LITTLE DAVID

OWNERS MANUAL

LD7D/M

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REV. 10/10/06 M.C.R. #06-012

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SUBJECT

*NOTE: WHEN ORDERING PARTS FOR ST. STEEL MACHINE, ADD (SS) TO END OF PART NUMBER (CARTRIDGE PARTS EXCLUDED)

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 THE BOXES AFTER THEY CLEAR THE EXIT END OF THE MACHINE.

* FINGER GUARDS ARE PROVIDED TO MINIMIZE BELT GAP AS DRIVE BELTS WEAR . GAP SHOULD BE 1/32" BETWEEN GUARD AND BELT.

* 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 BY-PASS ANY DESIGNED-IN SAFETY FEATURES SUCH AS INTERLOCKS, GUARDS OR SHIELDS.

* FULLY AUTOMATIC MACHINES ARE EQUIPPED WITH A REAR FLAP KICKER. DO NOT PLACE ANY PART OF THE BODY NEAR THIS AREA WITHOUT FIRST DISCONNECTING POWER AND AIR SUPPLY.

* 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 AND AIR ARE DISCONNECTED.

* ALWAYS DISCONNECT POWER AND AIR SUPPLY (IF APPLICABLE) BEFORE SERVICING THE MACHINE.

* WHEN OPERATING A SEMI-AUTOMATIC MACHINE, HOLD BOX FLAPS DOWN AT TRAILING 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.

BELT LAGGING INSTALLATION

1. IF THE BELT MOVES TO THE LEFT OR RIGHT AT THE EXIT END OF THE MACHINE, THEN THE BELT LAGGING (FRICTION) MATERIAL ON THE DRIVE ROLLER MUST BE CUT ON THE SAME SIDE THAT THE BELT IS MOVING TOWARDS. TO ACCOMPLISH THIS, FIRST REMOVE THE BELT THAT IS MOVING OUT OF LINE AS DESCRIBED ABOVE, SO THAT THE EXIT ROLLER CAN TURN FREELY, AFTER THE MACHINE IS TURNED ON.

2. TURN ON MACHINE AND WITH A UTILITY KNIFE, CUT ABOUT 1/8" OFF THE BELT LAGGING MATERIAL BY PLACING THE POINT OF THE KNIFE ON THE LAGGING MATERIAL WHILE THE DRIVE ROLLER IS TURNING. BE SURE TO PLACE THE KNIFE ON THE ROLLER SO THAT THE ROLLER IS MOVING AWAY FROM THE POINT OF THE KNIFE.

3. AFTER A COMPLETE CUT IS MADE, TURN MACHINE OFF AND WITH THE POINT OF THE KNIFE, LIFT UP A SECTION OF THE CUT LAGGING AND PULL OFF UNTIL IT IS REMOVED FROM THE DRIVE ROLLER COMPLETELY. (THIS CAN BE DONE BY JOGGING THE MACHINE ON/OFF WHILE PULLING THE CUT STRIP OF LAGGING).

4. REPLACE BELT AND CHECK ALIGNMENT. BELT WILL HAVE MOVED TO THE OPPOSITE SIDE THAT WAS CUT. THIS PROCEDURE MAY HAVE TO BE REPEATED UNTIL THE BELTS ARE CENTERED.

MACHINE SPECIFICATIONS

MACHINE DIMENSIONS:

HEIGHT:	56 inches	1422 mm
WIDTH:	30 inches	762 mm
LENGTH:	34 inches	863 mm

TABLE HEIGHT (adjustable):

MINIMUM:	22 inches	560 mm
MAXIMUM:	30 inches	762 mm

ELECTRICAL:

STANDARD:	115V/1/60
	240V/1/50
OPTIONAL:	220V/1/50,60
	220V/3/50,60
	380V/3/50
	440V/3/50
	440V/3/60

BOX CAPACITY:

LENGTH:	6 inches to unlimited max.	152 mm to unlimited max.
WIDTH:	4.5 inches to 22 inches	114 mm to 559 mm
HEIGHT:	4.5 inches to	152 mm to 609 mm

OPERATING SPEED:

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

CLOSURE MATERIAL - PRESSURE SENSITIVE TAPE

WIDTH:	1.5 inches to 2 inches	38 mm to 50 mm
MAX. ROLL DIAMETER:	15 inches	380 mm
WEIGHT: (uncrated)	180 lbs.	81 kg.

INTRODUCTION

THE LITTLE DAVID LD7D/M UNIFORM PRESSURE SENSITIVE TAPER IS DESIGNED TO TAPE 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. ALL HARDWARE USED ON THIS MACHINE IS METRIC.

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:

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ORE YOUR NEAREST LITTLE DAVID DISTRIBUTOR

INSTALLATION

THE LITTLE DAVID IS SHIPPED COMPLETELY ASSEMBLED.

THE LITTLE DAVID IS READY FOR OPERATION AFTER PLUGGING IT INTO AN APPROPRIATE GROUNDED ELECTRICAL OUTLET. THE CONNECTION CABLE IS LOCATED ON THE REAR OF THE MACHINE.

THE HEIGHT OF THE MACHINE CAN BE ADJUSTED FROM 22 INCHES TO 30 INCHES (559 mm to 762 mm) IN ONE INCH INCREMENTS BY ADJUSTING THE HEIGHT OF THE LEG EXTENSIONS.

DUE TO ITS PORTABILITY AND EASY PLUG-IN CONNECTION, THE MACHINE MAY BE QUICKLY MOVED TO VARIOUS LOCATIONS AS THE NEED ARISES.

AN OPTIONAL INFEED TABLE CAN BE INSTALLED AT THE INFEED END OF THE MACHINE, HOWEVER, A CONVEYOR MAY BE USED INSTEAD. THE INFEED TABLE CAN BE USED SO THAT THE PACKER CAN FILL THE BOXES AND CLOSE THE FLAPS PRIOR TO FEEDING THE BOXES IN 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 1/4" (6 mm) BELOW THE MACHINE BELT HEIGHT.**

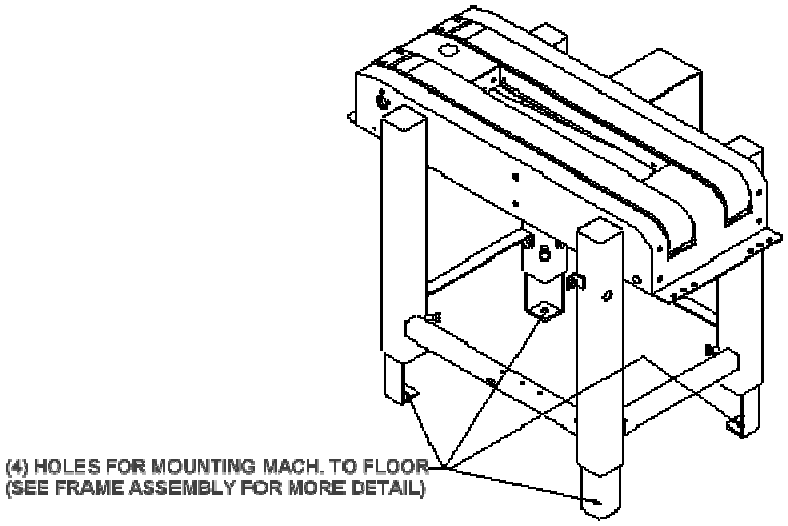
MACHINE BOLTING PROCEDURE:

THE LD7E MUST BE FASTENED TO THE FLOOR TO AVOID TIPPING WHEN THE HEAD IS IN THE HIGHEST "UP" POSITION. THERE ARE HOLES LOCATED ON THE BOTTOM OF EACH OF THE LEG EXTENSIONS FOR FASTENING THE MACHINE TO THE FLOOR. THE MACHINE SHOULD BE LEVEL AND SHOULD NOT ROCK.

TO FASTEN THE MACHINE TO THE FLOOR, USE SPECIFIED HARDWARE LISTED BELOW.

CONCRETE FLOOR: - WEDGE STUD ANCHOR
1/2 INCH DIA. ANCHOR MIN. EMBEDMENT DEPTH = 2 1/4" GRADE 5 STEEL.
INSTALLED TO MANUFACTURER'S SPECIFICATION.

WOOD AND OTHER FLOORING:
1/2 INCH DIA. LAG SCREW MIN. EMBEDMENT DEPTH = 3" GRADE 2 STEEL.
INSTALLED TO MANUFACTURER'S SPECIFICATION.



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

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

MAIN FRAME

STARTER SWITCH:

THE STARTER SWITCH IS MOUNTED ON THE OPERATOR SIDE OF THE MACHINE. IT INCORPORATES A CIRCUIT BREAKER THAT IS SET TO TRIP AT THE PROPER RATING OF THE MOTOR. TO REPLACE THIS SWITCH, FIRST DISCONNECT THE MACHINE FROM THE ELECTRICAL SUPPLY. REMOVE THE SWITCH BY LOOSENING THE TWO FASTENING SCREWS AND PULL THE SWITCH FROM THE ELECTRICAL BOX. REMOVE THE WIRES AFTER FIRST NOTING THEIR CONNECTIONS 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 SET MANUALLY BY LOOSENING THE SIDE RAIL LOCK HAND WHEEL COUNTERCLOCKWISE. MOVE THE SIDE RAILS IN UNTIL BOTH SIDE RAILS COME IN CONTACT WITH THE BOX. RELOCK THE SIDE RAILS BY TURNING THE SIDE RAIL LOCK HAND WHEEL CLOCKWISE.

IF A SIDE RAIL NEEDS REPLACING, REMOVE THE TWO SCREWS ON THE TOP OF THE SIDE RAIL AND REPLACE WITH NEW ONE. SECURELY TIGHTEN SCREWS WHEN REPLACING A SIDE RAIL.

BELTS:

TWO BELTS LOCATED ON THE BED OF THE MACHINE DRIVE THE BOX THROUGH THE MACHINE. THE BELTS RUN OVER A DRIVE ROLLER LOCATED AT THE EXIT END OF THE MACHINE, AND THEN ARE THREADED OVER THE INFEED ROLLERS LOCATED AT THE INFEED END.

TO REPLACE A BELT, BRING THE BELT LACING PIN TO THE TOP OF THE MACHINE. PUSH THE BELT TENSIONING BRACKET TOWARD THE EXIT END OF THE MACHINE AND PULL THE BELT LACING PIN. REMOVE THE OLD BELT AND REPLACE WITH THE NEW ONE. FOLLOW THE BELT THREADING DIAGRAM. MAKE SURE THE SPRINGS ON THE BELT TENSIONING ROLLER BRACKET ARE IN PLACE.

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.

BELT THREADING DIAGRAM

KEY	PART NUMBER	DESCRIPTION
1	PSC301244-4	BELT
2	PSC301217-4	DRIVE ROLLER
3	PSC301232	BELT TENSIONING SPRING
4	K286D	GUIDE ROLLER
5	PSC301208-5	INFEED ROLLER BRACKET
6	PSC301211-4	INFEED ROLLER

HEAD

THE HEAD RIDES ALONG THE MAST ON BEARINGS AND HIGH DENSITY POLYETHYLENE PADS. THE HEAD HEIGHT IS ADJUSTED BY TURNING THE HEAD LOCK HAND WHEEL COUNTERCLOCKWISE TO RELEASE THE HEAD. TURNING THE HAND WHEEL CLOCKWISE WILL LOCK THE HEAD IN THE DESIRED POSITION.

BEARINGS:

IF ANY OF THE BEARINGS WHICH RUN AGAINST THE MAST NEED TO BE REPLACED, PROCEED AS FOLLOWS:

- DISCONNECT ELECTRICAL SUPPLY. PLACE A STURDY BOX/BLOCK ON BED OF MACHINE AND LOWER HEAD ONTO IT.

- REMOVE COVER FROM BACK OF HEAD TO EXPOSE BEARINGS. LOOSEN OUTSIDE NUTS ON THREADED SHAFT.

- BACK OFF NUTS BETWEEN BEARINGS WHILE TURNING THREADED SHAFT WITH A SCREW DRIVER UNTIL DEFECTIVE BEARING CAN BE REMOVED.

- REVERSE ABOVE PROCEDURE TO REPLACE BEARING.

- THE FRONT BEARINGS ARE ACCESSIBLE THROUGH THE BOTTOM OF THE HEAD.

WHENEVER THE BEARINGS HAVE BEEN CHANGED, THE CLEARANCE BETWEEN THE HEAD AND THE MAST MUST BE RE-ALIGNED. THE CLEARANCE BETWEEN THE TEFLON SLIDES AND THE SIDES OF THE MAST SHOULD BE ADJUSTED TO APPROXIMATELY .020" (.5 mm). THIS SHOULD BE CHECKED THROUGH THE HEADS RANGE OF TRAVEL TO INSURE THAT THIS CLEARANCE EXISTS AT THE HIGH POINTS OF THE MAST.

THE CLEARANCE BETWEEN THE BEARINGS AND THE FRONT AND REAR SURFACES OF THE MAST SHOULD BE SUCH THAT THE HEAD MOVES FREELY AND DOES NOT COCK OR SAG. TO ADJUST THE CLEARANCE, PROCEED AS FOLLOWS:

- REMOVE COVER FROM REAR OF HEAD.

- ADJUST CLEARANCE OF TEFLON SLIDES OF MAST BY LOOSENING LEFT NUT ON THREADED SHAFT LOCATED ON THE OUTSIDE OF THE HEAD, AND TIGHTEN NUT LOCATED AGAINST INSIDE OR ROLLER A CORRESPONDING AMOUNT. THIS IS THE EFFECT OF SPREADING OPEN THE SIDES OF THE HEAD. ADJUST THE FRONT AND REAR THREADED SHAFTS TOGETHER TO KEEP THE TEFLON SLIDES PARALLEL TO THE MAST. FIRST ADJUST THE UPPER PAIR OF SHAFTS THEN ADJUST THE LOWER PAIR OF SHAFTS.

- MOVE HEAD THROUGH ITS FULL TRAVEL AND CHECK THAT TEFLON SLIDES HAVE PROPER CLEARANCE AT THE HIGH POINTS.

- NEXT ADJUST THE FORE AND AFT ADJUSTMENT SCREWS. THESE ARE SET SCREWS THAT ARE LOCATED IN THE FOUR BLOCKS TO WHICH THE HEAD COVER IS MOUNTED. TURNING THEM CLOCKWISE WILL MOVE THE ADJACENT REAR BEARINGS IN TOWARD THE MAST. THEY SHOULD BE ADJUSTED SO THAT THE BEARING JUST CLEARS THE MAST. LOOSEN THE FOUR OUTSIDE NUTS OF THE TWO REAR THREADED SHAFTS BEFORE MAKING THIS ADJUSTMENT SO THAT THE SHAFTS CAN MOVE IN THEIR OVER-SIZED HOLES. BE SURE TO TIGHTEN THE OUTSIDE NUTS AFTER ADJUSTING. WHEN PROPERLY ADJUSTED, THE HEAD WILL BE PARALLEL TO THE BED OF THE MACHINE AND WILL NOT COCK ON THE MAST AND THE BEARINGS SHOULD RUN FREELY.

- MOVE THE HEAD THROUGH ITS FULL TRAVEL AND CHECK THAT THERE IS PROPER CLEARANCE AT THE HIGH POINTS.

- REPLACE HEAD COVER.

ELECTRICAL SYSTEM

THE ELECTRICAL SYSTEM CONSISTS OF TWO FRACTIONAL HP DRIVE MOTORS AND THE STARTER SWITCH. THE MOTORS AND FRAME ARE GROUNDED THROUGH THE ELECTRICAL CONNECTOR.

