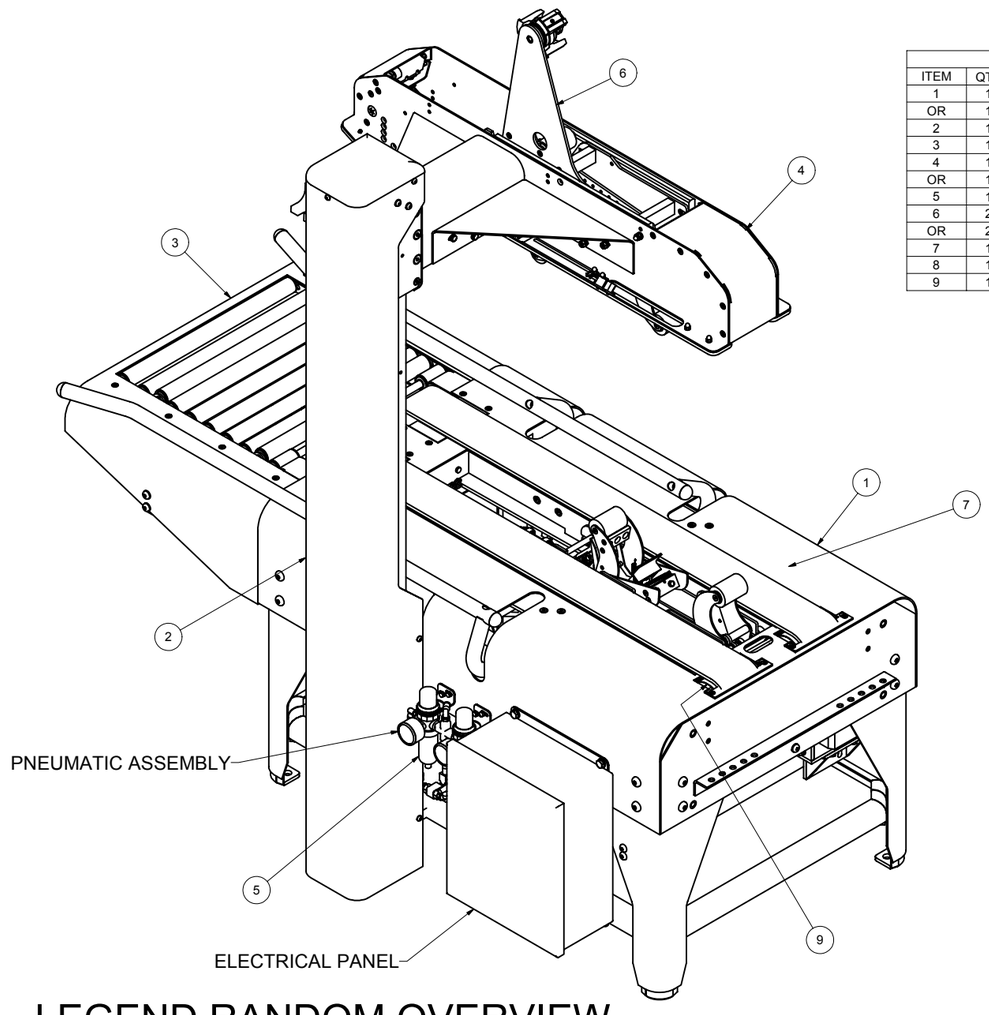
ILLUSTRATED ASSEMBLY DRAWINGS
TABLE OF CONTENTS

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



LEGEND RANDOM OVERVIEW

(OPERATOR SIDE)



LEGEND RANDOM OVERVIEW

(MAST SIDE)

Parts List			
ITEM	QTY	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	.PNEU/LDR	PNEU. ASSY LEGEND RANDOM
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.
9	1	.LDR/DRIVE/STD	DRIVE ASSY.

LDR MAIN ASSY EXT DRIVE ROLLER PADDLE.idw

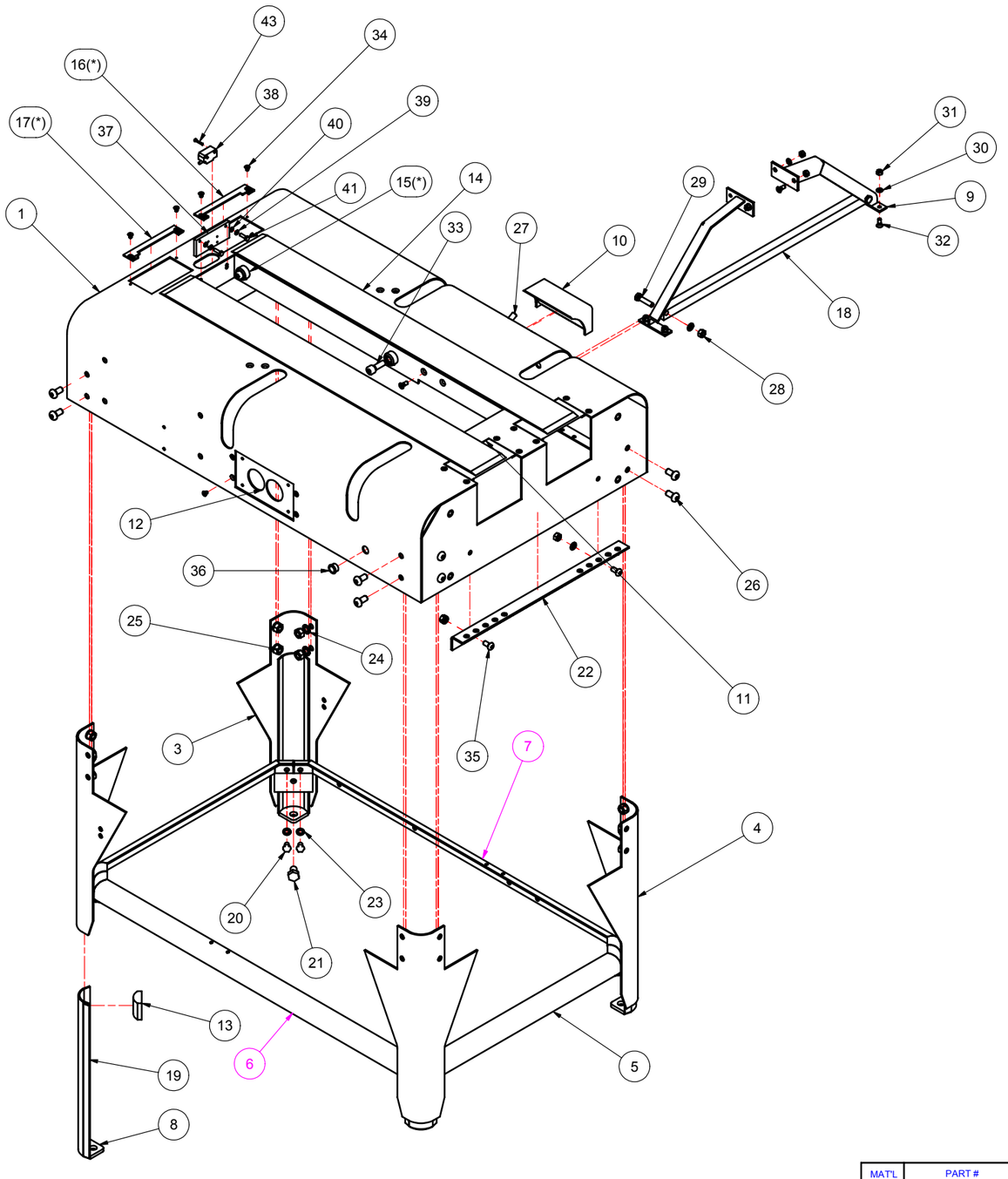
MAT'L	PART #	CAD FILE	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE 3/15/2005	
ST. ST.		DRAWN DATE 3/14/2005	.X =±.050 INCH .XX =±.015 ANGLES ±1/2° .XXX =±.005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X =±1.0mm METRIC .XX =±.3mm .XXX =±.1mm MACH. FINISH √
			FRACTIONS ±1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE: LEGEND RANDOM OVERVIEW

DWG NO	.LDR/2 OR .LDR/3	SCALE	N/A
MATERIAL	NOTED	CHECKED	
DRAWN	tonys	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	4/5/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LDU-1342-6	MAIN FRAME WELDMENT (RANDOM) EXT DRIVE
2	1	LDU-1056R-5	LEG - FRAME
3	1	LDU-1056L-5	LEG - FRAME
4	2	LDU-1095-5	LEG - FRAME
5	2	LDU-1094-5	BRACE HORIZONTAL FRONT/REAR
6	1	LDU-1093-5	BRACE HORIZONTAL OPER./MAST
7	1	LDU-1093A-5	BRACE HORIZONTAL OPER./MAST
8	4	LDU-1057-4	LEG EXTENSION
9	2	LDU-1097-5	BASE STIFFENER
10	1	LDU-1028-4	BRACKET - MAST/BASE
11	2	LDU-1334-4	FILL PLATE - FRONT
12	1	LDU-1242-4	PLATE - ELECTRICAL BOX
13	4	LDU-1016-3	STOP - LEG EXTENSION
14	2	LDU-1129B-4	BELT RUBBING STRIP
15	4	LDU-1163-3	CARTRIDGE STANDOFF (*) FOR 2" ONLY)
16	1	LDU-1115L-3	FINGER GUARD (*) SWITCH WITH #17 FOR 3")
17	1	LDU-1115R-3	FINGER GUARD (*) SWITCH WITH #16 FOR 3")
18	1	LDU-1044-4	STIFFENER GUARD
19	4	SPH-1060	LEG RULE 22.25 TO 36
20	8	FHHMH012P10	HEX HEAD M12 X 8
21	4	FHHMJ020P88	HEX HEAD M12 X 20
22	2	LDU-1092-4	BRACKET - CONVEYOR
23	14	FLWMHP	LOCK WASHER M8
24	22	FLWMIP	SPRING WASHER M10
25	20	FHFNMIP	HEX NUT M10
26	16	FBHMI020P88	BUT HEAD M10 X 20
27	2	FHHMI020P88	HEX HEAD M10 X 20
28	6	FHFNMHP	HEX NUT M8
29	2	FHHMH035P10	HEX HEAD M8 X 35
30	8	FLWMGP	LOCK WASHER M6
31	8	FHFNMGP	HEX NUT M6
32	8	FFHMG016P10	FHSC M6 X 16
33	4	FSHMI035P88	SHCS M10 X 30
34	16	FFHMF008P10	FHSH M5 X 8
35	4	FBHMH016P10	BHCS M8 X16
36	1	PSC401903	SNAP BUSHING
37	1	LDU-1343-3	PHOTOEYE BRACKET - BOTTOM
38	1	A219BA-30	PHOTOELECTRIC SENSOR
39	2	FLWMFP	LOCK WASHER M5
40	2	FFWMFP	FLAT WASHER M5
41	2	FHHMF016P10	HEX HEAD M5 x 16
42	2	FLWMDP	LOCK WASHER M3
43	2	FSHMD018P10	SHCS M3-18mm LG