THE CIRCUIT BREAKER IS FACTORY SET. IF IT TRIPS, IT SHOULD BE RESET AFTER INSPECTION OF THE ELECTRICAL SYSTEM.

WARNING: THE INSPECTION OF THE ELECTRICAL SYSTEM SHOULD BE DONE BY A QUALIFIED ELECTRICIAN **ONLY!**

LUBRICATION

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

THE REDUCER USES 6 TO 8 OZS. OF SCH634.

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.

TROUBLE SHOOTING

TAPING DIFFICULTIES:

1. TAPE DOES NOT ADHERE WELL TO BOX:

    1. CHECK THAT BOX IS NOT WAXY OR OILY.
    2. 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.
    3. CHECK THE PRESSURE ON THE WIPE DOWN ROLLERS. IF NECESSARY, INCREASE THE MAIN SPRING PRESSURE.
    4. CHECK THAT THE SPRING IS NOT BROKEN.

2. TAPE END STICKS TO ITSELF OR MECHANISM:

    1. CHECK THAT THERE IS NOT TOO MUCH DRAG ON THE TAPE CAUSING STRETCHING AND SNAP BACK AT CUT OFF. REDUCE THE TAPE CORE DRAG SETTING.
    2. CHECK THE TAPE THREADING PATH.
    3. CHECK FOR DEFECTIVE TAPE ROLL BY PULLING TAPE OFF MANUALLY. THE PULL SHOULD BE EVEN AND NOT VARY SUDDENLY.
    4. CHECK TAPE GUIDE PLATE SETTING AND FREEDOM OF MOVEMENT.
    5. CHECK ROLLER FOR BINDING.

3. TAPE BREAKS OR JAMS:

    1. CHECK THE TAPE ROLL BY PULLING TAPE OFF MANUALLY. THE PULL SHOULD BE EVEN AND SHOULD NOT VARY SUDDENLY.
    2. CHECK THE TAPE CORE DRAG SETTING.
    3 CHECK THE TAPE THREADING PATH.
    4. CHECK FOR NICKS IN EDGE OF TAPE ROLL. PULL OFF DAMAGED TAPE.
    5. TAPE TENSION SET TOO HIGH.

4. TAPE WRINKLES:

    1. CHECK THE TAPE ROLL BY PULLING TAPE OFF MANUALLY. THE PULL SHOULD BE EVEN AND SHOULD NOT VARY SUDDENLY.
    2. 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.
    3. CHECK THAT ALL THE ROLLERS TURN FREELY ON THEIR SHAFTS.
    4. CHECK THE BOX CONTENTS. PARTIALLY FULL BOXES OR VERY COMPRESSIBLE CONTENTS MAY ALLOW THE FLAPS TO DEPRESS EXCESSIVELY CAUSING WRINKLES.
    5. CHECK THE DRAG OF THE TAPE. TOO MUCH DRAG MAY CAUSE OVERRUNNING OF THE TAPE ROLL. ADJUST THE TAPE CORE DRAG SETTING.
    6. TAPE TENSION SET TOO HIGH.
    7. CHECK ROLLER STOP INSIDE CARTRIDGE.
    8. CHECK THAT THE TAPE IS PROPERLY THREADED AND THAT TAPE CORE IS PROPERLY CENTERED.

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

10. CHECK THAT THE BELTS ARE NOT SLIPPING.

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

5. SHORT TAPE TAB ON BOX:

1. CHECK TAPE TENSION.
2. 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 FRONT ROLLER ARM CANNOT BE DEPRESSED BELOW BOX HEIGHT. THEY ARE LOCATED INSIDE CARTRIDGE ON BOTH SIDES. WHEN FULLY DEPRESSED, FRONT WIPE ROLLER SHOULD PROTRUDE 3/32" ABOVE CARTRIDGE FRAME. IF THIS NEEDS ADJUSTING, ROTATE THE 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 OPPOSITE HOLE IN THE CARTRIDGE FRAME. THE FRONT ROLLER SHOULD THEN PROTRUDE TO BELT LEVEL.

7. TAPE NOT CUTTING:

1. CHECK KNIFE ARM FOR MECHANICAL BINDING.
2. CHECK THAT KNIFE IS NOT DULL.
3. CHECK SPRINGS ON KNIFE STUDS.
4. CHECK BUSHINGS IN KNIFE STUDS.
5. IF KNIFE STOP BLOCK IS CAUSING FRICTION ON KNIFE STUDS, ROTATE UNTIL FREE.
6. TAPE TENSION IS SET TOO LOW.

8. TAPE NOT CENTERED ON BOX:

1. USE SCREW IN CENTER OF TAPE CORE TO RE-ALIGN.

9. TAPE NOT BEING WIPED:

1. CHECK MAIN SPRING.
2. TAPE TENSION IS SET TOO HIGH.

BOX PROBLEMS:

BOXES JAMMING IN MACHINE:

1. JAM CLEARING PROCEDURE:

    1. STOP MACHINE.
    2. OPEN SIDE RAILS AND RAISE HEAD.
    3. REMOVE JAMMED BOXES. CUT TAPE FLUSH WITH END OF WIPE ROLLER.
    4. RESET HEAD AND SIDE RAILS TO A SAMPLE SIZE BOX.
    5. START MACHINE. MACHINE IS NOW READY TO PROCESS THE NEXT BOX.

2. INCORRECT BOX SIZE OR SHAPE:

    1. CHECK BOXES TO MAKE SURE THE SIZE FALLS WITHIN THE LIMITS OF THE MACHINE.
    2. MACHINE WILL NOT PROCESS UNSTABLE BOXES.

3. CONTENTS BULGING THROUGH TOP OF BOX:

    1. CHECK TO BE SURE BOX IS NOT OVERFILLED WITH CONTENTS.

4. BOX SLIPPING AGAINST BELTS:

    1. INCREASE HEAD PRESSURE.

5. SIDE RAIL PRESSURE TOO HIGH:

    1. OPEN SIDE RAILS SLIGHTLY.

6. HEAD PRESSURE TOO HIGH:

    1. RAISE HEAD SLIGHTLY.

BELT DRIVE PROBLEMS:

CHECK THAT MACHINE IS CONNECTED TO A LIVE ELECTRICAL SOURCE.

1. BELTS SLIP:

    1. RAISE HEAD SLIGHTLY.
    2. CHECK BELT TENSIONING SPRINGS. REPLACE IF MISSING OR BROKEN.

2. BOX SLIPS AGAINST BELTS:

    1. LOWER HEAD SLIGHTLY TO INCREASE PRESSURE ON BOX.

3. BELTS RUB AGAINST FRAME:

    1. CHECK THAT BELTS ARE POSITIONED CORRECTLY IN BETWEEN THE BELT GUIDE ROLLERS.
    2. 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 THE 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 WITH UNDER FILL OR COMPRESSIBLE CONTENTS.

TAPE GUIDE PLATE:

THE TAPE IS GUIDED TO THE FRONT ROLLER BY THE 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 FORMS 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 AN ADJUSTMENT IS NECESSARY GENTLY BEND THE FINGERS NEAR THE TIPS. ONLY BEND A SMALL AMOUNT, THEN CHECK. FINGERS MUST CONTACT PLATE. WHEN THE 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 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 DEVICE. THE KNIFE ARM SHOULD BE ADJUSTED SO THAT THE TIPS OF THE KNIFE ARM ARE 2 1/2” FROM THE CARTRIDGE FRAME. 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:

TOP TAPE:

1. RETRACT DETENT WITH RIGHT HAND.
2. WITH LEFT HAND, GRAB CARTRIDGE NEAR TAPE CORE AND ROTATE UP/BACK UNTIL CARTRIDGE RESTS AGAINST STOP.
3. LOAD TAPE ON TAPE CORE.
4. FOLD TAPE ON ITSELF TO PREVENT ADHESIVE FROM GRABBING CARTRIDGE (ABOUT 1 FT. IN LENGTH).
5. THREAD AS PER DIAGRAM LOCATED ON TAPE CARTRIDGE.
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 CONTACTS DETENT. MAINTAIN GRIP OF TAPE ROLL WITH LEFT HAND WHILE RETRACTING DETENT WITH RIGHT HAND. LOWER CARTRIDGE INTO PLACE AND RELEASE DETENT.

BOTTOM TAPE:

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

Constant force spring removal and installation procedure for internally mounted spring

The following are step by step instructions for the removal and installation of the internally located constant force spring assembly.

SPECIAL NOTE:

Follow proper lock out/tag out procedures and use proper PPE (personal protection equipment) Example: safety glasses and protective gloves.

Figure 1:
Locate spring cover
at top of mast assembly

.

Figure 2:
Loosen and remove hardware holding spring cover.
(1) located near side
(1) located far side

Figure 3:
Remove spring cover from mast assembly exposing spring.

Figure 4:
Loosen and remove spring bracket hardware.

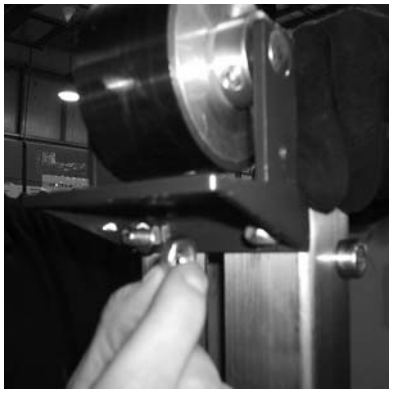
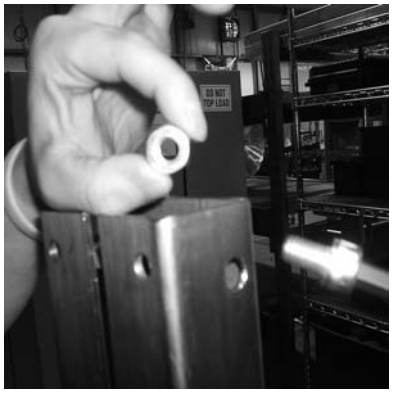


Figure 5:
Remove spring bracket assembly from top of mast.

Figure 6:
Remove head stop hardware from mast.
(1) located near side
(1) located far side



Constant force spring removal and installation procedure for internally mounted spring

Figure 7:
Slide head upward until spring is forced outside of mast.

Figure 8:
Slide head up to expose spring mount hardware. Then lock in place using lock knob on the side of head weldment.

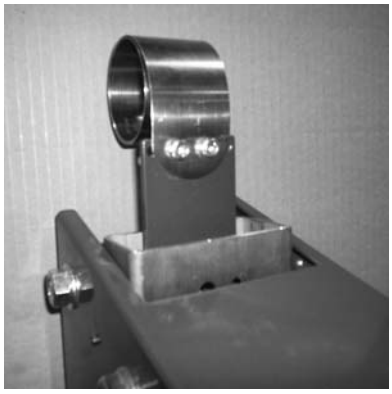


Figure 9:
Remove hardware that holds spring in place.

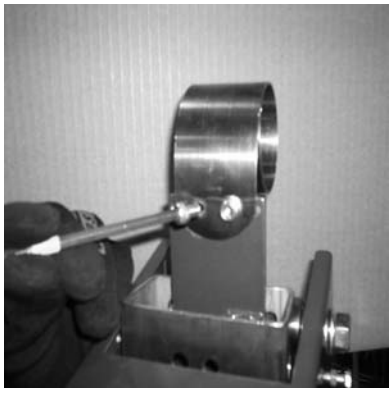


Figure 10:
Remove spring from spring/actuator bracket.

Figure 11:
Reassemble new constant force spring assembly.

Figure 12:
Insert spring shaft thru spring drum and center with a set collar on each side.

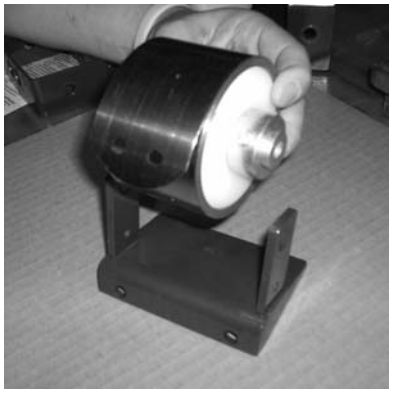


Figure 13:
Insert constant force spring assembly into spring bracket.
The spring should be facing the rear of the bracket as shown.

Figure 14:
Attach new spring bracket assembly to top of mast.

Constant force spring removal and installation procedure for internally mounted spring

Figure 15:
Pivot spring in place to line up with spring/actuator bracket and reinstall hardware.

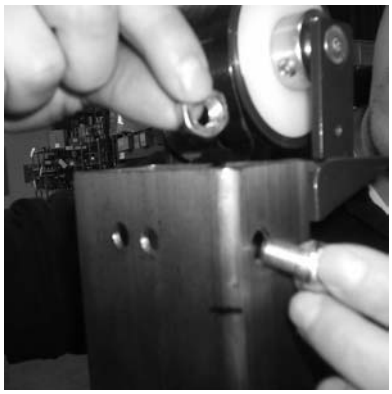


Figure 16:
Reinstall head stop hardware in mast assembly.
(1) near side
(1) far side

Figure 17:
Reinstall spring cover.
(1) bolt near side
(1) bolt far side.

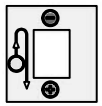
Figure 18:
Assembly is complete. Adjust head and run machine as normal.

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	11/10/2005	AJS

SL-0016
80/20 MACHINE
PARTS LABEL

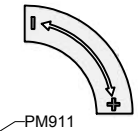
SL-0004
PINCH POINT
ROLLER LABEL

PM944-4
LITTLE DAVID LABEL



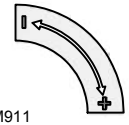
PM905
ON/OFF LABLE

SL-0021
ARC FLASH HAZARD LABEL



PM911
+/- DIRECTION LABEL

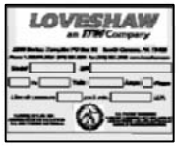
SL-0003
PINCH POINT SQUEEZER
LABEL



PM911
+/- DIRECTION LABEL
(BACK SIDE OF LEG)

SL-0001
BLADE HAZARD LABEL

SL-0002
UNDERSTAND MANUAL LABEL



PM931/BLANK
MACHINE I.D. TAG

PM945-3
CAUTION
ADJUST BELTS LABEL

SL-0022 OR SL-0022/2
INSPECTED BY LABEL

PM922
UL LABEL

SL-0006
ENTANGLEMENT HAZARD LABEL

MAT'L	PART #	CAD FILE	
N/A	N/A	PLOT DATE	11/14/2005
ST. ST.	N/A	DRAWN DATE	11/10/2005
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
LD7 MACHINE LABELS

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

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

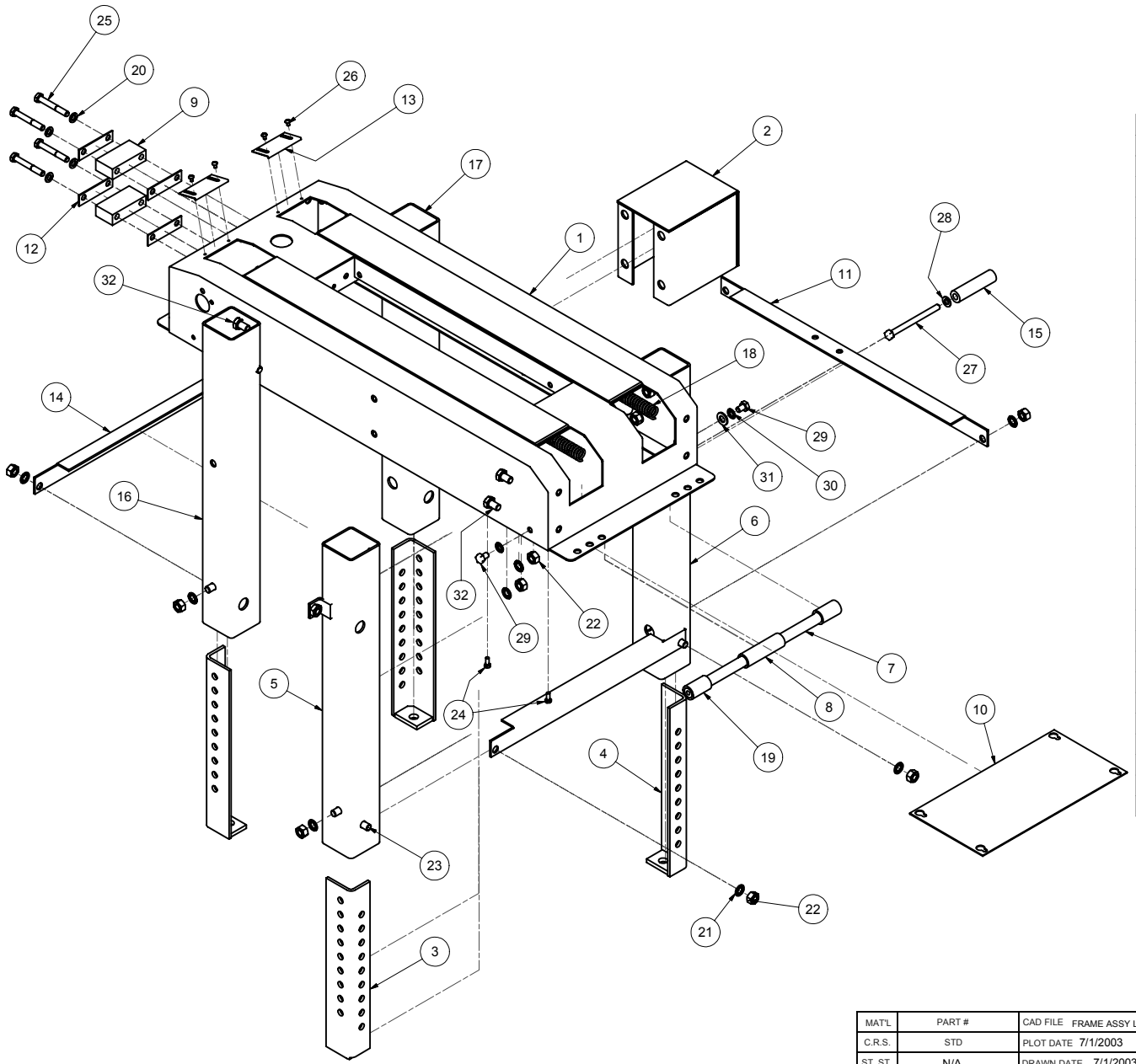
NO PERSON IS AUTHORIZED TO MAKE ANY WARRANTY OR TO CREATE ANY LIABILITY BINDING UPON LOVESHAW. WHICH IS NOT STATED IN THIS WARRANTY. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, WHICH ARE HEREBY EXCLUDED. IN PARTICULAR, THE IMPLIED WARRANTY OF MERCHANTABILITY,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

LOVESHAW AN ITW COMPANY

2206 EASTON TURNPIKE, BOX 83 SOUTH CANAAN, PA 18459
TEL: 570.937.4921 - 800.572.3434 - FAX: 570.937.3229

ILLUSTRATED REPLACEMENT PARTS
TABLE OF CONTENTS

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	7/2/2003	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC7A219-6	MAIN FRAME WELDMENT
2	1	PSC301282-4	MAST ADAPTER
3	2	PSC37L-5	AUXILIARY LEG LEFT
4	2	PSC37R-5	AUXILIARY LEG RIGHT
5	1	PSC7A203-6	LEG FRONT OPER. SIDE
6	1	PSC7A204/MI-6	LEG FRONT MAST SIDE
7	1	PSC301220-4	SHAFT - INFEED ROLLER BRKT.
8	1	PSC301225-3	SPACER - INFEED ROLLER BRKT.
9	2	PSC301233-4	SPACER - REDUCER
10	1	PSC301250-4	SAFETY PLATE
11	2	PSC301263-5	TIE BAR
12	4	PSC301265-3	RUBBER PAD - REDUCER SPACER
13	2	PSC301273-3	DRIVE BELT GUARD
14	2	PSC301274-5	TIE BAR FRONT & REAR
15	1	PSC301281-3	SPACER - MAST ADAPTER
16	1	PSC7A216-6	LEG REAR OPER. SIDE
17	1	PSC7A217-6	LEG REAR MAST SIDE
18	4	PSC301232	SPRING
19	2	PSC301226-3	SPACER - TENSION ROLLER
20	4	FLWMHP	LOCK WASHER M8
21	20	FITLWMIP	STAR WASHER M10
22	16	FHFNMIP	HEX NUT M10
23	8	FBHMI020P88	BUT HD M10x20
24	4	FHHMF012910	HEX HEAD SCREW M5 X 12
25	4	FHHSH225P08	HEX HEAD 5/16-18 X 2 1/4 LG.
26	4	FBHME006P10	BUTT. HEAD SCREW M4 X 6
27	1	FHHMH100P10	HEX HEAD SCREW M8 X 100
28	1	FFWMHP	FLAT WASHER M8
29	2	FHHMH012P10	HEX HEAD M8 X 12
30	2	FITLWMHP	INT'L TOOTH LOCK WASHER M8
31	1	FFWMIP	FLAT WASHER M10
32	12	FHHMI016P10	HHCS M10 X 16

MAT'L	PART #	CAD FILE FRAME ASSY LD7D	
C.R.S.	STD	PLOT DATE 7/1/2003	
ST. ST.	N/A	DRAWN DATE 7/1/2003	
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

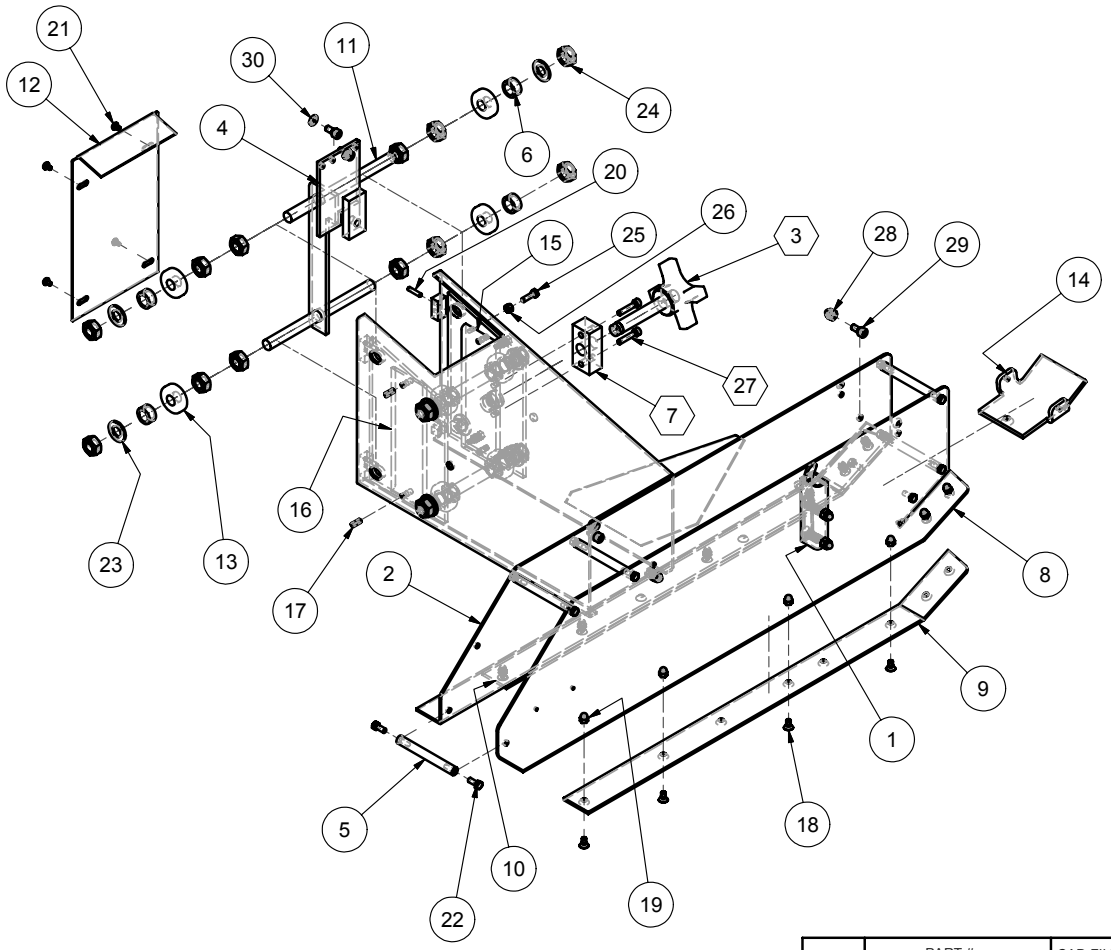
FRACTIONS ± 1/64

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

TITLE
FRAME ASSEMBLY LD7D

DWG NO	FRAME ASSY	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	4/7/2005	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	DETENT ASSEMBLY	SEE NEXT PAGE
2	1	PSC302301-6	HEAD WELDMENT
3	1	PSC301322	CLAMP SW. SCREW
4	1	LDU-1368-5	SPRING/ACTUATOR BRACKET
5	5	LD12B-1022-4	TIE BAR
6	8	PSC138-3	SPACER
7	1	PSC301324-3	CLAMP NUT HEAD
8	1	PSC301330-6	HEAD FRAME OPER. SIDE
9	1	PSC301331L-5	HOLD DOWN RAIL LEFT
10	1	PSC301331R-5	HOLD DOWN RAIL RIGHT
11	4	PSC302307-3	STUD - REAR ROLLER
12	1	PSC302308-4	HEAD COVER
13	8	PSC303313	BALL BEARING
14	1	OPC80009-3	TOP LOAD BRACKET
15	1	PSC302305-4	SLIDE STRIP - RIGHT
16	1	PSC302306-4	SLIDE STRIP - REAR
17	4	PSC301313	SPRING PIN
18	12	FFHMF010P10	FLAT HEAD M5 X 10
19	12	FHDNMFP	HEX DOME NUT M5
20	4	FSSME020P10	SET SCREW M4 X 20
21	4	FBHME006P10	BUTT. HEAD SCREW M4 X 6
22	12	FHHMF012910	HHCS M5 X 12
23	8	FFWMJP	FLAT WASHER M12
24	20	FHFNMJP	HEX NUT M12
25	4	FHHMF016P10	HEX HEAD M5 x 16
26	4	FHFNMFP	HEX FLAT NUT M5
27	2	FSHMF025P10	SHCS M5x25
28	2	FHDNMGP	HEX DOME NUT M6
29	5	FSHMG012P10	SOC. HD. CAP SCREW M6 X 12
30	2	FLWMGP	LOCK WASHER M6

⬡ INDICATES ITEMS THAT ARE REMOVED ONLY ON A LD7EA.

MAT'L	PART #	CAD FILE	HDA301F
C.R.S.	STD	PLOT DATE	4/7/2005
ST. ST.	N/A	DRAWN DATE	4/7/2005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	

TOLERANCES UNLESS OTHERWISE NOTED:

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

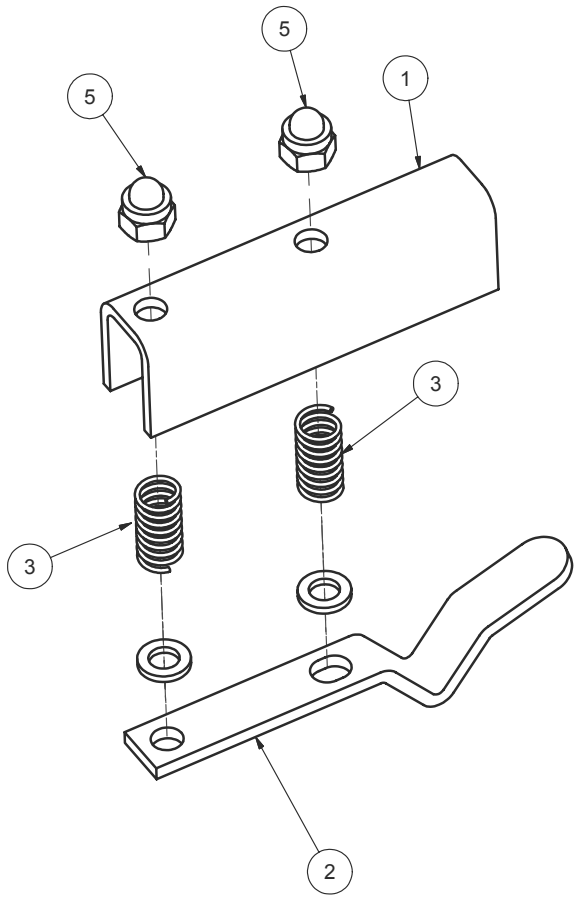
METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm, MACH. FINISH 125

FRACTIONS ± 1/64

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

TITLE
HEAD ASSY. LD7E /LD7EA

DWG NO	.HDA301F	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC127A-4	COVER DETENT PLATE
2	1	PSC127B-4	PLATE DETENT
3	2	PSC583	SPRING
5	2	M6 X 1.0	DOME NUT
6	2	FFWMGP	FLAT WASHER M6

DRAWN	dennisw	10/2/2002
CHECKED		
QA		
MFG		
APPROVED		

TITLE

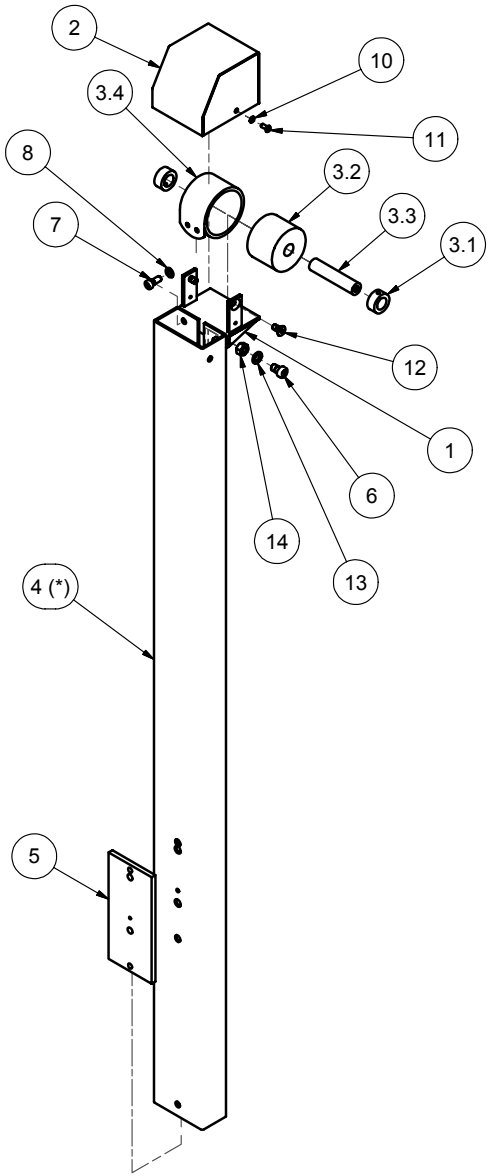
DETENT ASSEMBLY

SIZE	DWG NO	REV
B	.LDDTA	

SCALE

SHEET 1 OF 1

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	12/8/2004	AMYR



NOTE:

THIS NOTE IS NOT TO BE APPLIED TO LD7 2" MACHINES.