MAT'L	PART #	CAD FILE frm_ldr_2-3_ext	
C.R.S.	STD	PLOT DATE 4/5/2004	
ST. ST.	N/A	DRAWN DATE 4/5/2004	
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005, ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm, MACH. FINISH 63

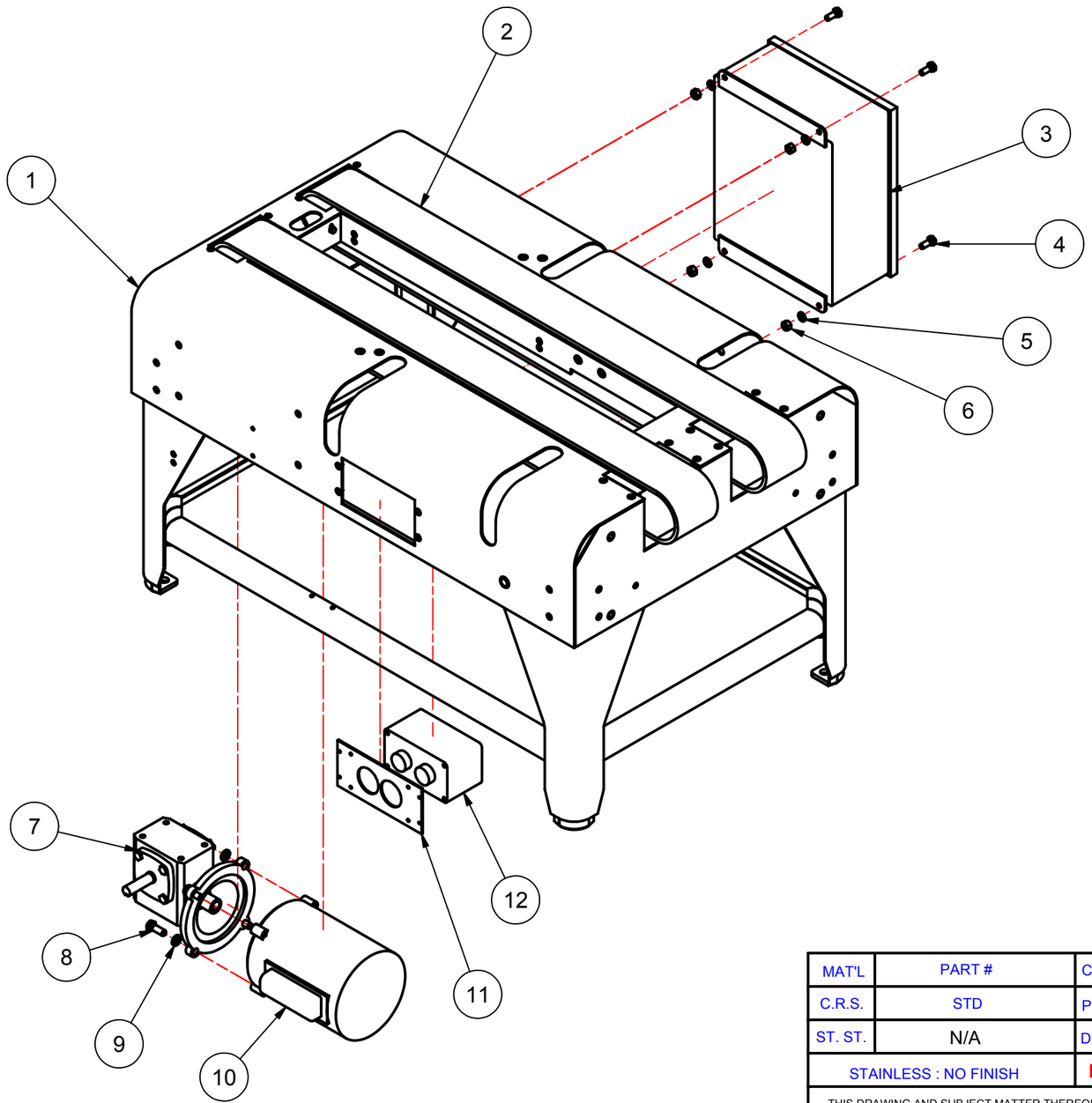
FRACTIONS ± 1/64

LOVESHAW an *ITW* 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	
DRAWN	AMYR	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/5/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	.FRM/LDR/2EXT	BASE FRAME ASSEMBLY
2	2	LDU-1128A-4	BELT
3	1	A100N-121005	ELECTRICAL BOX
4	4	FHHMH020P10	HEX HEAD M8 X 20
5	4	FLWMHP	LOCK WASHER M8
6	4	FHFNMHP	HEX HEAD M8
7	1	SEE CHART	REDUCER
8	4	FHHSJ100P08	HEX HEAD 3/8-16 X 1" LG.
9	4	FLWSFP	LOCK WASHER 3/8
10	1	LD12B-2033A	MOTOR
11	1	LDU-1242-4	START/STOP SW. PLATE
12	1	.ED1154	START/STOP SW. BOX

ASSY. NUMBER	SPROCKET	GEAR BOX	FT./MIN.
.LDUC110	SPK-0023	RED-1001	80
.LDUC110A	SPK-0049	RED-1005	60

MAT'L	PART #	CAD FILE MOTOR ASSY LDR	
C.R.S.	STD	PLOT DATE 5/5/2004	
ST. ST.	N/A	DRAWN DATE 5/4/2004	
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005 ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm MACH. FINISH 125

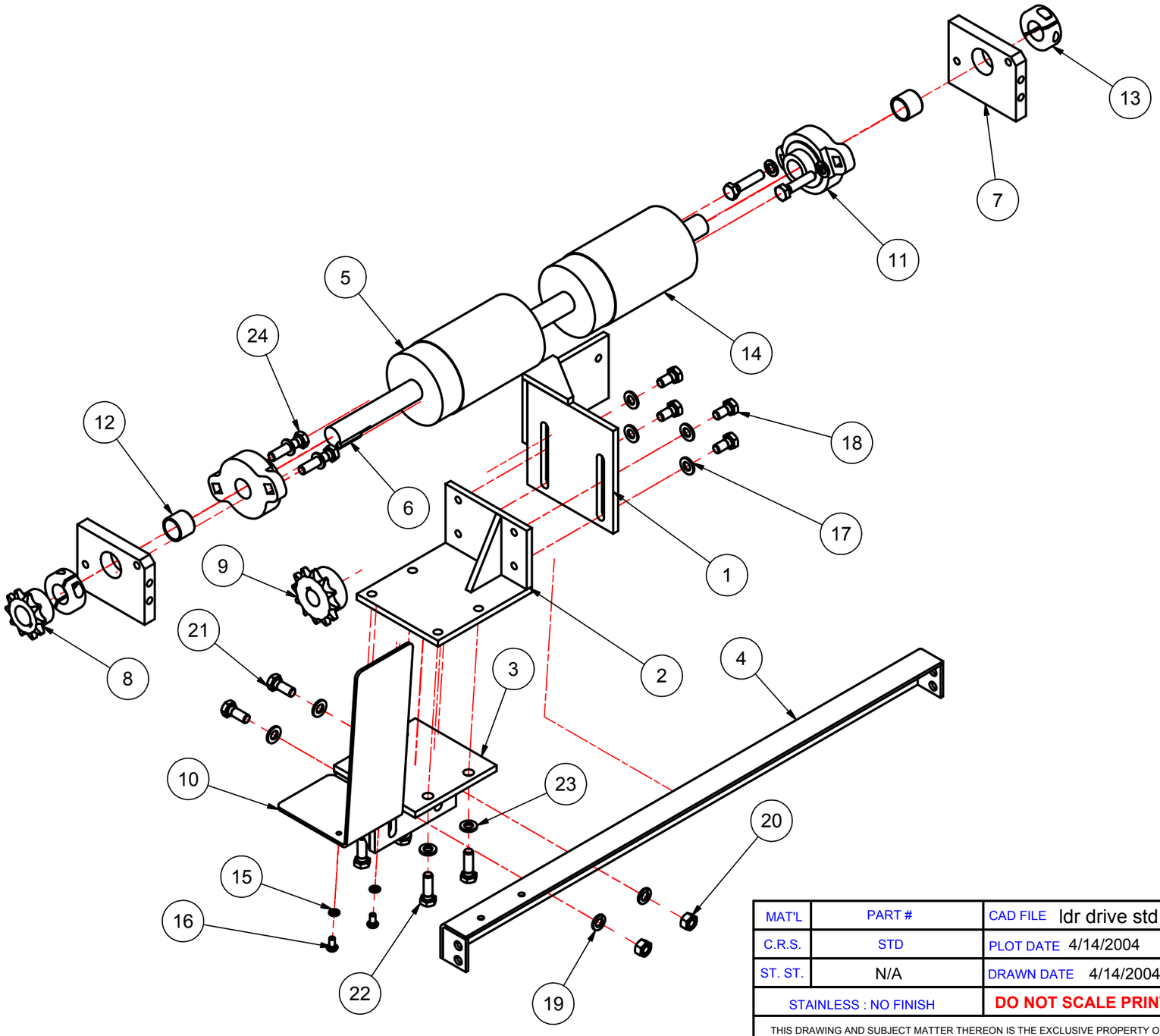
FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE
DRIVE MOTOR ASSEMBLY LDR

DWG NO	DRIVE MOTOR ASSEMBLY	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	4/14/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LDU-1126-5	BRACKET, GEAR BOX MOUNT
2	1	LDU-1127-5	BRACKET, GEAR BOX SLIDE
3	1	LDU-1051-5	BRACE, BOTTOM MOTOR
4	1	LDU-1052-5	BRACE, MOTOR
5	1	LDU-1064-5	ROLLER, DRIVE
6	1	LDU-1080-3	KEY, DRIVE SHAFT HUB
7	2	LDU-1062-4	BRACKET, BEARING
8	1	SPK-0050	SPROCKET
9	1	SEE CHART	SPROCKET
10	1	LDU-1116-4	GUARD, CHAIN
11	2	BRG-1019	BEARING
12	2	BSG-1041	PLANE BEARING
13	2	202201	SPLIT WASHER
14	2	LP09-056	BELT LAGGING
15	2	FLWMFP	LOCK WASHER M5
16	2	FBHMF010P10	BUTTON HEAD SCREW M5 X 10
17	6	FFWMHP	FLAT WASHER M8
18	4	FHHMH016P10	HEX HEAD SCREW M8x16 LG.
19	6	FLWMHP	LOCK WASHER M8
20	2	FHFNMHP	HEX NUT M8
21	2	FHHMH020P10	HEX HEAD SCREW M8x20
22	4	FHHSH100P08	HH 5/16-18 x 1 LG.
23	4	FLWSEP	LOCK WASHER 5/16
24	4	FHHMH035P10	HEX HEAD M8x35

ASSY. NUMBER	SPROCKET	GEAR BOX	FT./MIN.
.LDUC110	SPK-0023	RED-1001	80
.LDUC110A	SPK-0049	RED-1005	60

MAT'L	PART #	CAD FILE	ldr drive std
C.R.S.	STD	PLOT DATE	4/14/2004
ST. ST.	N/A	DRAWN DATE	4/14/2004
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005 ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm MACH. FINISH 125

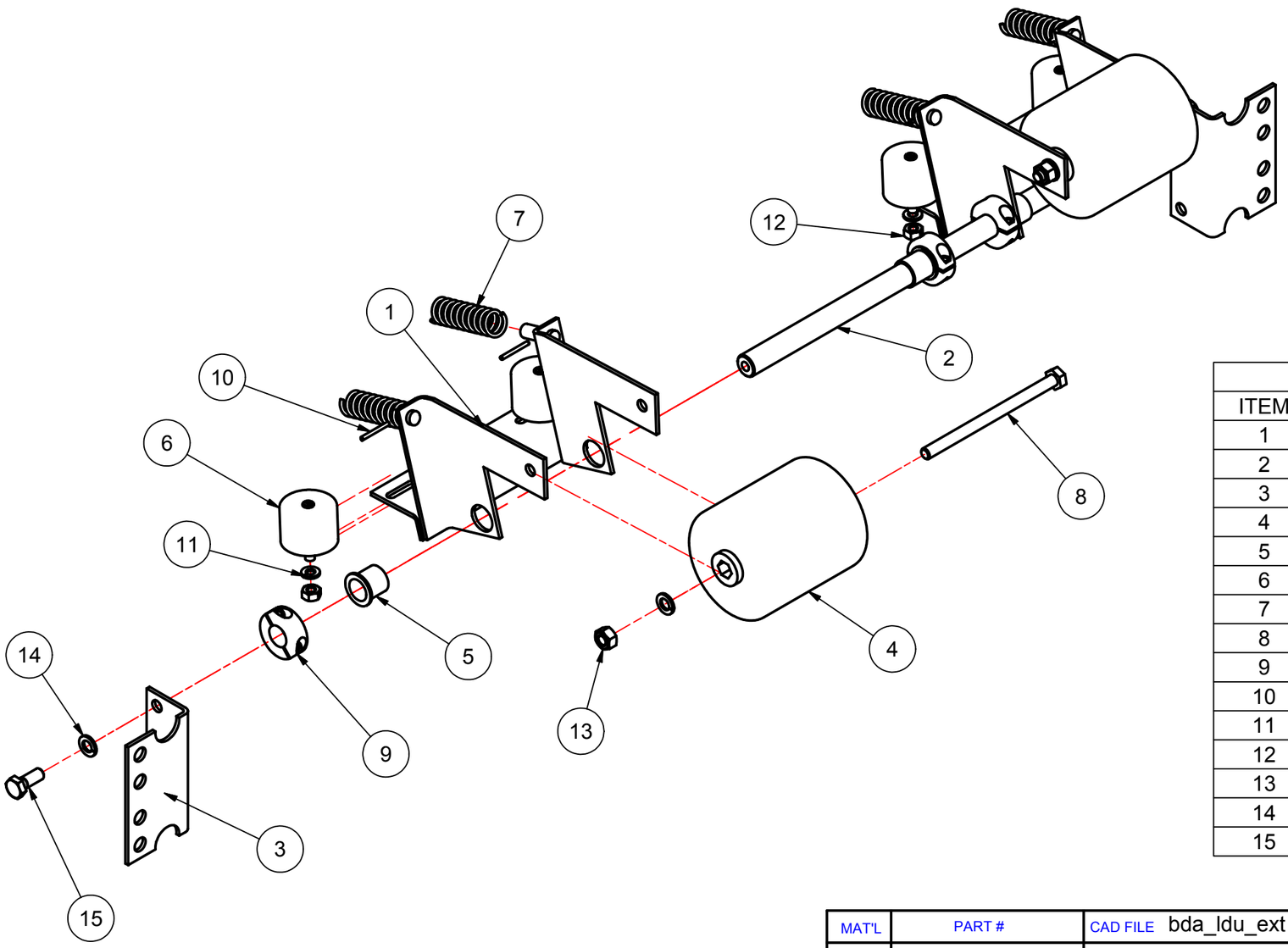
FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE
DRIVE ASSEMBLY LDR

DWG NO	.LDR/DRIVE/STD	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/6/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	LDU-1335-5	TENSION ROLLER BRACKET
2	1	LDU-1098-4	BAR - BELT TENSIONER
3	2	LDU-1099-4	BRACKET - TENSIONER BAR
4	2	PSC196-4	INFEED ROLLER - LARGE
5	4	PSC301224	BUSHING
6	4	K286D	ROLLER
7	4	SPR-1016	COMPRESSION SPRING
8	2	FHHMH120P10	HEX HD M8 x 120
9	4	SC62	SPLIT COLLAR 5/8"
10	4	PSR609	ROLL PIN
11	4	FLWSDP	LOCK WASHER 1/4
12	4	FHFNSEP	HEX NUT 1/4-20
13	2	FHFNMHP	HEX NUT M8
14	4	FLWMHP	LOCK WASHER M8
15	2	FHHMH020P10	HEX HD M8x20

MAT'L	PART #	CAD FILE	bda_ldu_ext
C.R.S.	STD	PLOT DATE	5/6/2004
ST. ST.	N/A	DRAWN DATE	5/6/2004
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005, ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm, MACH. FINISH 125

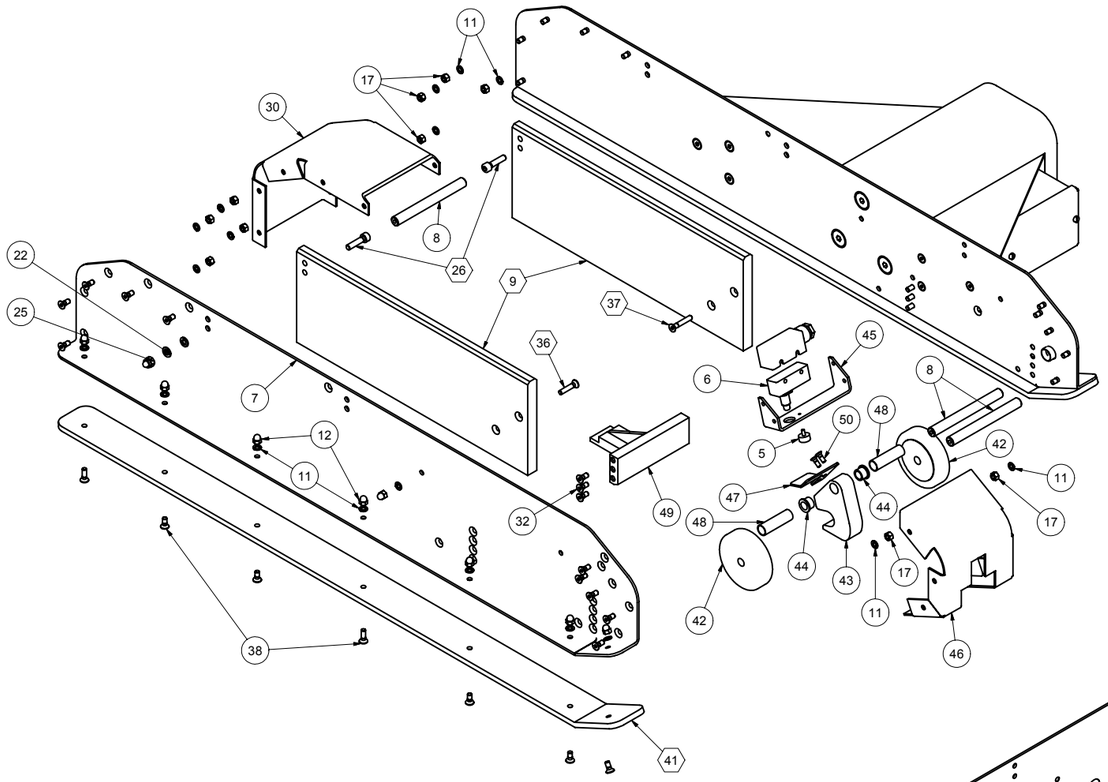
FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