WHEN APPLYING THREE FLAP FOLDER ASSY. AND TOP SQUEEZER ASSY., REPLACE COUNTER BALANCE ASSY. .CBAL301F WITH .CBAL301G

REPLACE	QTY	PART NUMBER
3.1	2	LDU-1134A-3
3.2	1	LDU-1027-4
3.4	1	LDU-1026-4

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC102286-4	SPRING BRACKET
2	1	PSC102285-4	SPRING COVER
3	1	CBAL301F	COUNTER BALANCE ASSY.
3.1	2	SC75	SET COLLAR
3.2	1	LD12B-2002B-4	DRUM SPRING
3.3	1	PSC302222A-3	SHAFT SPRING
3.4	1	LD12B-2008-3	CONSTANT FORCE SPRING
4 (*)	1	PSC102305-5	MAST
5	1	PSC302213-4	MAST STRAP - FRAME
6	2	FSHMI016P88	SOC. HD. CAP SCREW M10 X 16
7	2	FSHMH020P10	SOC. HD. CAP SCREW M8 X 20
8	2	FLWMHP	LOCK WASHER M8
10	2	FLWMFP	LOCK WASHER M5
11	2	FBHMF012P10	HEX SOC. BUTT. HD. SCREW
12	2	FFHMH016P10	FLAT HD. M8 X 16 LG.
13	2	FLWMIP	SPRING WASHER M10
14	2	FHFNMIP	HEX NUT M10
15	2	FHFNMHP	HEX NUT, M8
(*)	1	PSC102305A-4	MAST (HIGH MAST OPTION ONLY)

MAT'L	PART #	CAD FILE	MST301F with CBAL301F
C.R.S.	STD	PLOT DATE	12/8/2004
ST. ST.	N/A	DRAWN DATE	12/8/2004
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

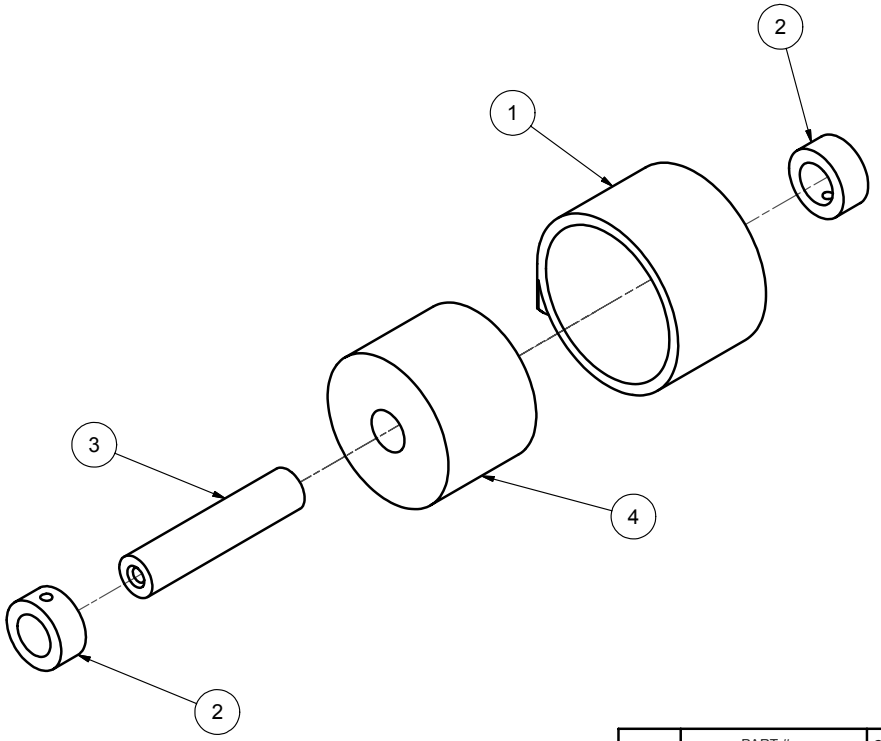
FRACTIONS ± 1/64

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

TITLE
MAST ASSY W/ COUNTER BALANCE

DWG NO	.MST301F / .CBAL301F	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	9/16/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LD12B-2008-3	CONSTANT FORCE SPRING
2	2	SC75	SET COLLAR
3	1	PSC302222A-3	SHAFT SPRING
4	1	LD12B-2002B-4	DRUM SPRING

MAT'L	PART #	CAD FILE CBAL301F	
C.R.S.	STD	PLOT DATE 9/16/2004	
ST. ST.	N/A	DRAWN DATE 9/16/2004	
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

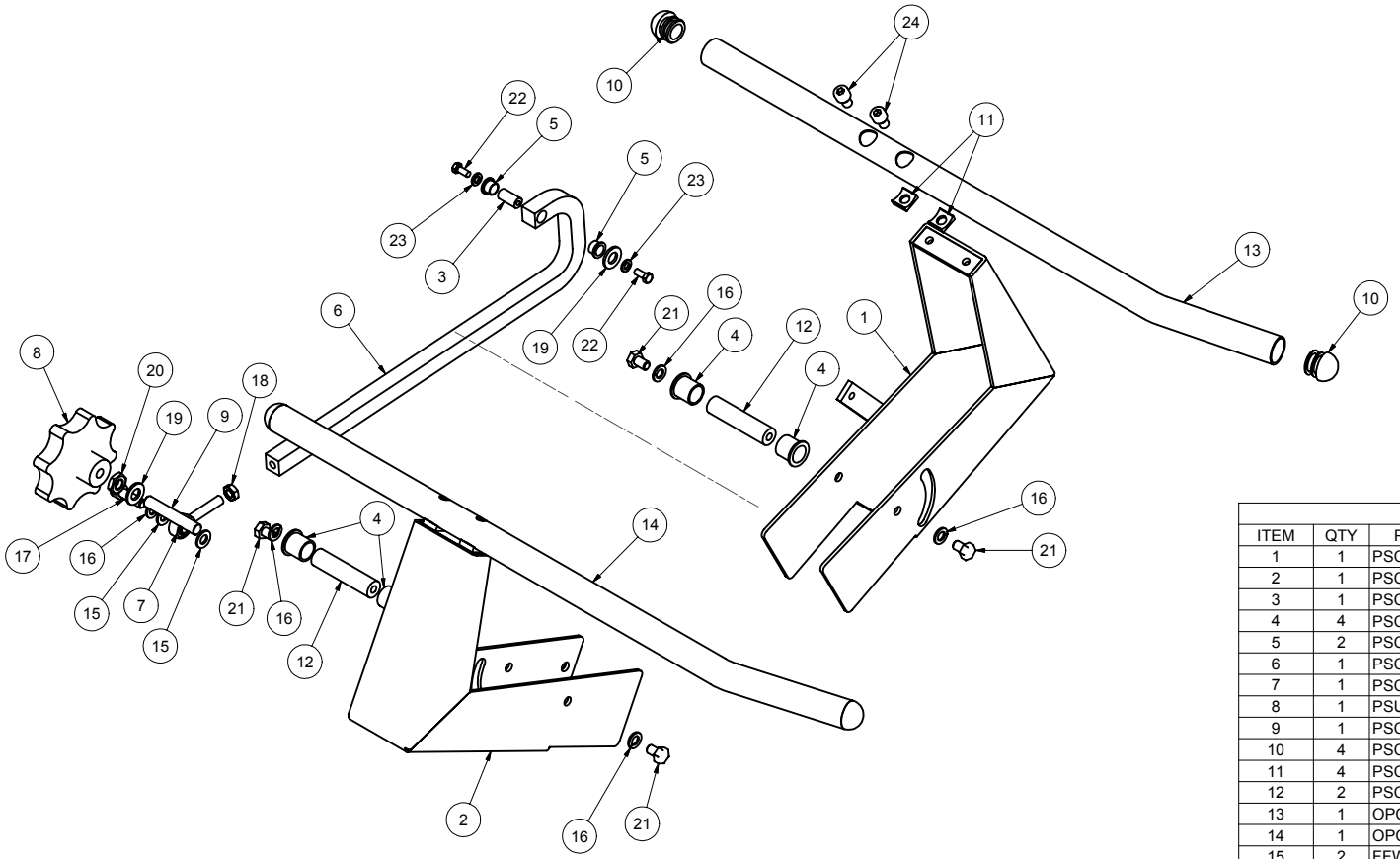
FRACTIONS ± 1/64

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

TITLE
HEAD COUNTER BALANCE ASSY.

DWG NO	.CBAL301F	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	4/14/2005	AJS



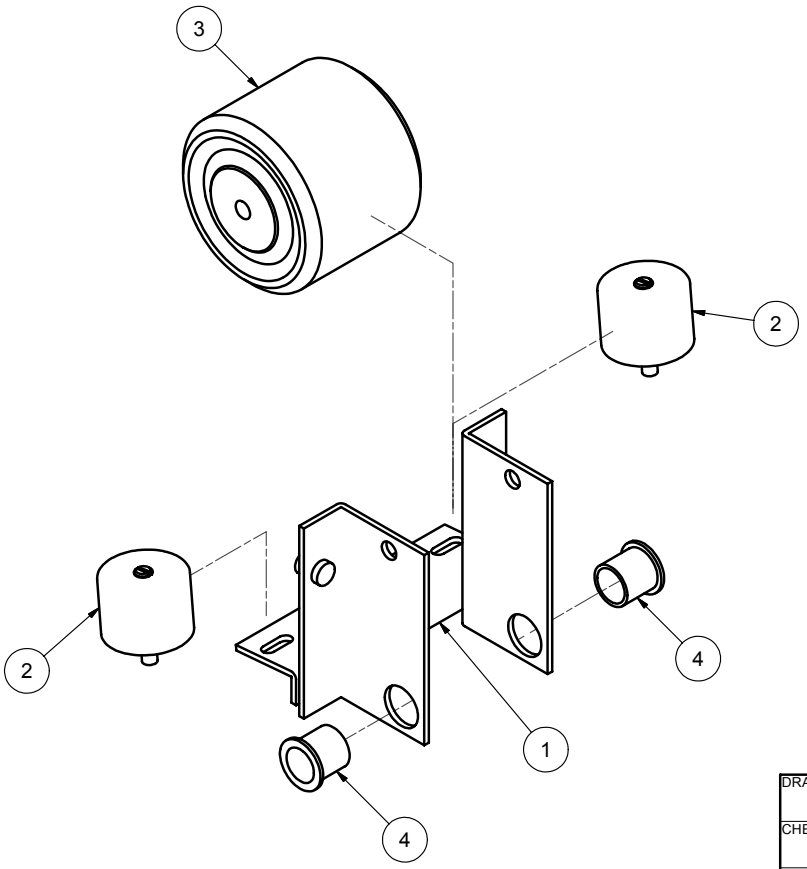
Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC301917/MI-6	SIDE RAIL ARM (MAST SIDE) M.I.
2	1	PSC301917L-6	SIDE RAIL ARM (OPER. SIDE)
3	1	PSC301222-3	SHAFT CONNECTING ARM
4	4	PSC301224	BUSHING
5	2	PSC301230-3	BUSHING (S.R. CONN ARM)
6	1	PSC301271-5	SIDE RAIL CONNECTING ARM
7	1	PSC552	SPHERICAL ALIGN BEARING
8	1	PSU166-4	SIDE RAIL HAND KNOB
9	1	PSC7A211-3	THREADED ROD
10	4	PSC511A	SIDE RAIL CAP
11	4	PSC212-3	SPACER S.R.
12	2	PSC7A202-3	SIDE RAIL PIVOT SHAFT
13	1	OPC301918R-5 (*)	SIDE RAIL RH
14	1	OPC301918L-5 (*)	SIDE RAIL LH
15	2	FFWMHP	FLAT WASHER M8
16	5	FLWMHP	LOCK WASHER M8
17	1	FSHMH025P10	SHCS M8x25
18	1	FHJNSIP	HJN 5/16-24
19	2	FFWMIP	FLAT WASHER M10
20	1	FHJNMIP	M10 HJN
21	4	FHHMH012P10	HEX HEAD M8 X 12
22	2	FHHMF012910	HHCS M5 X 12
23	2	FFWMGP	FLAT WASHER M6
24	4	FSHMH012P10	M8 X 12 SHCS
(*)	1	PSC301918R-5	SIDE RAIL RIGHT (SHORT OPTION ONLY)
(*)	1	PSC301918L-5	SIDE RAIL LEFT (SHORT OPTION ONLY)

MAT'L	PART #	CAD FILE SRA7D EXT10.IDW	TOLERANCES UNLESS OTHERWISE NOTED:
C.R.S.	STD	PLOT DATE 8/29/2007	
ST. ST.		DRAWN DATE 3/17/2005	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 √
			FRACTIONS ± 1/64

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

TITLE: SIDE RAIL ASSY.

DWG NO SRA7D EXT10	SCALE N/A
MATERIAL NOTED	CHECKED
DRAWN tonys	APPROVED



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC301208-5	INFEED ROLLER BRACKET
2	2	K286D	ROLLER
3	1	PSC301211-4	INFEED ROLLER
4	2	PSC301224	BUSHING

DRAWN	Dennisw	6/25/2002
CHECKED		
QA		
MFG		
APPROVED		

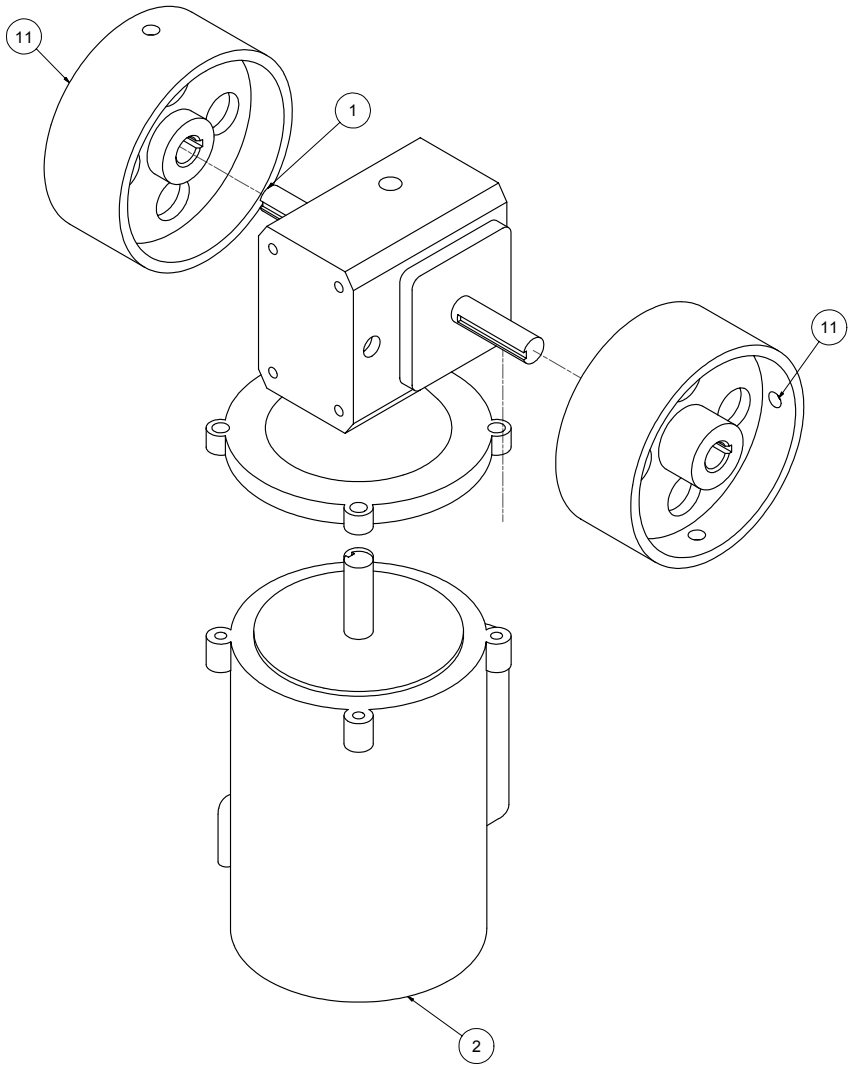
TITLE

INFEED ROLLER ASSEMBLY

SIZE	DWG NO	REV
B	IRLRA301	

SCALE

SHEET 1 OF 1

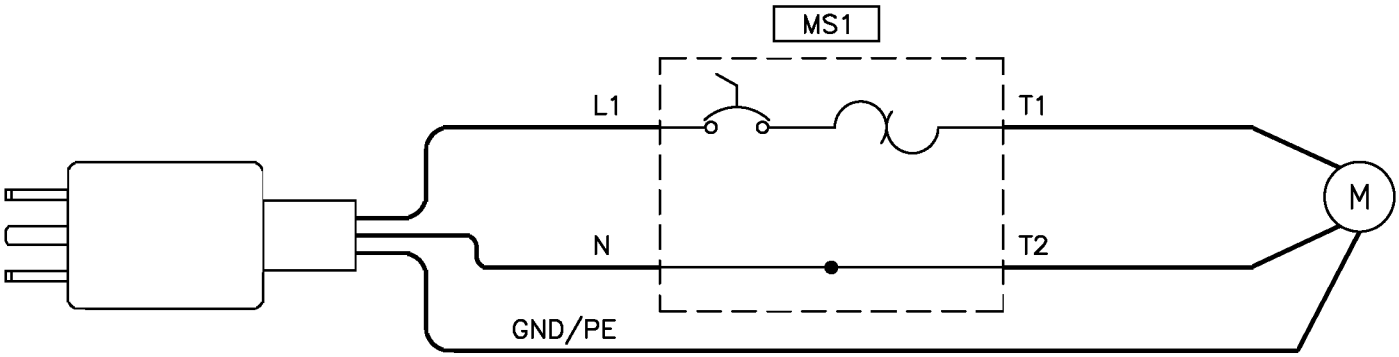


Parts List			
ITEM	QT	PART NUMBER	DESCRIPTION
1	1	PSC301238S	REDUCER
2	1	LD16B-2033A	MOTOR
3	1	A204	CONNECTOR (NOT SHOWN)
4	1	PSC614	BELT LAGGING (NOT SHOWN)
5	1	PSC301241-4	MOTOR CABLE (NOT SHOWN)
6	1	PSC301235-GE	MOTOR STARTER (NOT SHOWN)
7	1	PSC505A-115-4	LINE CABLE (NOT SHOWN)
8	1	PSC611	STRAIN RELIEF (NOT SHOWN)
9	1	PSC636G-GE	HEATER (NOT SHOWN)
10	1	PSC647	RING TERM. (NOT SHOWN)
11	2	PSC301217-4	DRIVE ROLLER

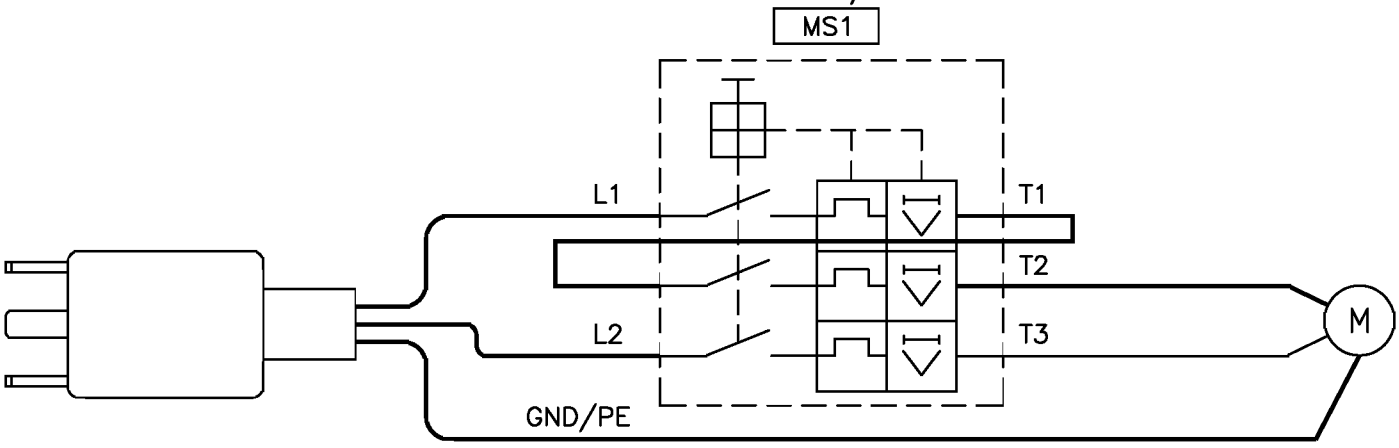
DRAWN: Dennisw	6/25/2002	
CHECKED		TITLE: ELECTRICAL COMPONENT ASSEMBLY
QA		
MFG		
APPROVED		SIZE: D; DWG NO: LDCA100-LD7D 1_3HP; REV
		SCALE; SHEET 1 OF 1

ELECTRICAL SCHEMATIC LEGEND, LD7 AND LD3

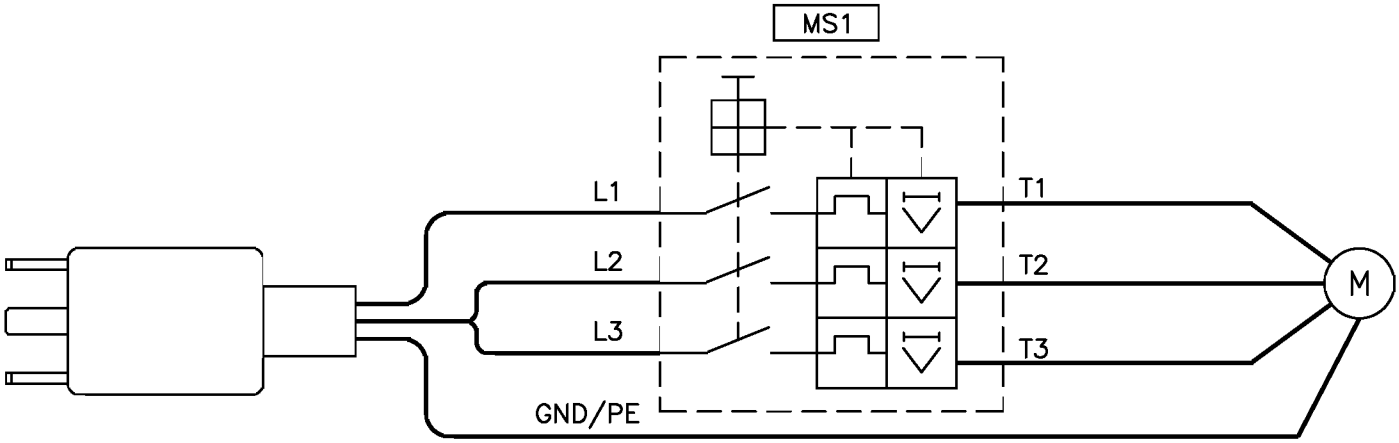
120 VAC 60HZ



SINGLE PHASE 50/60 HZ MODELS



THREE PHASE 50/60 HZ MODELS



CADFILE: ED73

LITTLE DAVID

TAPE CARTRIDGE MANUAL

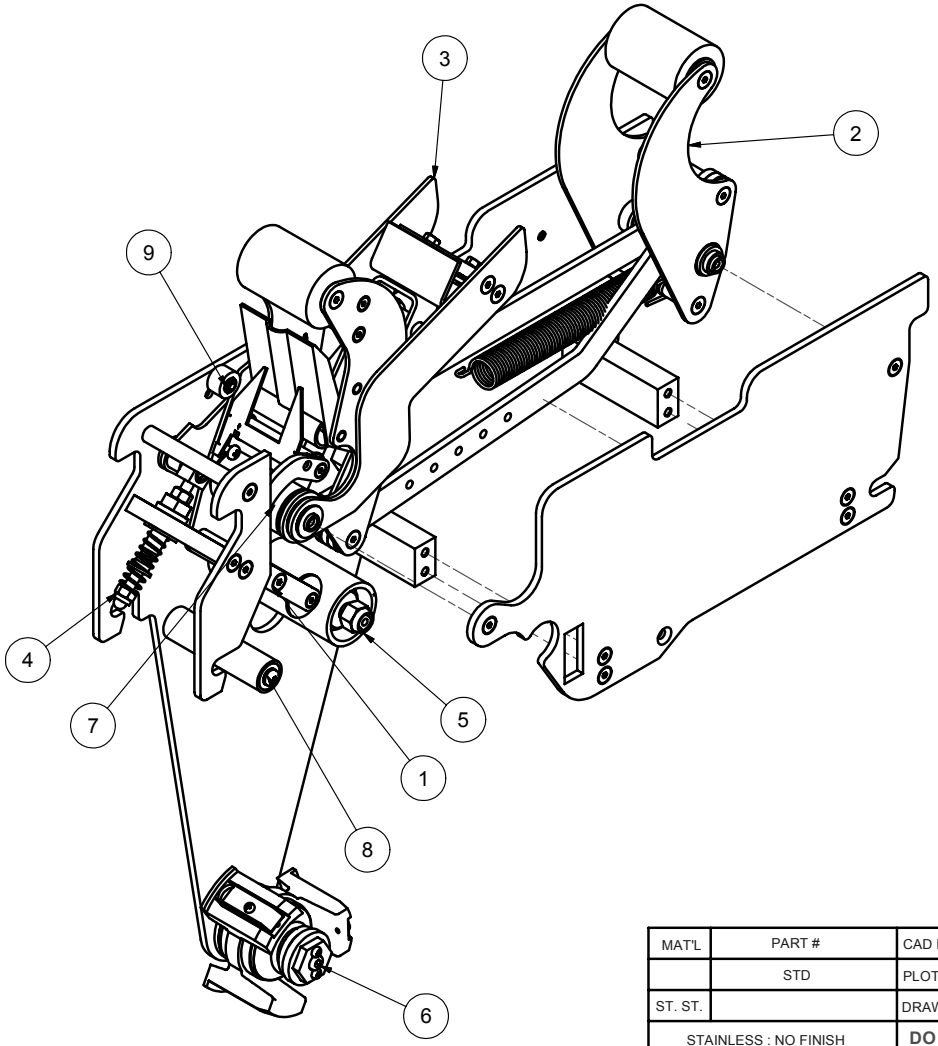
.CAC50

THE LOVESHAW CORPORATION
2206 EASTON TURNPIKE
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

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

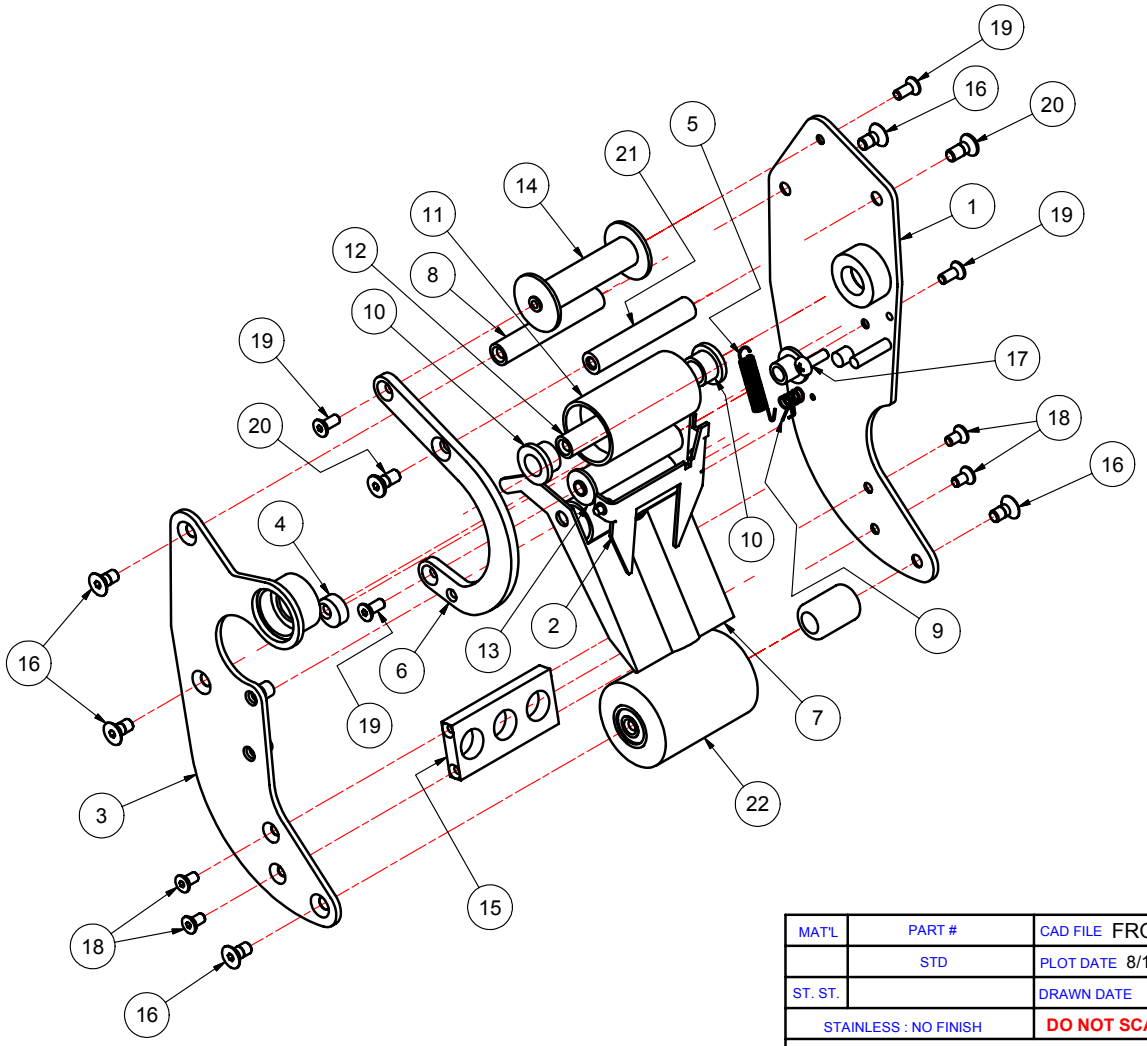
FRACTIONS ± 1/64

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	8/1/2006
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