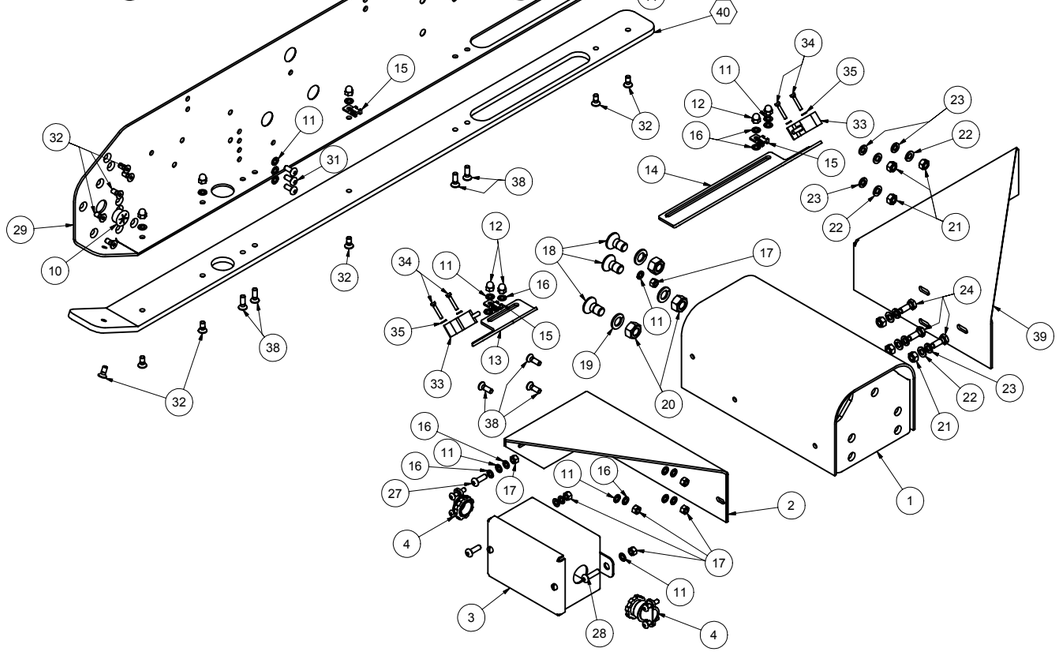
TITLE
BELT DRIVE ASSEMBLY

DWG NO	.BDA/LDU/EXT	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

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



HEAD ASSEMBLY FRONT VIEW



HEAD ASSEMBLY REAR VIEW

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LDU-1157-5	HEAD NECK
2	1	LDU-1047-4	STIFFENER - HEAD NECK
3	1	JB4916	JUNCTION BOX
4	2	A204	CONNECTOR
5	1	SPH-1188	BUMPER
6	1	LDF506	LIMIT SWITCH ASSY
7	1	LDU-1409-6	HEAD PLATE
8	3	LDU-1153-3	SHAFT - CARTRIDGE STOP
9	2	LDU-1284-4	SPACER - HEAD L/R (2" CART.)
OR	0	REMOVED	REMOVED FOR (3" CART.)
10	1	BSG-1045	BUSHING
11	35	FLWMFP	LOCK WASHER M5
12	17	FHDNMFP	HEX DOME NUT M5
13	1	LDU-1325-4	PHOTOEYE BRACKET
14	1	LDU-1325BMI-4	PHOTOEYE BRACKET
15	3	SPH-1123	CABLE HOLDER
16	11	FFWMFP	FLAT WASHER M5
17	17	FHFNMFP	HEX FLAT NUT M5
18	3	FFHMI020P88	HEX SOC. CNTRSNK HD. SCREW
19	3	FLWMIP	SPRING WASHER M10
20	3	FHFNMIP	HEX NUT M10
21	6	FHFNMGP	HEX NUT M6
22	8	FLWMGP	LOCK WASHER M6
23	8	FFWMGP	FLAT WASHER M6
24	3	FHHMG016P10	HHCS M6 X 16
25	2	FHDNMGP	HEX DOME NUT M6
26	2	FSHMG025P10	SOC. HD. CAP SCREW M6 X 25
27	2	FBHMF016P10	HEX SOC. BUTT. HD. SCREW
28	1	FBHMF020P10	BUTT. HD. CAP SCREW M5 X 20
29	1	LDU-1410-6	HEAD PLATE
30	1	LDU-1350-4	HEAD GUARD REAR (OFFSET CART.)
31	3	FBHMF012P10	HEX SOC. BUTT. HD. SCREW
32	34	FFHF012P10	FLAT HD. M5 X 12 LG.
33	2	A219BA-30	PHOTOELECTRIC SENSOR
34	4	FSHMD018P10	SOC. HD. CAP SCREW M3 X 18mm LG.
35	4	FLWMDP	LOCK WASHER M3
36	1	FFHMF025P10	FLAT HEAD CAP SCREW M5 X 25 LG.
OR	0	REMOVED	REMOVED FOR (3" CART.)
37	1	FFHMF030P10	FLAT HEAD CAP SCREW M5 X 30 LG.
OR	0	REMOVED	REMOVED FOR (3" CART.)
38	9	FFHMF016P10	FLAT HEAD CAP SCREW M5 X 16 LG.
39	1	LDU-1055-5	BRACE, HEAD NECK
40	1	LDU-1407-4	HEAD PLATE WEAR STRIP (2" CART.)
OR	1	LDU-1407MI-4	HEAD PLATE WEAR STRIP (3" CART.)
41	1	LDU-1408-4	HEAD PLATE WEAR STRIP (2" CART.)
OR	1	LDU-1408MI-4	HEAD PLATE WEAR STRIP (3" CART.)
42	2	LDU-1382-3	ROLLER (FRONT PADDLE)
43	1	LDU-1387-4	PADDLE
44	2	BSG-1028	BUSHING
45	1	LDU-1406-4	SWITCH BRACKET
46	1	LDU-1405-4	HEAD GUARD (ROLLER SWITCH)
47	1	LDU-1404-3	STRIKER PLATE OFFSET
48	2	LDU-1398B-3	SPACER - NOSE PADDLE
49	1	LDU-1403A-4	TOP LOAD BRKT.
50	2	FFHME012P10	FHSH M4x12 LG
51	3	FFHMG020P10	FHCS M6x20

NOTE:

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

MAT'L	PART #	CAD FILE HDA LDR 2AP OFFSET.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE 3/10/2005	
	N/A	DRAWN DATE 3/10/2005	
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:
.X =±.050
INCH .XX =±.015 ANGLES ±1/2°
.XXX =±.005
.X =±1.0mm
METRIC .XX =±.3mm MACH. FINISH
.XXX =±.1mm
FRACTIONS ± 1/64

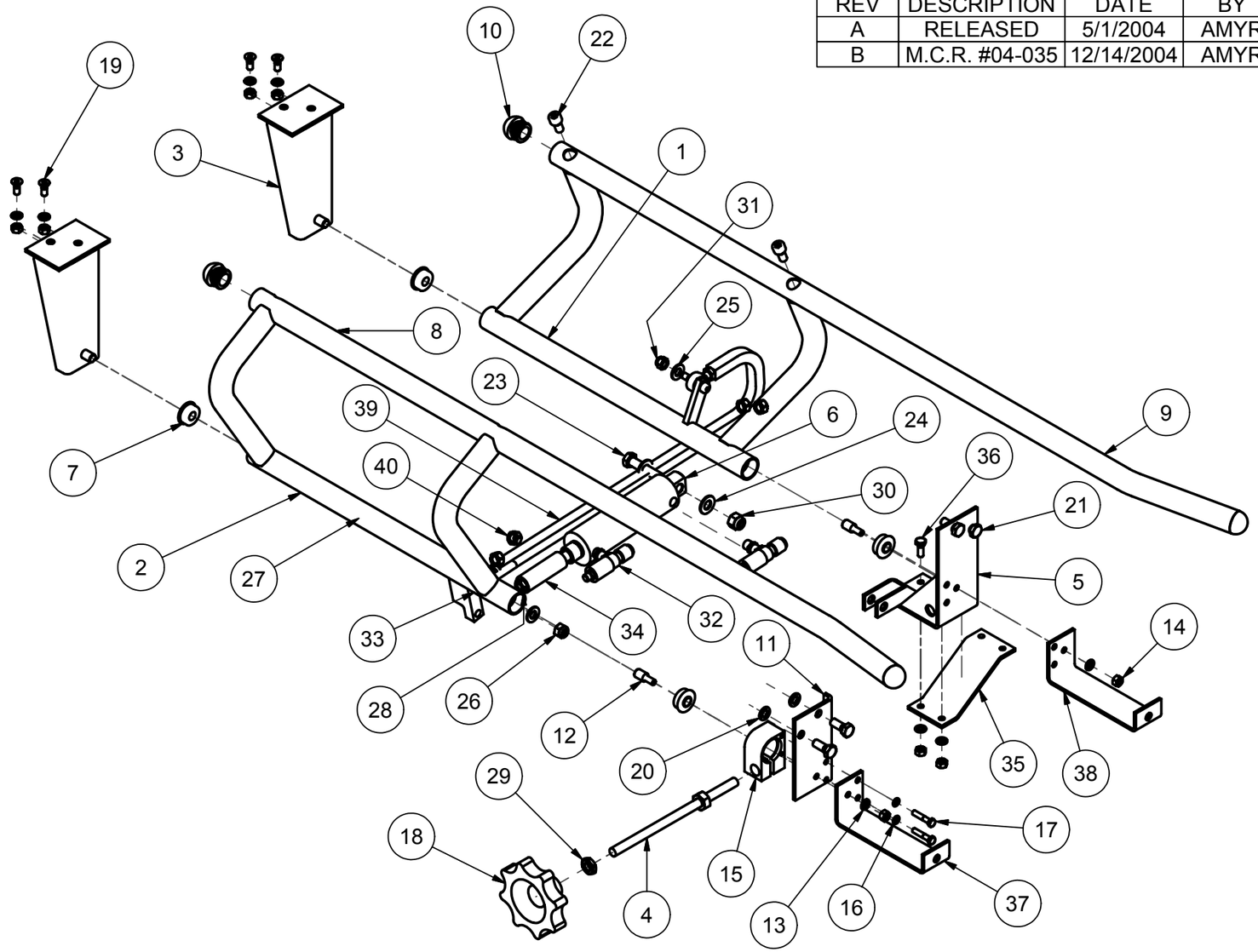
LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE: HEAD ASSY LDR 2"/3" w/ OFFEST CART & FRT ROLLER SWITCH

DWG NO	.HDA/LDR/2RS	SCALE	N/A
MATERIAL	NOTED	CHECKED	
DRAWN	tonys	APPROVED	

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

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/1/2004	AMYR
B	M.C.R. #04-035	12/14/2004	AMYR



MAT'L	PART #	CAD FILE sra_ldr_ext18	TOLERANCES UNLESS OTHERWISE NOTED:
C.R.S.	STD	PLOT DATE 12/14/2004	
ST. ST.	N/A	DRAWN DATE 5/1/2004	
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

INCH .X = ±.050, .XX = ±.015, .XXX = ±.005; ANGLES ± 1/2°

METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm; MACH. FINISH 125

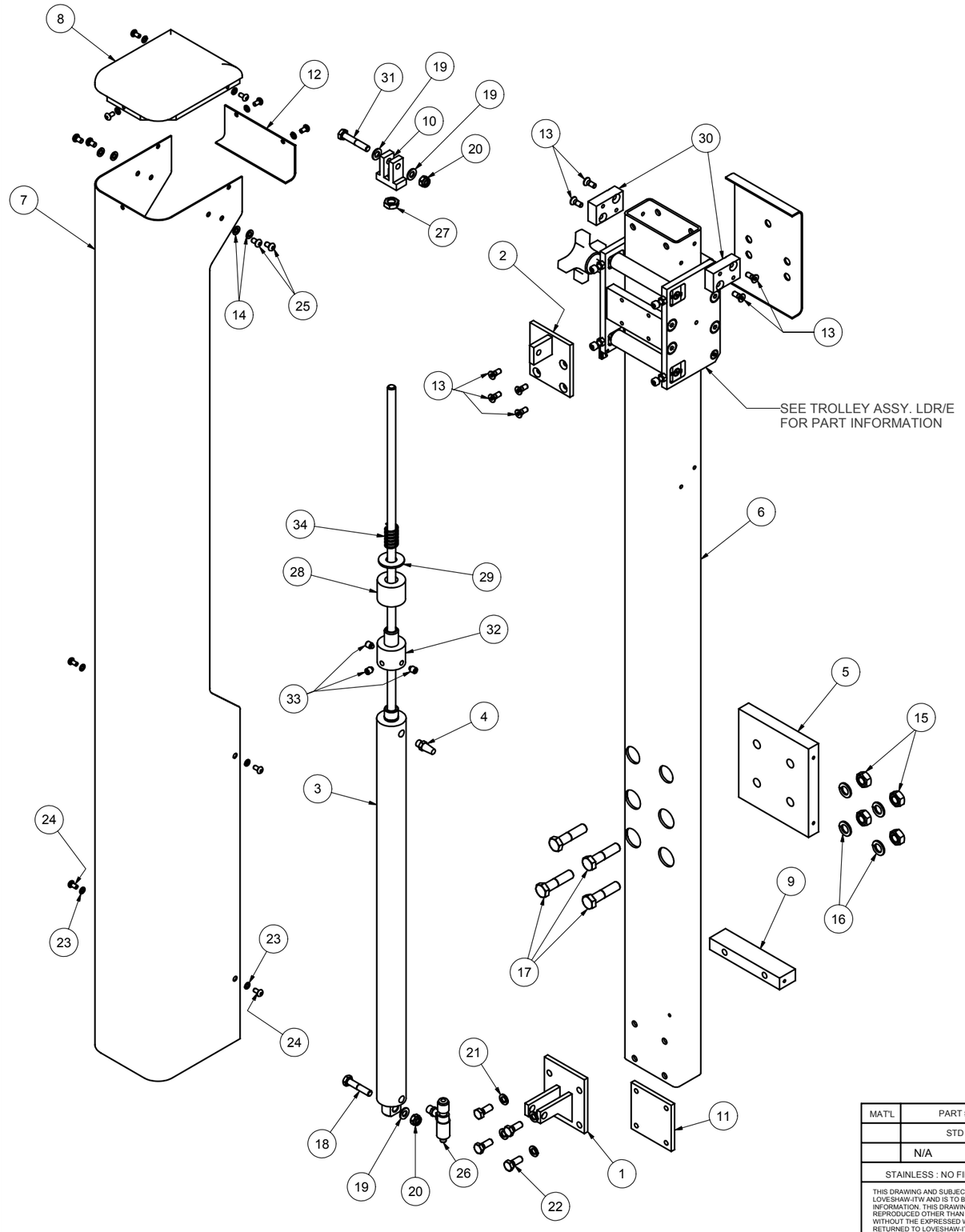
FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE
SIDE RAIL ASSEMBLY

DWG NO	.SRA/LDR/EXT18	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

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



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LDU-1124B-4	MOUNT, CYLINDER
2	1	LDU-1188-4	BRKT. CYL. PIVOT
3	1	N401-235	CYLINDER
4	1	N400-17	MUFFLER
5	1	LDU-1132-4	MAST SPACER
6	1	LDU-1113-6	MAST
7	1	LDU-1144A-5	MAST GUARD
8	1	LDU-1145A-4	MAST CAP
9	1	LDU-1168-4	MAST SPACER BOTTOM
10	1	LDU-1187B-4	BRACKET, CYL. TOP (SINGLE)
11	1	LDU-1224-4	MAST NUT PLATE
12	1	LDU-1143F-4	GUARD SPRING
13	8	FFHMG016P10	FLAT HD. CAP SCREW M6 X 16
14	4	FLWMGP	LOCK WASHER M6
15	4	FHFNMJP	HEX NUT M12
16	4	FLWMJP	LOCK WASHER M12
17	4	FHHMJ050P88	HEX HEAD M12 X 50 LG.
18	1	FHHMH040P10	HH M8x40 LG.
19	3	FFWMHP	FLAT WASHER M8
20	2	FNLNMHP	NYLOCK NUT M8
21	4	FLWMHP	LOCK WASHER M8
22	4	FHHMH020P10	HHCS M8x20
23	9	FLWMFP	LOCK WASHER M5
24	9	FBHMF010P10	BUTT. HD. SCREW M5 X 10
25	4	FBHMG010P10	BUTT. HD. CAP SCERW M6 X 10 LG.
26	1	N400-46	FITTING
27	1	FHJNSMP	7/16-20 HEX JAM NUT
28	1	PSR104C-4	BUMPER - S.R. CYLINDER ROD END
29	1	FFWSHP	FLAT WASHER 1/2"
30	2	LDU-1400A-3	GUARD HOLDER
31	1	FHHMH045P10	HH M8x45mm LG
32	1	LDU-1417-4	SPACER, BUMPER
33	3	SPH-1212	SET SCREW (SOFT POINT)
34	1	PSR603	SPRING - SIDE RAIL CYLINDER

MAT'L	PART #	CAD FILE	mta_ldr_e.idw
	STD	PLOT DATE	12/29/2005
	N/A	DRAWN DATE	3/11/2005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

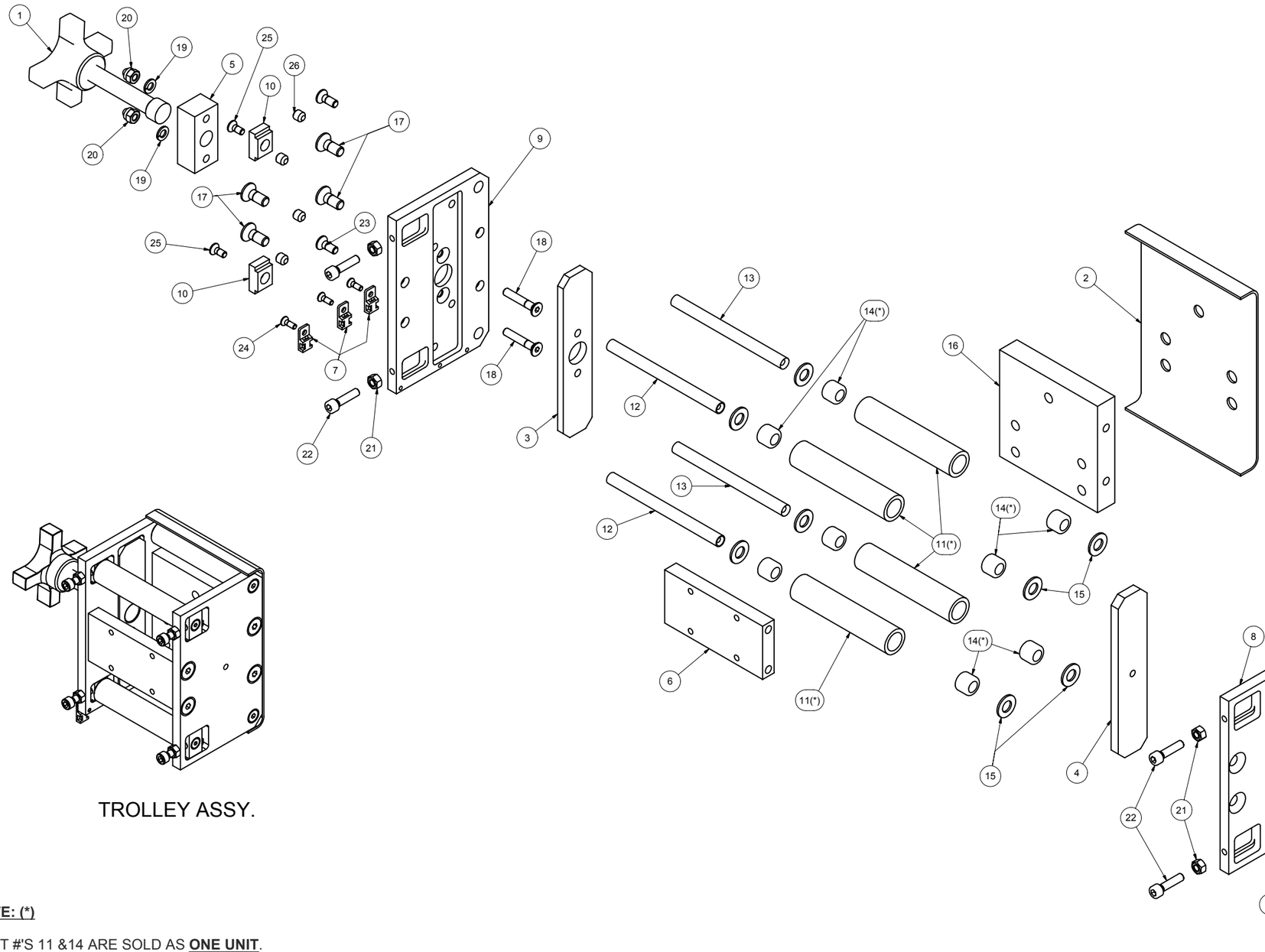
TOLERANCES UNLESS OTHERWISE NOTED:
.X = ±.050
INCH .XX = ±.015 ANGLES ± 1/2°
.XXX = ±.005
.X = ±1.0mm
METRIC .XX = ±.3mm MACH. FINISH
.XXX = ±.1mm
FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE: MAST & TROLLEY ASSY