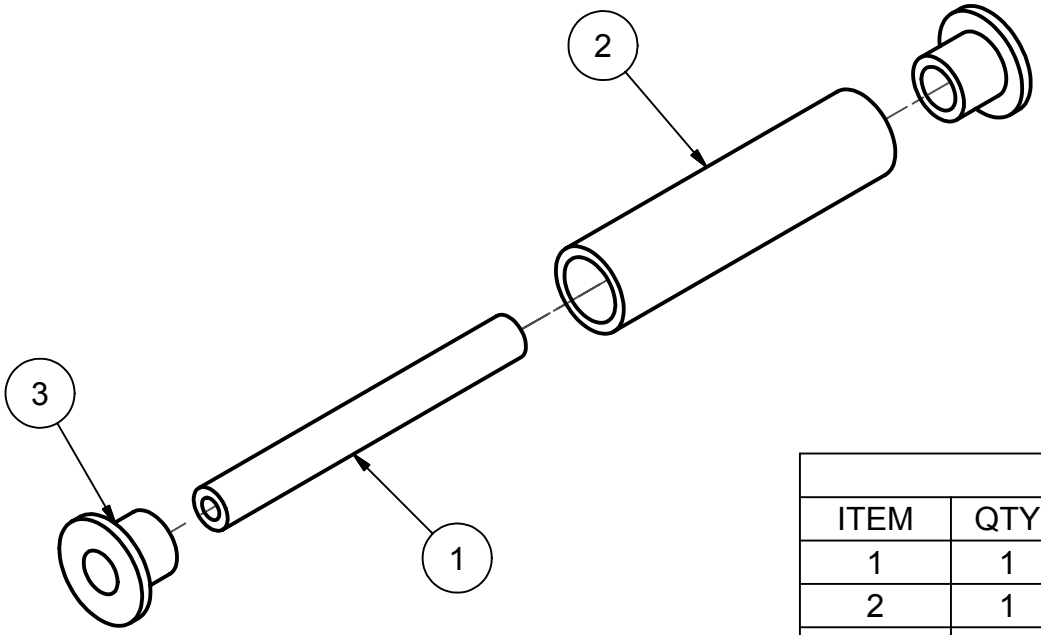
FRACTIONS ± 1/64

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

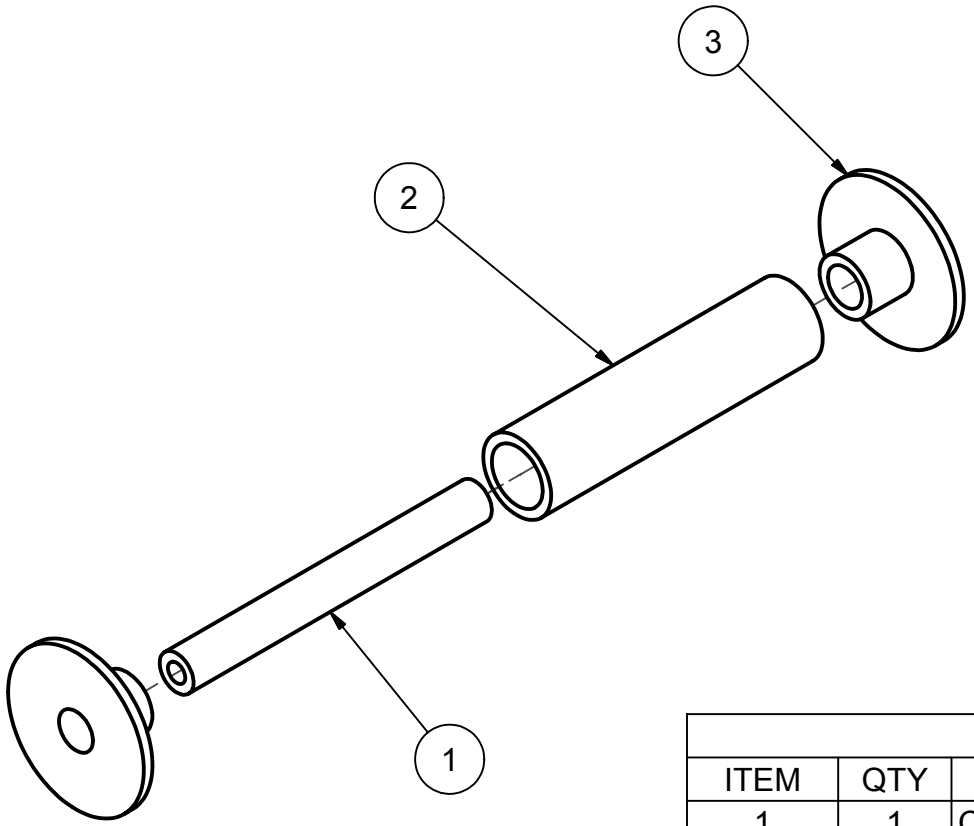
FRACTIONS ± 1/64

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

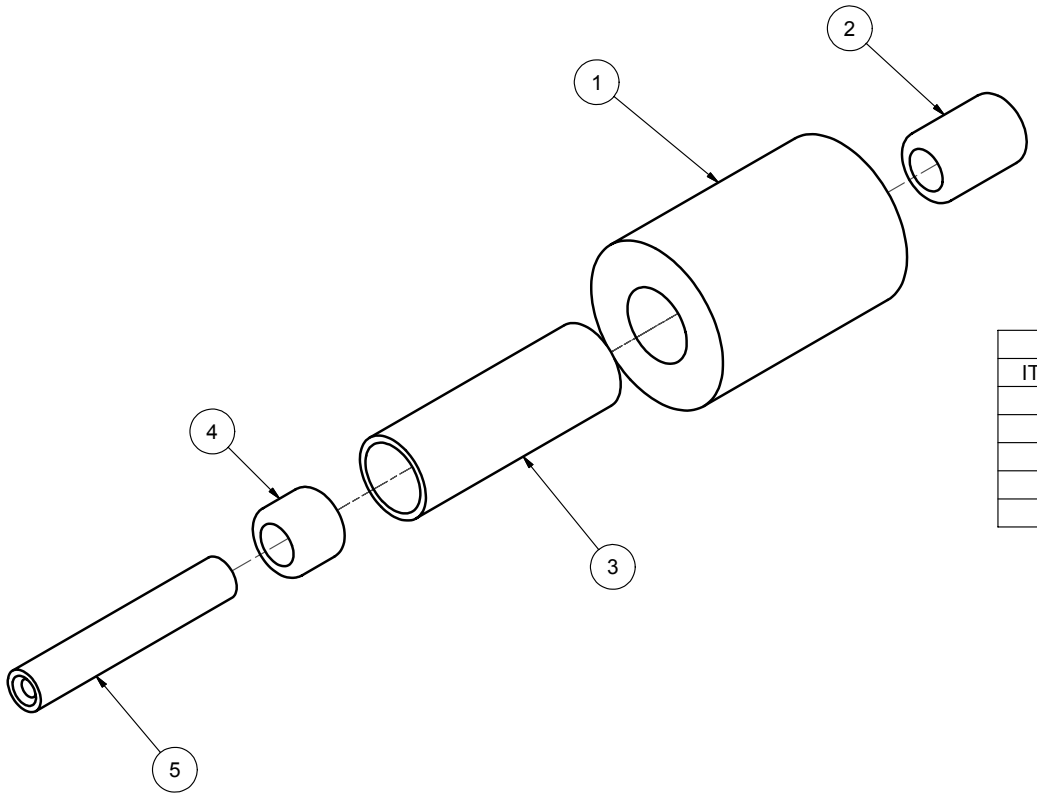
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/2/2005	DW



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.

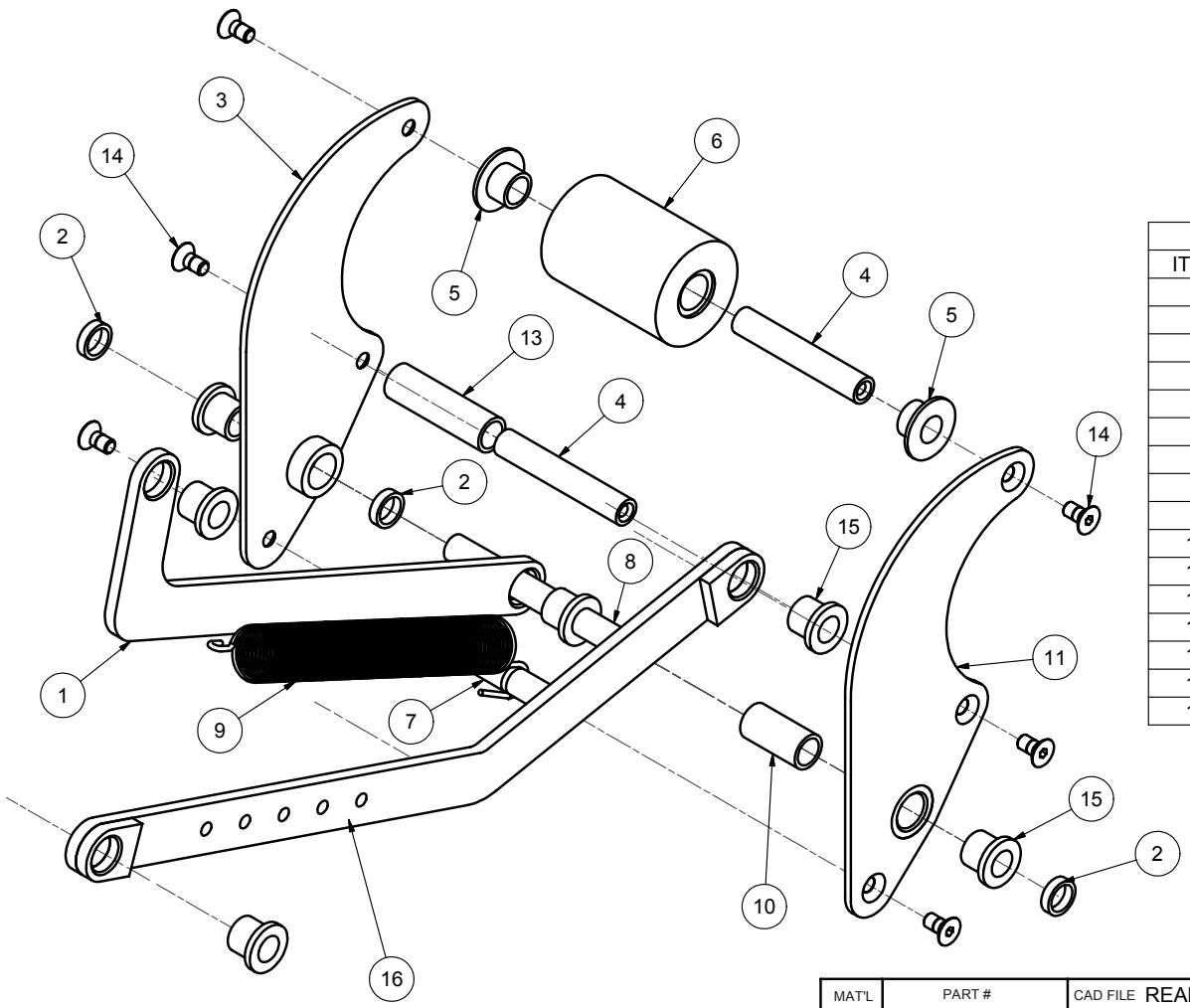
MAT'L	PART #	CAD FILE CRA50.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 5/25/2005	.X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2° .XXX = ±.005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X = ±1.0mm METRIC .XX = ±.3mm .XXX = ±.1mm MACH. FINISH 125
			FRACTIONS ± 1/64

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

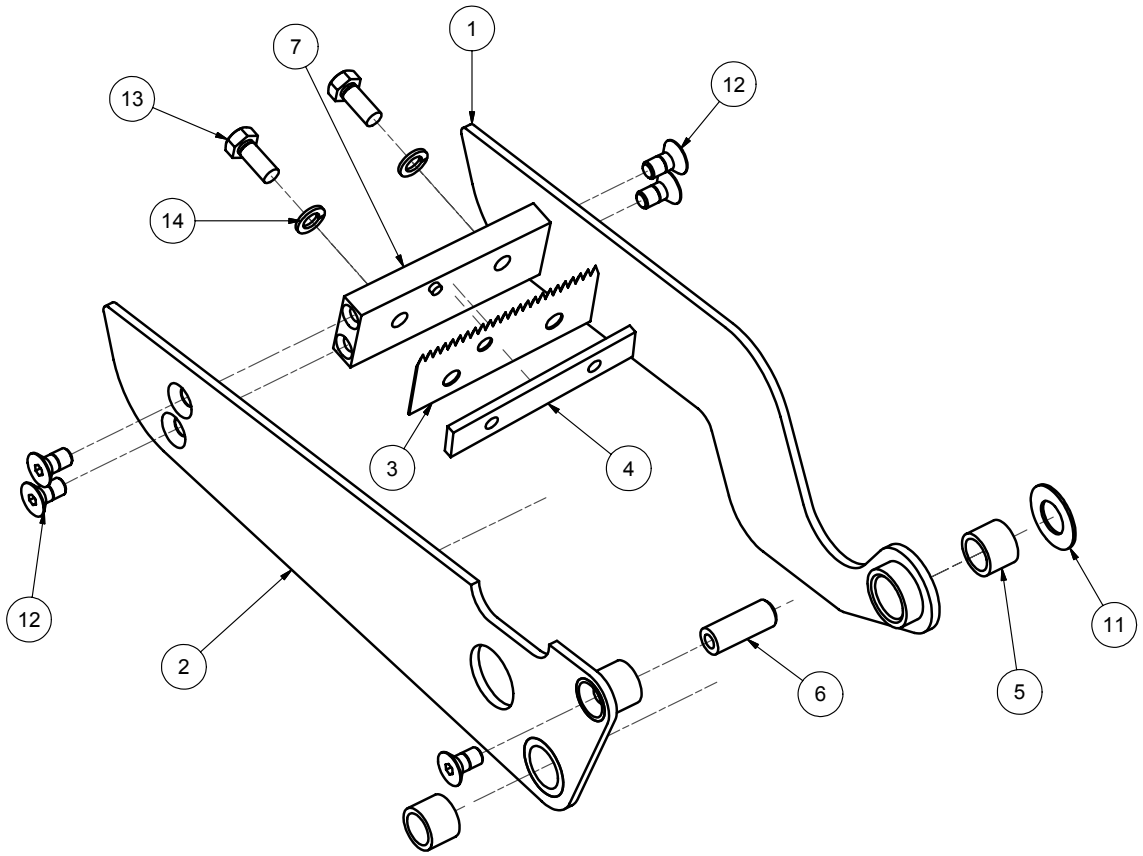
FRACTIONS ± 1/64

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

TITLE: REAR ARM ASSY. CAC50

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

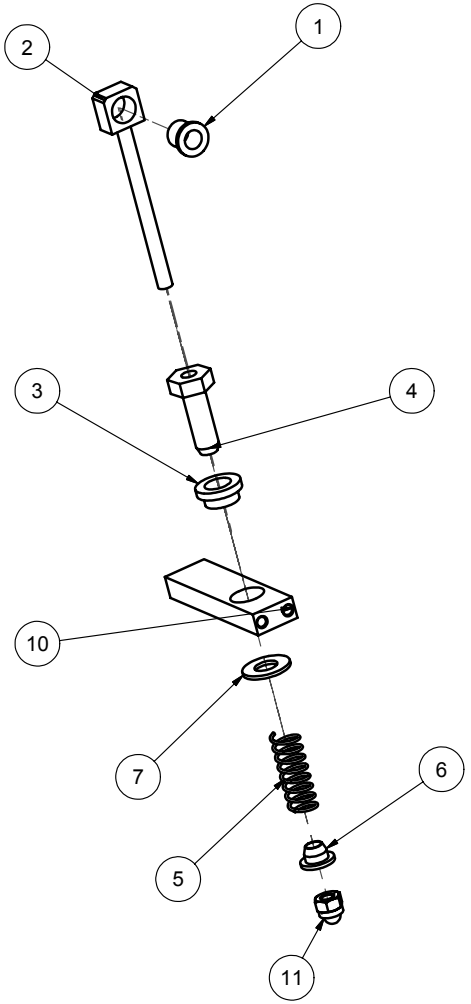
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/3/2005	DW



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

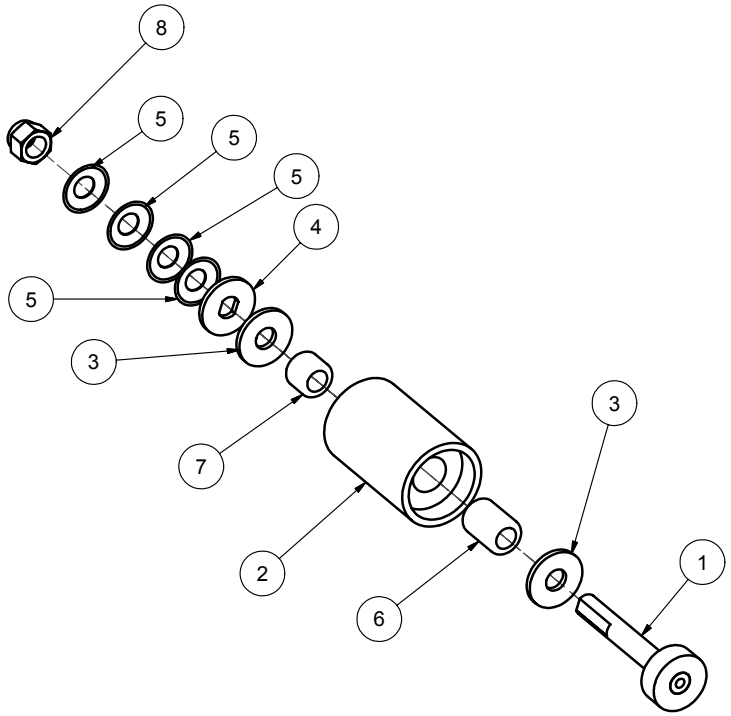
MAT'L	PART #	CAD FILE KNIFE ARM SPRING ASSY.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 6/3/2005	.X = ±.050 INCH .XX = ±.015 ANGLES ± 1/2° .XXX = ±.005
STAINLESS : NO FINISH		DO NOT SCALE PRINT	.X = ±1.0mm METRIC .XX = ±.3mm MACH. FINISH 125 .XXX = ±.1mm
			FRACTIONS ±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

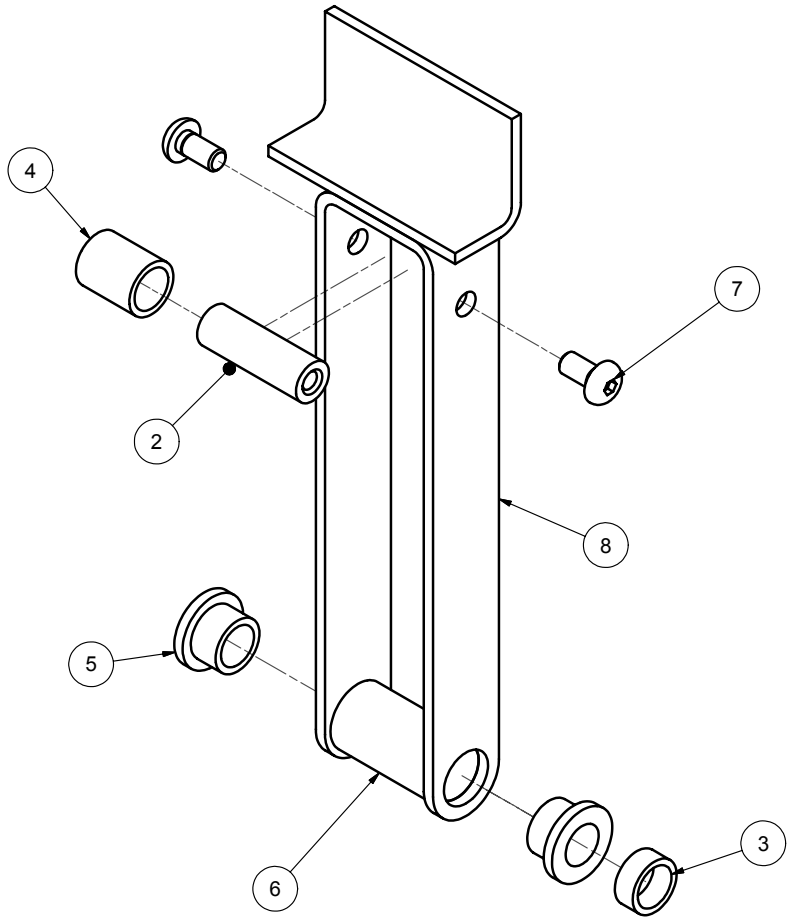
MAT'L	PART #	CAD FILE TRA50.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 6/6/2005	INCH .X = ±.050, .XX = ±.015, .XXX = ±.005 ANGLES ± 1/2°
STAINLESS : NO FINISH		DO NOT SCALE PRINT	METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm MACH. FINISH 125
			FRACTIONS ± 1/64

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

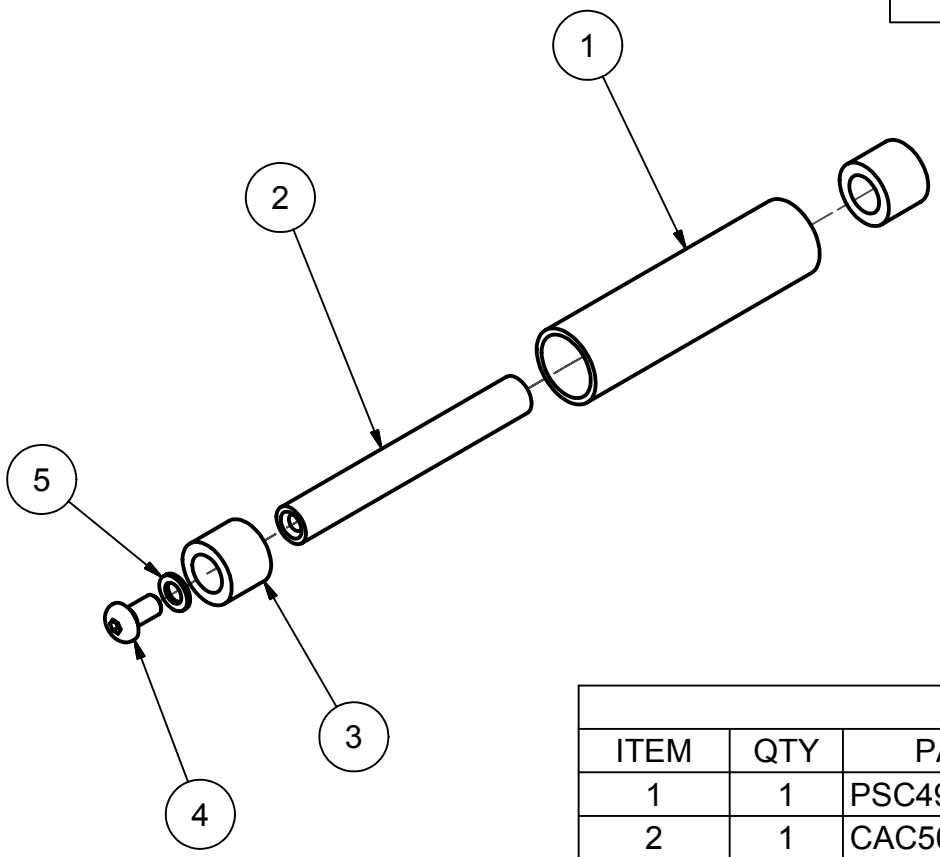
FRACTIONS ± 1/64

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

TITLE
KNIFE GUARD ASSEMBLY

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

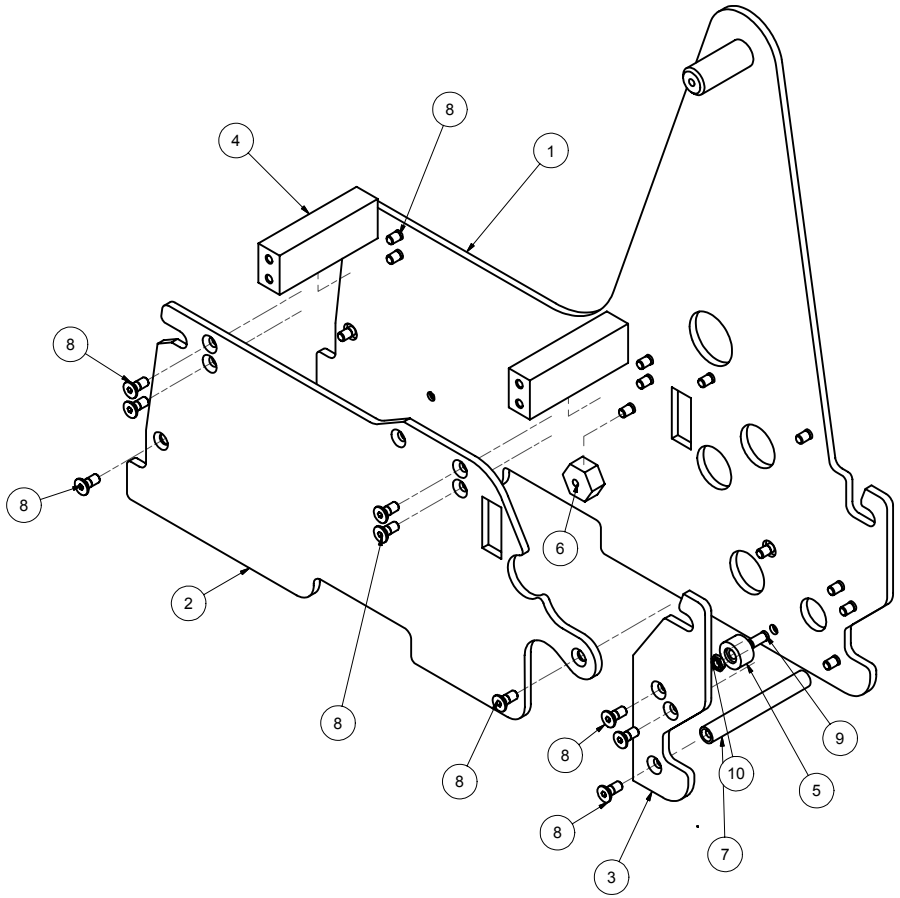
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/6/2005	DW



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

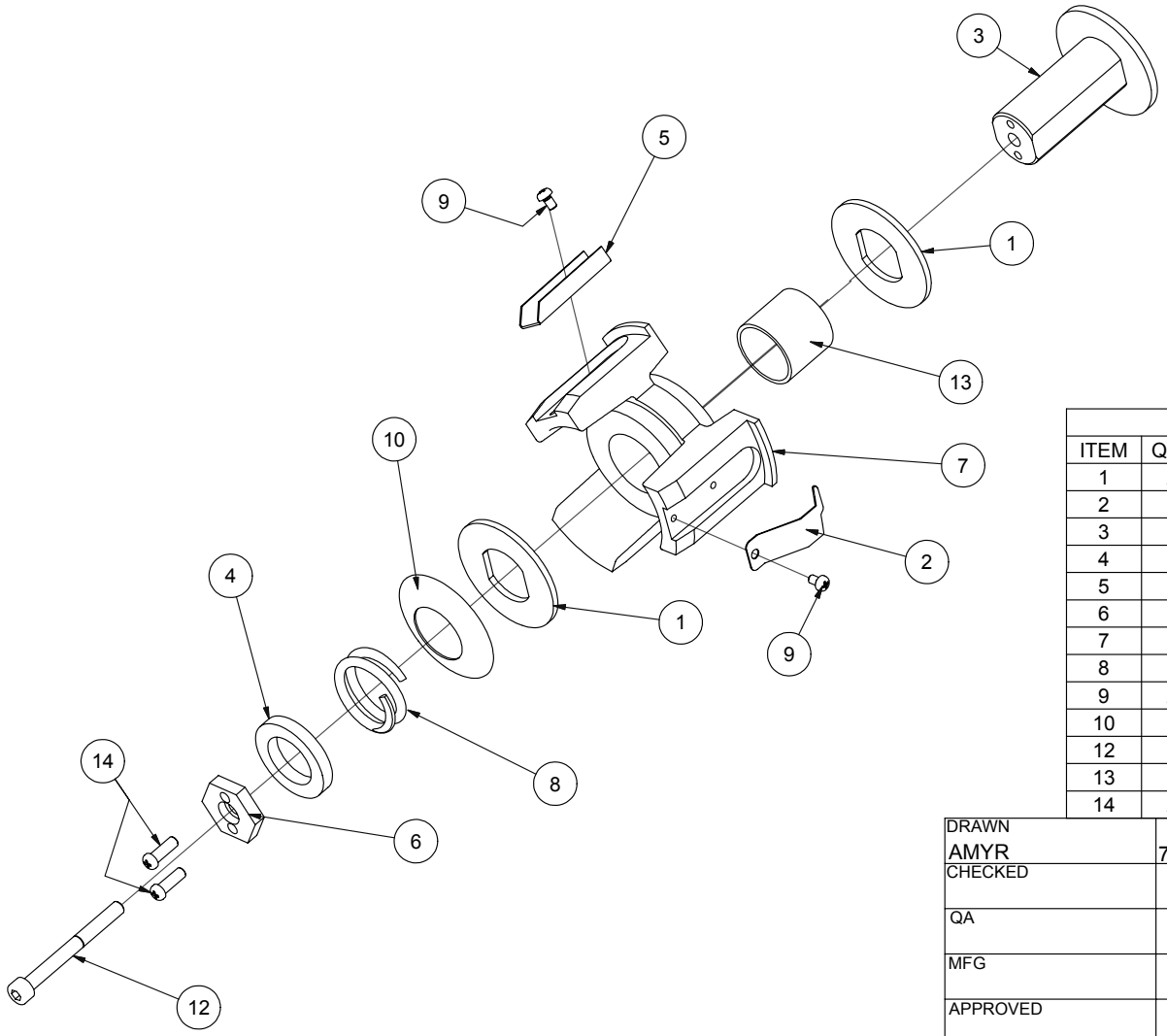
MAT'L	PART #	CAD FILE FRA-CAC50.idw	TOLERANCES UNLESS OTHERWISE NOTED:
	STD	PLOT DATE	
ST. ST.		DRAWN DATE 5/31/2005	INCH .X = ±.050, .XX = ±.015, .XXX = ±.005; ANGLES ± 1/2°
STAINLESS : NO FINISH		DO NOT SCALE PRINT	METRIC .X = ±1.0mm, .XX = ±.3mm, .XXX = ±.1mm; MACH. FINISH 125
			FRACTIONS ± 1/64

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:

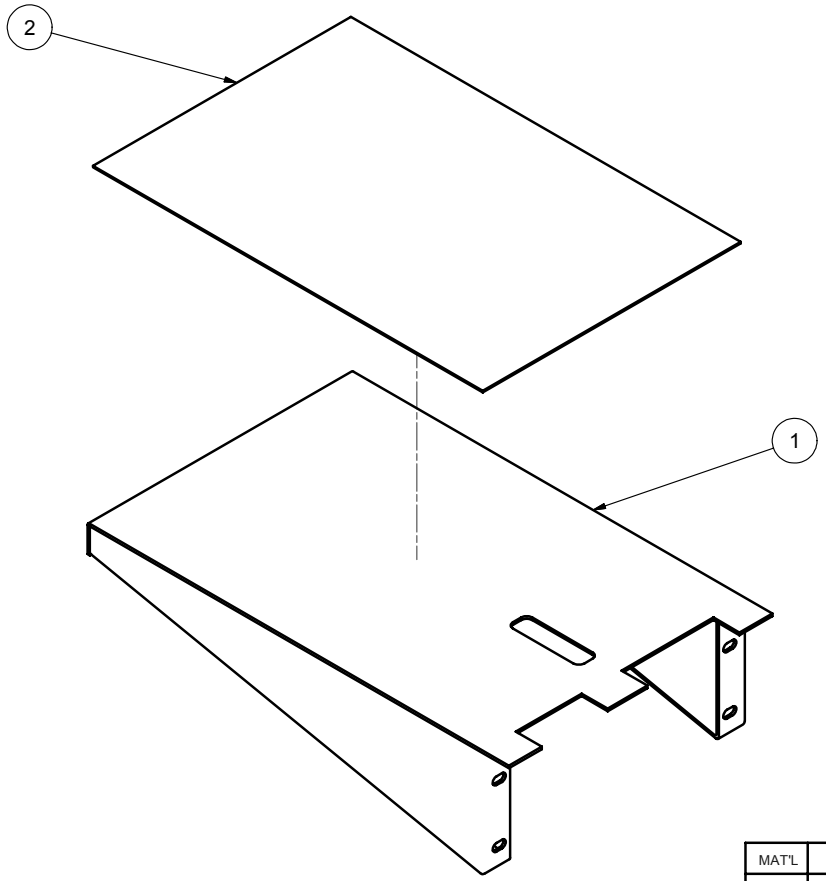
THERE IS A DISC SPRING (PSC33) AND A SET OF BRAKE WASHERS (PSC28-3) USED TO SLOW THE FREE SPINNING OF THE TAPE ROLL CAUSED WHEN THE TAPE IS PULLED THROUGH THE CARTRIDGE. BY ROTATING THE TAPE CORE NUT LP06B-039-3 (3”) OR PSC142-3 (2”) IN A CLOCKWISE DIRECTION THIS WILL INCREASE THE DRAG FROM THE DISC 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.