DWG NO	.MTA/LDR/E	SCALE	N/A
MATERIAL	NOTED	CHECKED	
DRAWN	tonys	APPROVED	

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



TROLLEY ASSY.

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.

NOTE: (*)

PART #'S 11 &14 ARE SOLD AS **ONE UNIT**.
PARTS **CAN NOT** BE PURCHASED SEPARATELY.
TO RE-ORDER THESE PARTS ORDER PART #
.TRA/LDU (THIS INCLUDES (1) LDU-1261B-3 &
(2) J206-PS.

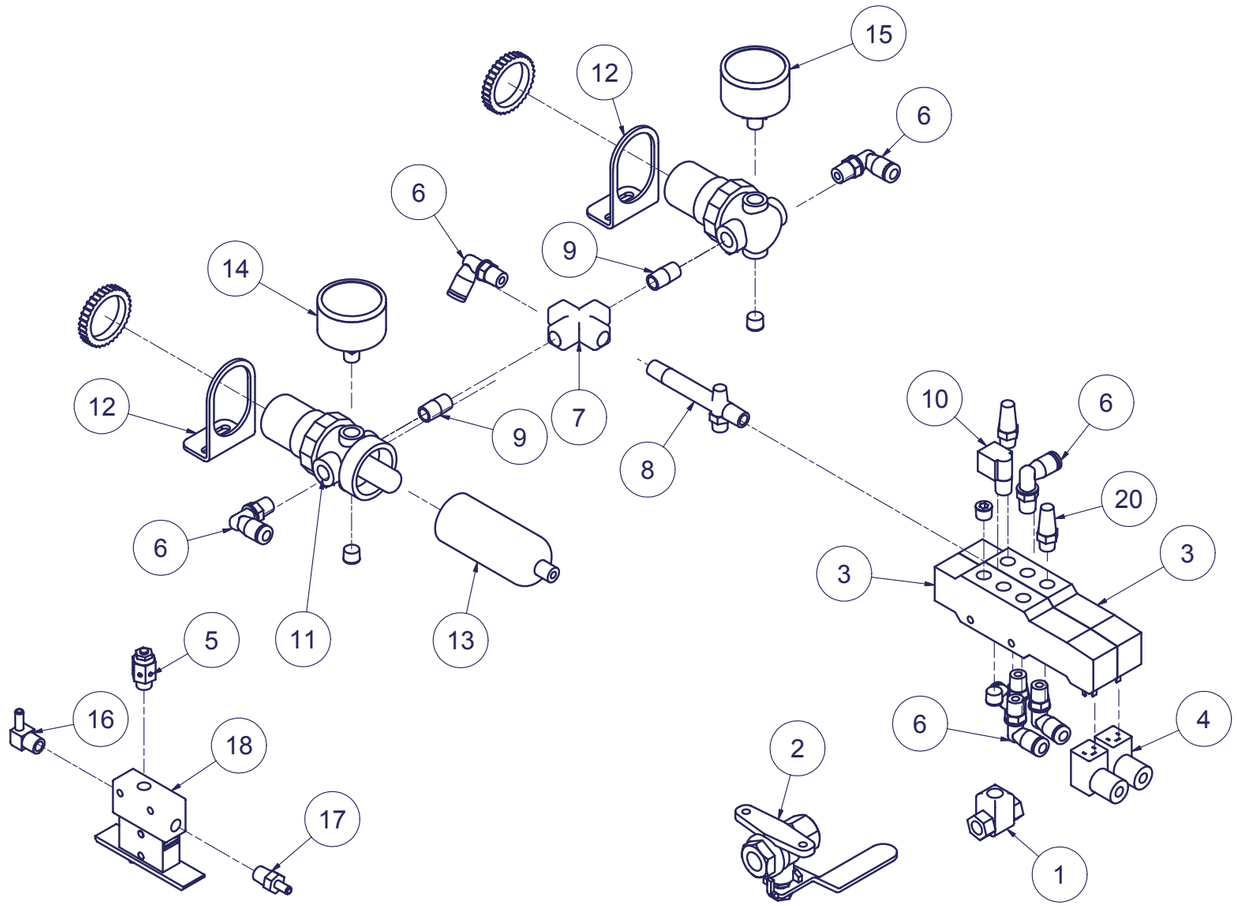
MAT'L	PART #	CAD FILE trolley assy ldr_e.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE 4/18/2006	
	N/A	DRAWN DATE 3/14/2005	.X = ±.050 INCH .XX = ±.015 .XXX = ±.005 ANGLES ± 1/2°
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X = ±1.0mm METRIC .XX = ±.3mm .XXX = ±.1mm MACH. FINISH √
			FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE: TROLLEY ASSY. LDR/E

DWG NO	trolley assy ldr_d	SCALE	N/A
MATERIAL	NOTED	CHECKED	
DRAWN	tonys	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	10/17/2002	AMYR
B	M.C.R. #03-001	8/19/2003	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LD4C1304	SHUTTLE VALVE
2	1	PSR706/A	AIR BALL VALVE
3	2	N402-62	VALVE
4	2	N518	ELECT. CONNECTION
5	1	N220A	SPEED CONTROL
6	7	N400-25M	FITTING
7	1	H103A	CROSS FITTING
8	1	N400-74	NIPPLE
9	2	H126C	CLOSE NIPPLE
10	1	H146	ELBOW
11	1	N519	FILTER/REGULATOR
12	2	N401	BRACKET
13	2	PSR611	GAUGE
14	2	PSR610	GAUGE
15	1	N520	REGULATOR
16	1	PSR636	FITTING
17	1	PSR634	FITTING
18	1	PSR633	VALVE
19	12 ft.	PV-42	HOSE (NOT SHOWN)
20	3	N400-17	MUFFLER

DRAWN	AMYR	10/17/2002	
CHECKED			
QA			
MFG			
APPROVED			

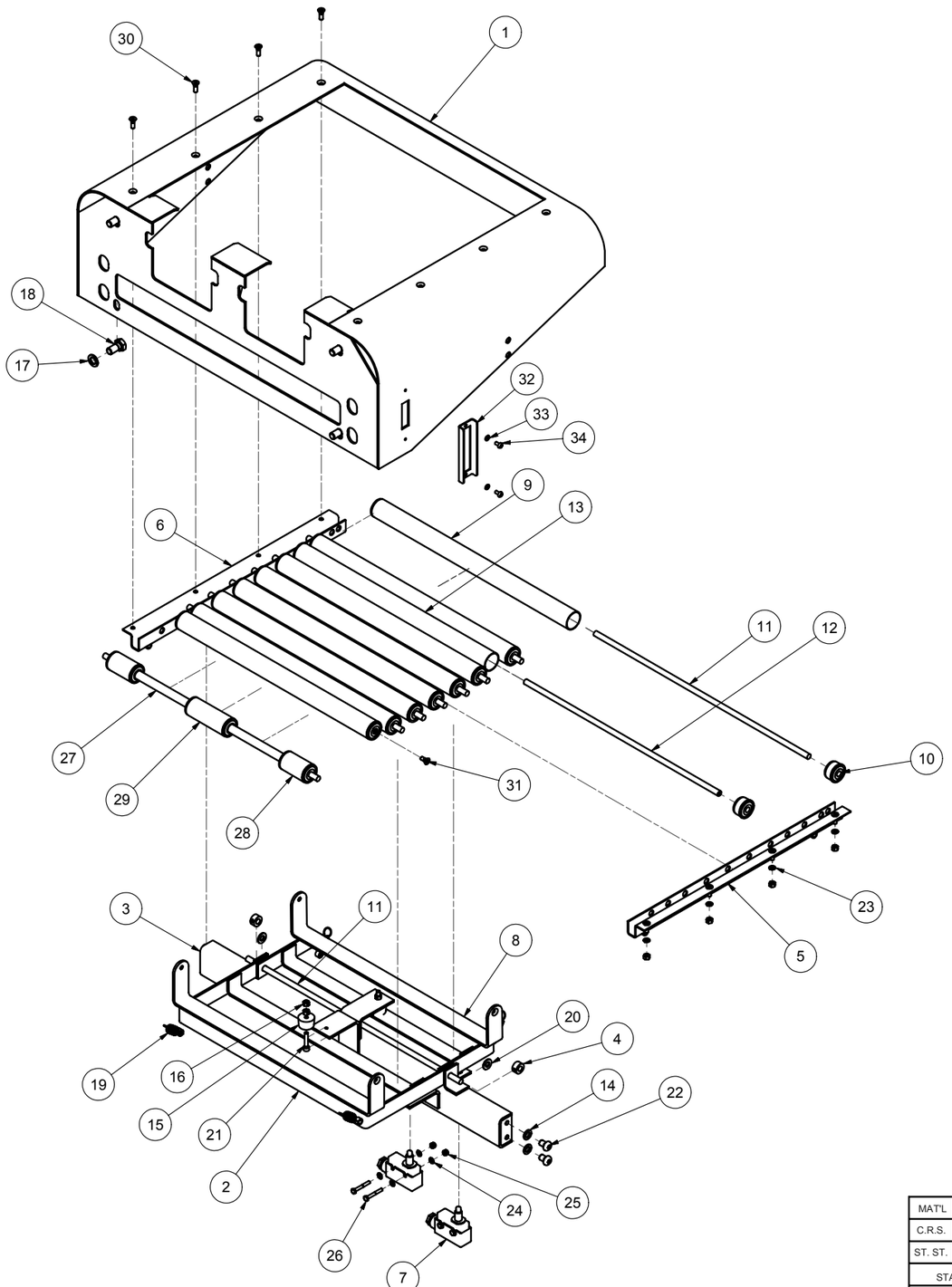
TITLE

PNEUMATIC ASSEMBLY LDR

SIZE		DWG NO	REV
C		PNEU_LDR	

SCALE | SHEET 1 OF 1

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/4/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LDU-1336-6	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)
6	1	LDU-1345R-4	BRKT. ROLLER SUPPORT (DUAL)
7	2	LDF506	LIMIT SWITCH ASSY
8	1	LDU-1344-5	FRAME, ROLLER PADDLE
9	7	LDU-1007-4	ROLLER, PACK TABLE
10	24	50299-029	ROLLER END PLUG
11	9	LDU-1008-4	SHAFT, ROLLER
12	2	LDU-1230-3	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
17	4	FLWMIP	SPRING WASHER M10
18	4	FHHMI020P88	HEX HD M10x20
19	4	SPR-1023	SPRING EXT.
20	2	BSG-1060	THRUST BEARING
21	2	FSHMF025P10	SHCS M5x25
22	4	FBHMH012P10	BH M8x12 LG.
23	8	FLWMFP	LOCK WASHER M5
24	8	FFWMEP	FW M4
25	4	FNLNMEP	NLN M4
26	4	FHHME030P10	HH M4x30
27	2	LDU-1354-3	ROLLER SPACER
28	2	LDU-1007C-4	ROLLER, PACK TABLE
29	1	LDU-1007D-4	ROLLER, PACK TABLE
30	8	FFHMF016P10	FHCS M5x16
31	2	FFHF012P10	FH M5x12 LG.
32	1	PSR173-4	COVER PLATE
33	2	FLWMEP	LOCK WASHER M4
34	2	FPHME008P10	M4 x 8mm LG

MAT'L	PART #	CAD FILE ita rb ldr2std	
C.R.S.	STD	PLOT DATE 5/4/2004	
ST. ST.	N/A	DRAWN DATE 5/4/2004	
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

.X = ±.050
INCH .XX = ±.015 ANGLES ± 1/2°
.XXX = ±.005

.X = ±1.0mm
METRIC .XX = ±.3mm MACH. FINISH 125
.XXX = ±.1mm

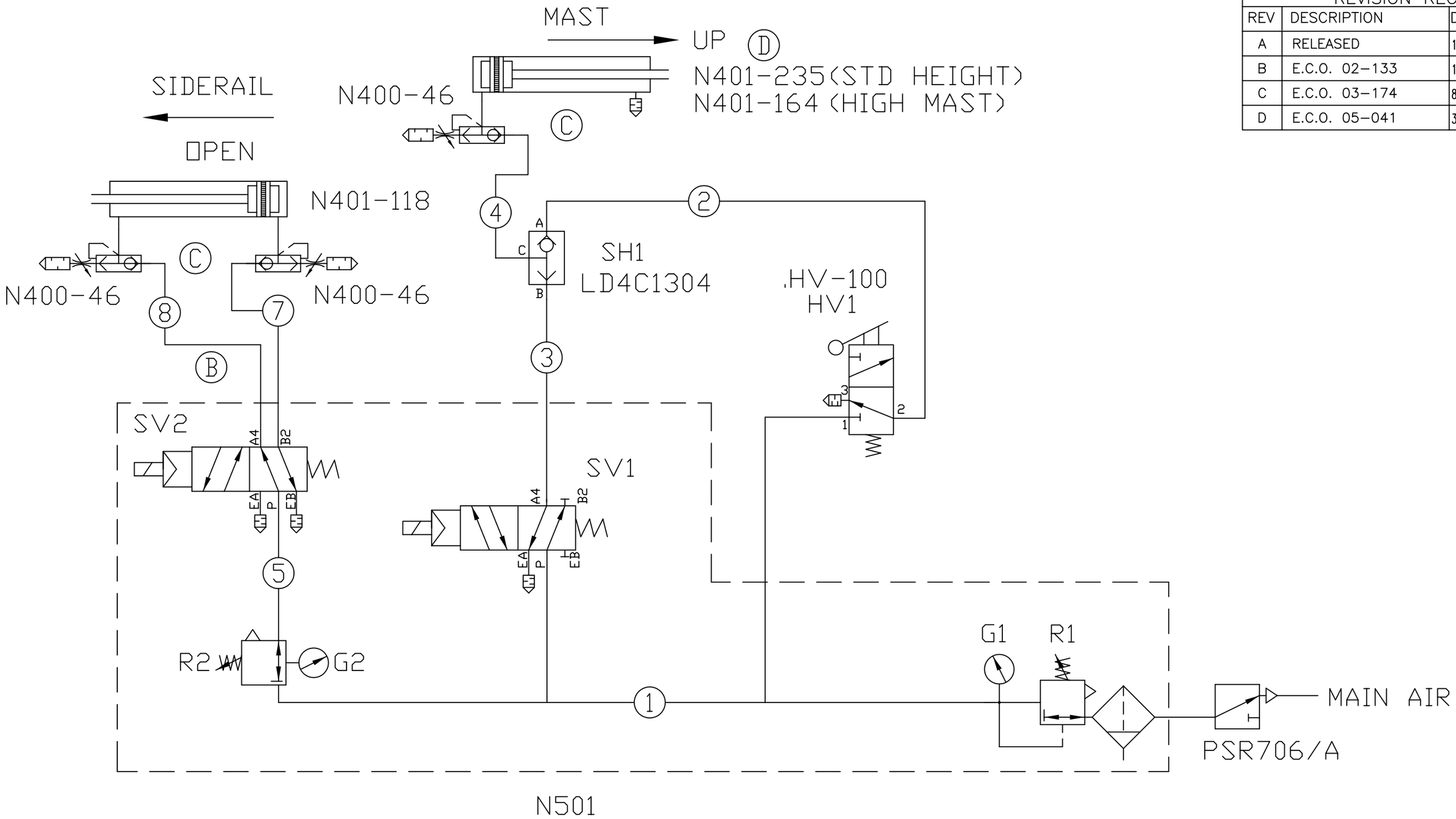
FRACTIONS ± 1/64

LOVESHAW an *ITW* Company
RT. 296, SOUTH CANAAN, PA.

TITLE
INFEED TABLE LDR (ROLLER)

DWG NO	.ITA/RB/LDR2STD	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

REVISION RECORD					
REV	DESCRIPTION	DATE	ATH	DR	CK
A	RELEASED	12/4/00		AJS	
B	E.C.O. 02-133	10/3/02		AJS	
C	E.C.O. 03-174	8/13/03		AJS	
D	E.C.O. 05-041	3/15/05		AJS	



MAT'L	PART #	CAD FILE: G76701	TOLERANCES UNLESSS OTHERWISE NOTED:
NOTED	STD	PLOT DATE: 10/02/02	
ST. ST.		DRAWN DATE: 12/4/00	INCH .X = ± .050, .XX = ± .015, .XXX = ± .005
STAINLESS: NO FINISH		DO NOT SCALE PRINT	METRIC .X = ± 1.0mm, .XX = ± .3mm, .XXX = ± .1mm

ANGLES ±1/2° FRACTIONS ±1/64

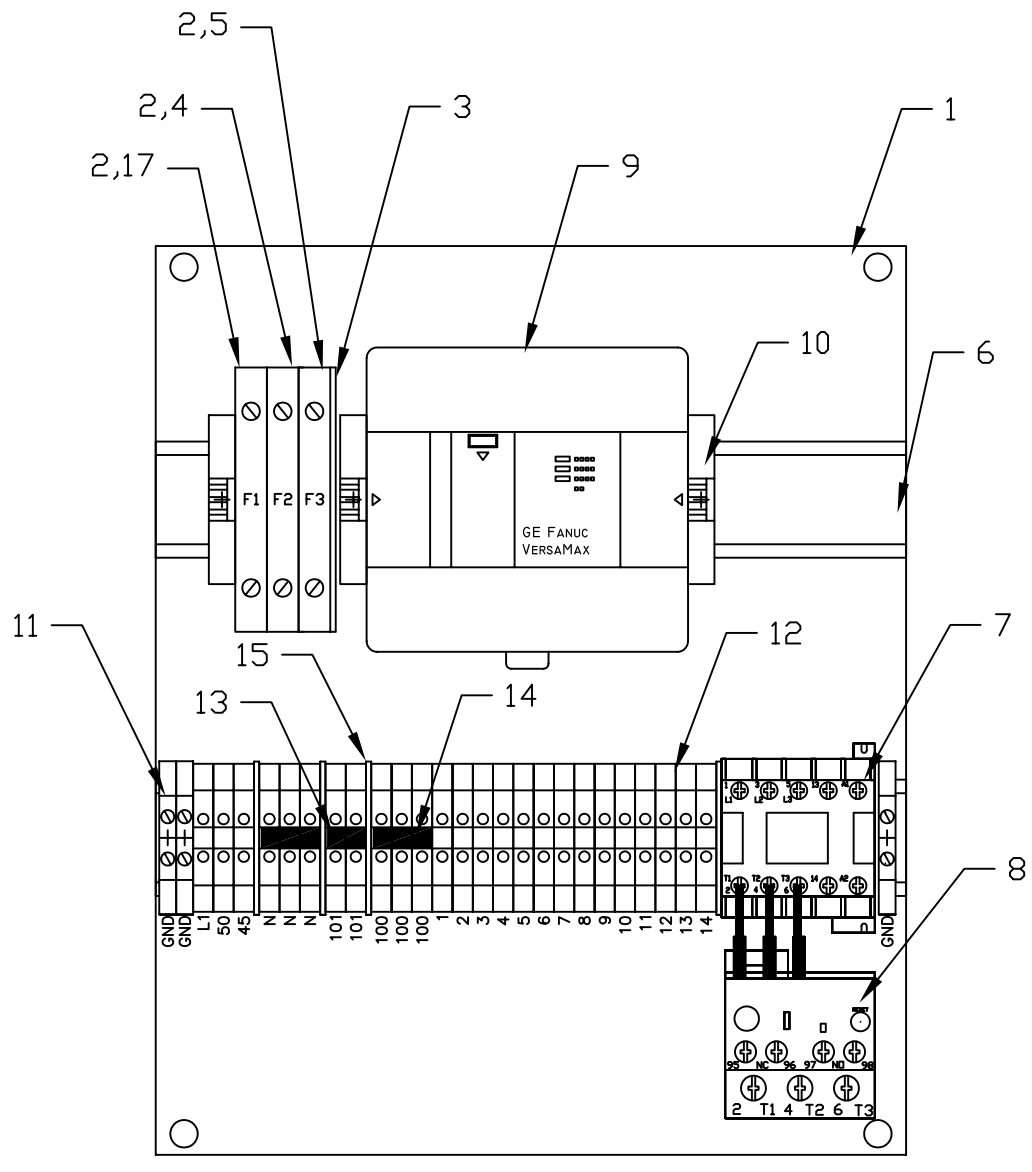
MACHINE FINISH 125

LOVESHAW an ITW Company
RT. 296, SOUTH CANAAN, PA.

TITLE:
PNEU. SCHEMATIC LDU/R

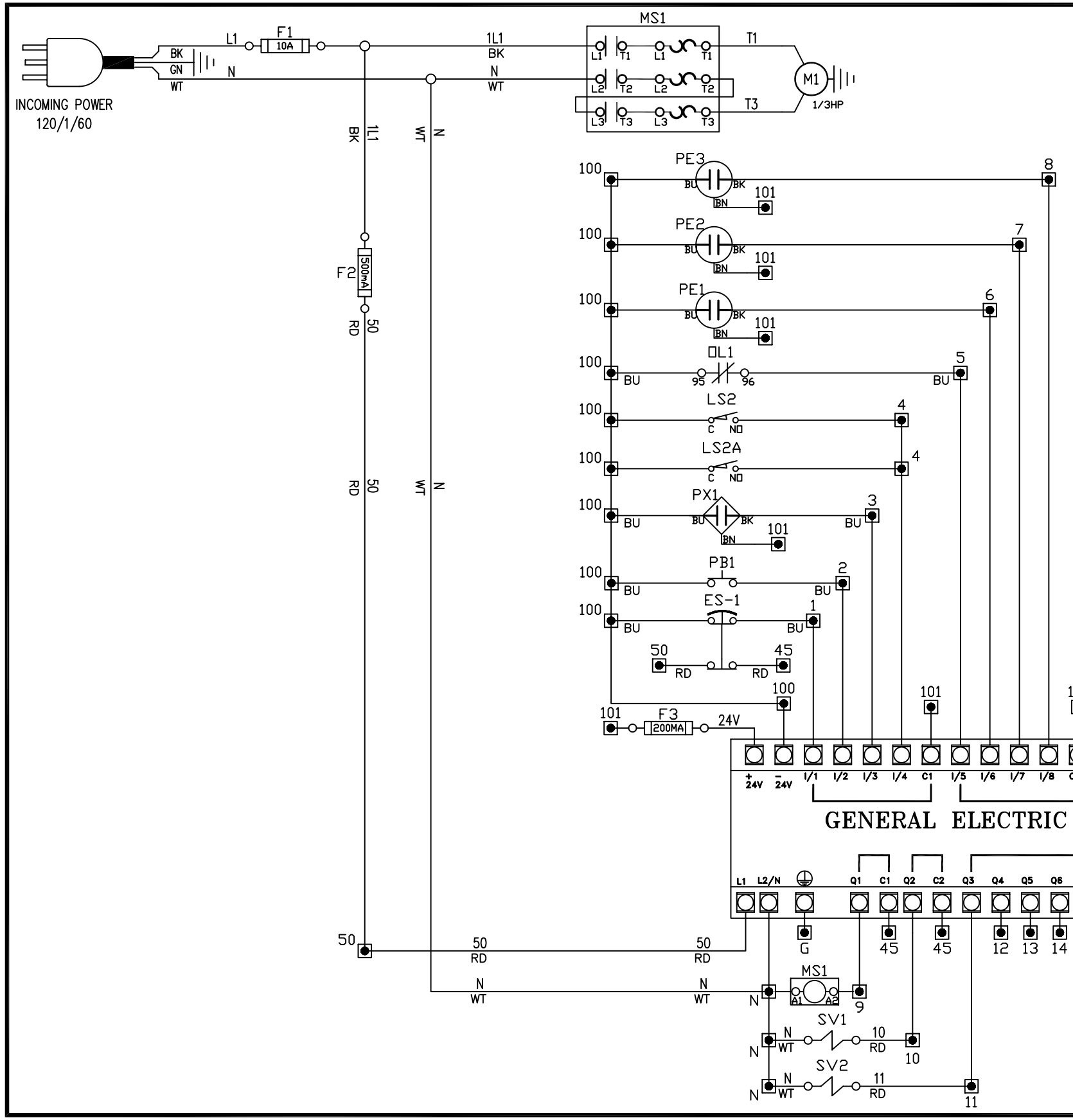
DWG. #: PNEU-0059-4		SCALE: N/A
MATERIAL: NOTED		CHECK'D:
DESIGNED:	DRAWN: AJS	APPRV'D:

REVISION RECORD					
REV	DESCRIPTION	DATE	ATH	DR	CK



KEY	PART NUMBER	PART DESCRIPTION
1	A100N-1210P-R	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	CONTACTOR
8	SS3-J	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

TOLERANCES EXCEPT AS NOTED	*THE LOVESHAW CORPORATION* RT 296, SOUTH CANAAN, PA.		
DECIMAL (3 PLC) +/- .005	TITLE: ELECTRICAL PANEL ASSEMBLY LDR - PLC - 120/1/60		
FRACTIONAL +/- 1/64	DWG. NO. ED1318		SCALE: 1 : 2
	MATERIAL: COMMERCIAL		DATE: 08/11/03
ANG. - 1/2°	DESIGNED: WM	DRAWN: MENTA	APPRVD: --



REVISION RECORD					
REV	DESCRIPTION	DATE	ATH	DR	CK

SYMBOL	DEVICE	FUNCTION
ES-1	E-STOP	EMERGENCY STOP SWITCH
F1	FUSE	MAIN POWER PROTECTION
F2	FUSE	120 VAC CONTROL POWER PROTECTION
F3	FUSE	24 VDC POWER PROTECTION
LS2	LIMIT SWITCH	PACK TABLE SIDERAILS LIMIT SWITCH (NEAR)
LS2A	LIMIT SWITCH	PACK TABLE SIDERAILS LIMIT SWITCH (FAR)
M1	MOTOR	MAIN DRIVE MOTOR
MS1	MOTOR STARTER	MAIN DRIVE MOTOR MANUAL MOTOR STARTER
OL1	OVERLOAD RELAY	MAIN DRIVE MOTOR THERMAL PROTECTOR
PB1	PUSHBUTTON	MACHINE START
PE1	PHOTOELECTRIC	MACHINE ENTRANCE (HEAD ASSY.)
PE2	PHOTOELECTRIC	HEAD RELEASE PULSE
PE3	PHOTOELECTRIC	MACHINE EXIT SENSOR
PX1	PROXIMITY SWITCH	HEAD TRAVEL TRIGGER SENSOR
SV1	SOLENOID VALVE	HEAD LIFTING VALVE
SV2	SOLENOID VALVE	SIDERAILS CONTROL VALVE

HEAD JUNCT. BOX WIRE CHART	
WIRE NO. 100	RED
WIRE NO. 101	BLUE
WIRE NO. 3	YEL.
WIRE NO. 6	GRN.
WIRE NO. 7	WHT.
NOT USED	BLK.

NOTE:
1. ALL 120VAC LINE WIRES WILL BE 16AWG BLACK UNLESS OTHERWISE NOTED.
2. ALL 120VAC CONTROL WIRES WILL BE 16AWG RED UNLESS OTHERWISE NOTED.
3. ALL 120VAC NEUTRAL WIRES WILL BE 16AWG WHITE UNLESS OTHERWISE NOTED.
4. ALL DC CONTROL WIRING WILL BE 20AWG BLUE UNLESS OTHERWISE NOTED.

TOLERANCES EXCEPT AS NOTED	*THE LOVESHAW CORPORATION* RT 296, SOUTH CANAAN, PA.		
DECIMAL (3 PLC) +/- .005	TITLE: ELECTRICAL SCHEMATIC LEGEND RANDOM – 120/1/60		
FRACTIONAL +/- 1/64	DWG. NO. ED1372		SCALE: N/A
	MATERIAL: N/A		DATE: 01/12/04
ANG. – 1/2°	DESIGNED: MENTA	DRAWN: WM	APPRVD: --