- - - OPTIONAL - - -

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	7/29/2003	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	OPC401211-6	INFEED TABLE
2	1	OPC301111T-4	INFEED TABLE TOP

MAT'L	PART #	CAD FILE ITA401	
C.R.S.	STD	PLOT DATE 7/29/2003	
ST. ST.	N/A	DRAWN DATE 7/29/2003	
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

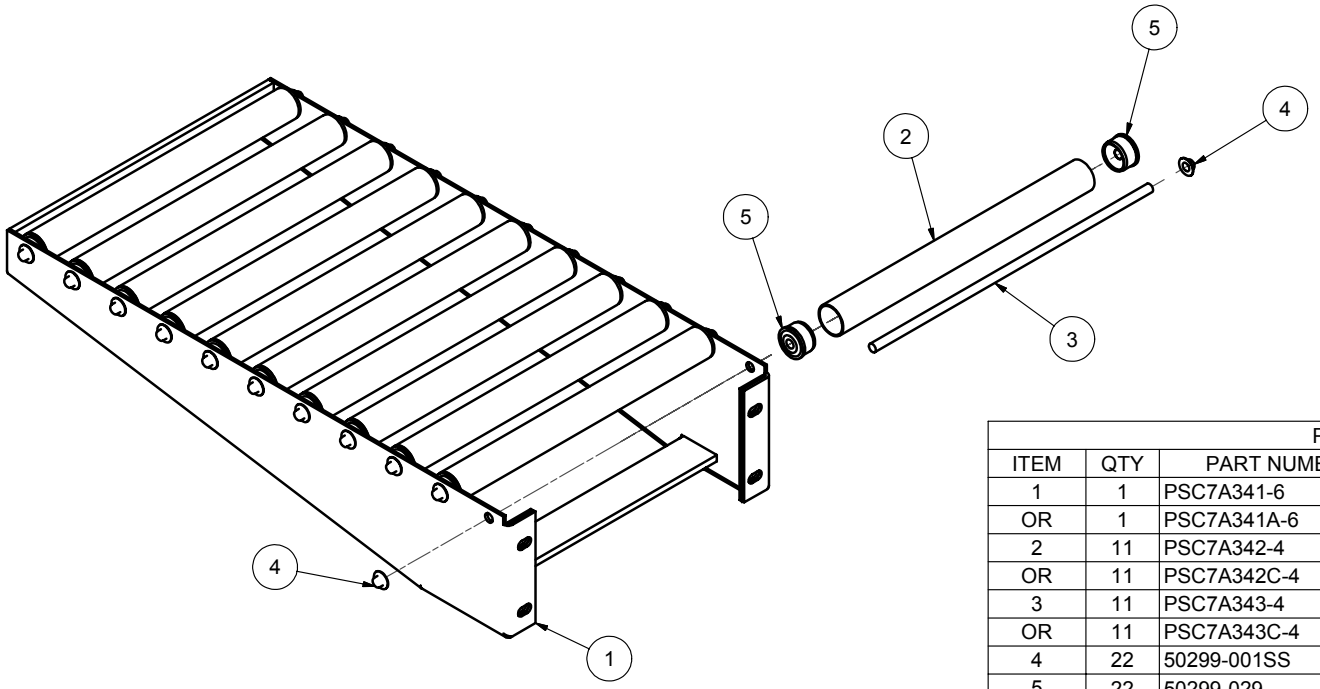
FRACTIONS ± 1/64

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

TITLE
INFEED TABLE ASSEMBLY

DWG NO	.ITA401	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

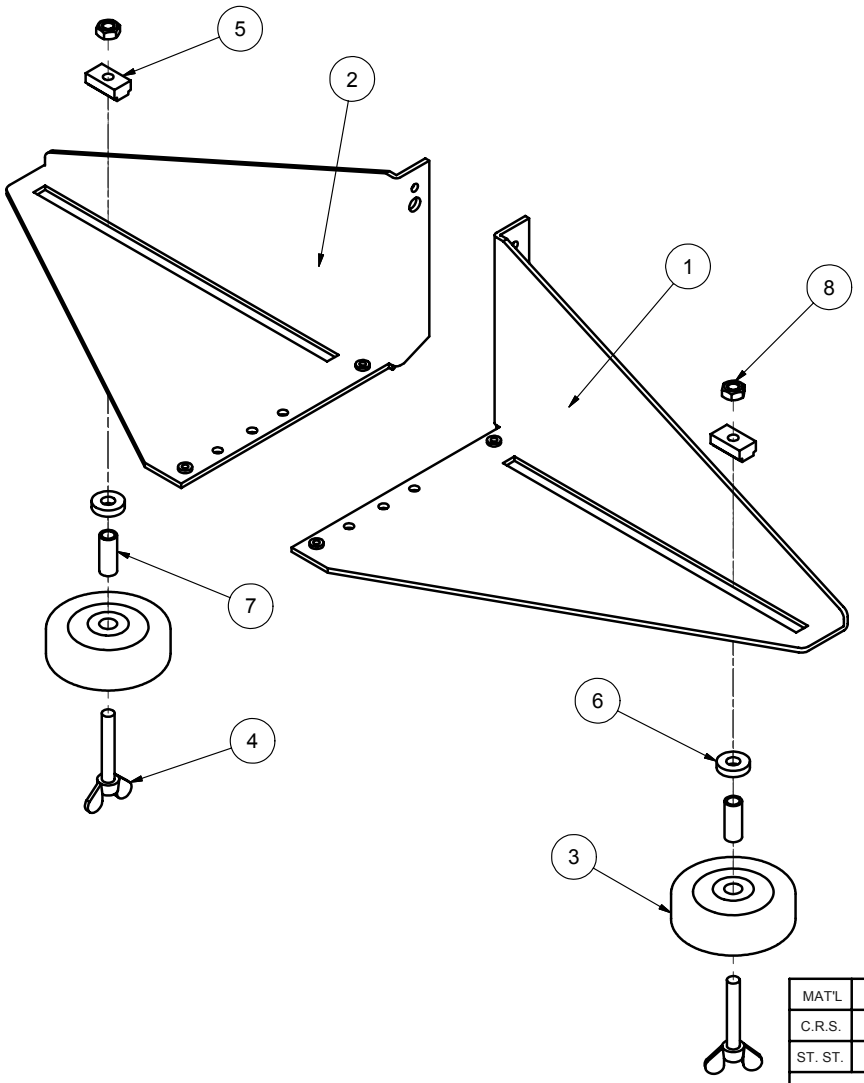
REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	4/18/2005	AJS



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC7A341-6	TABLE PACK (ROLLER)
OR	1	PSC7A341A-6	TABLE PACK (ROLLER) 3"
2	11	PSC7A342-4	ROLLER
OR	11	PSC7A342C-4	ROLLER (3")
3	11	PSC7A343-4	SHAFT, ROLLER
OR	11	PSC7A343C-4	SHAFT, ROLLER (3")
4	22	50299-001SS	PUSH NUT
5	22	50299-029	ROLLER END PLUG

MAT'L	PART #	CAD FILE ITA401-RB.idw	TOLERANCES UNLESS OTHERWISE NOTED:	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.
C.R.S.	STD	PLOT DATE 4/18/2005		
ST. ST.	N/A	DRAWN DATE 4/18/2005	INCH .X = ±.050 .XX = ±.015 .XXX = ±.005 ANGLES ± 1/2°	TITLE ROLLER TABLE LD7 & LD7 (3")
STAINLESS : NO FINISH		DO NOT SCALE PRINT	METRIC .X = ±1.0mm .XX = ±.3mm .XXX = ±.1mm MACH. FINISH 125	DWG NO ITA401-RB / SCALE N/A
			FRACTIONS ± 1/64	MATERIAL NOTED / CHECKED
				DRAWN tonys / APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	10/22/2003	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LD12B-1023-6	SQUEEZER FRAME LEFT
2	1	LD12B-1024-6	SQUEEZER FRAME RIGHT
3	2	LD12B-1027A	SQUEEZER WHEEL
4	2	OPU301102	WING SCREW
5	2	OPU301103-3	SQUEEZER T-NUT
6	2	OPU301104-3SS	SPACER
7	2	OPU501	BUSHING
8	2	M8	HEX NUT

MAT'L	PART #	CAD FILE	TSA16A
C.R.S.	STD	PLOT DATE	8/9/2004
ST. ST.	N/A	DRAWN DATE	10/22/2003
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

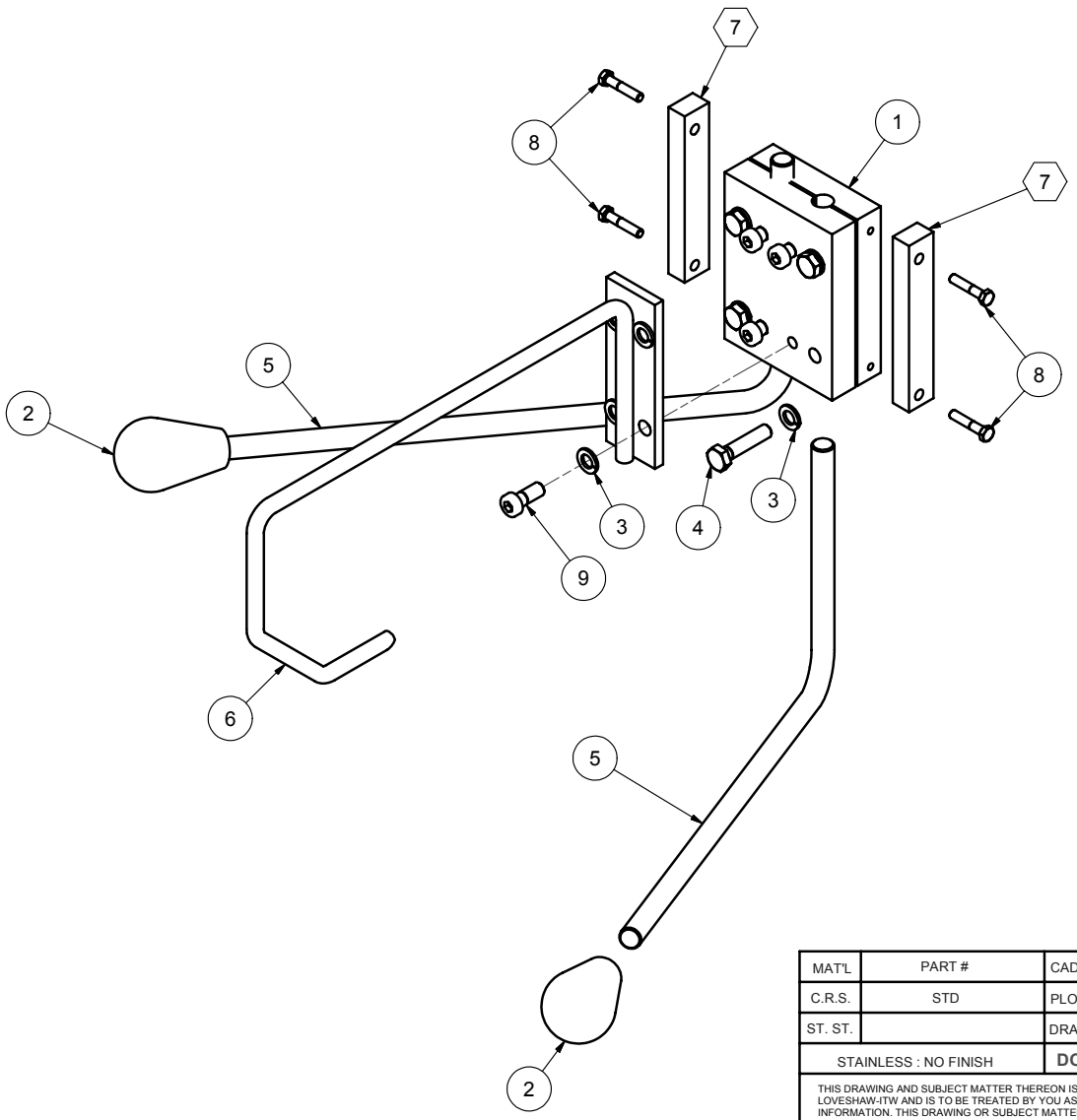
FRACTIONS ± 1/64

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

TITLE
TOP SQUEEZER ASSEMBLY

DWG NO	.TSA16A	SCALE	N/A
MATERIAL	N/A	CHECKED	
DRAWN	AMYR	APPROVED	

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	4/21/2005	AJS
B	M.C.R. #06-001	3/9/2006	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	OPU301302-4	CLAMP FLAP CLOSER
2	2	SPH-1200	KNOB
3	8	FLWMHP	LOCK WASHER M8
4	4	FHHMH035P10	HEX HD M8 X 35
5	2	OPU7A304-5	FLAP CLOSER
6	1	OPU7A303A-3	FLAP FOLDING WELDMENT
7	2	OPU301303-3	SPACER - 3 FLAP FOLDER
8	4	FHHMF025P10	HEX HD M5x25 (3" CARTRIDGE)
OR	4	FHHMF012P10	HEX HD M5x12 (2" CARTRIDGE)
9	4	FSHMH020P10	SOC. HD. CAP SCREW M8 X 20

⬡ INDICATES ITEMS THAT ARE ONLY REQUIRED ON 3" HEADS.

MAT'L	PART #	CAD FILE TFFA100A.idw	
C.R.S.	STD	PLOT DATE	
ST. ST.		DRAWN DATE 4/21/2005	
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

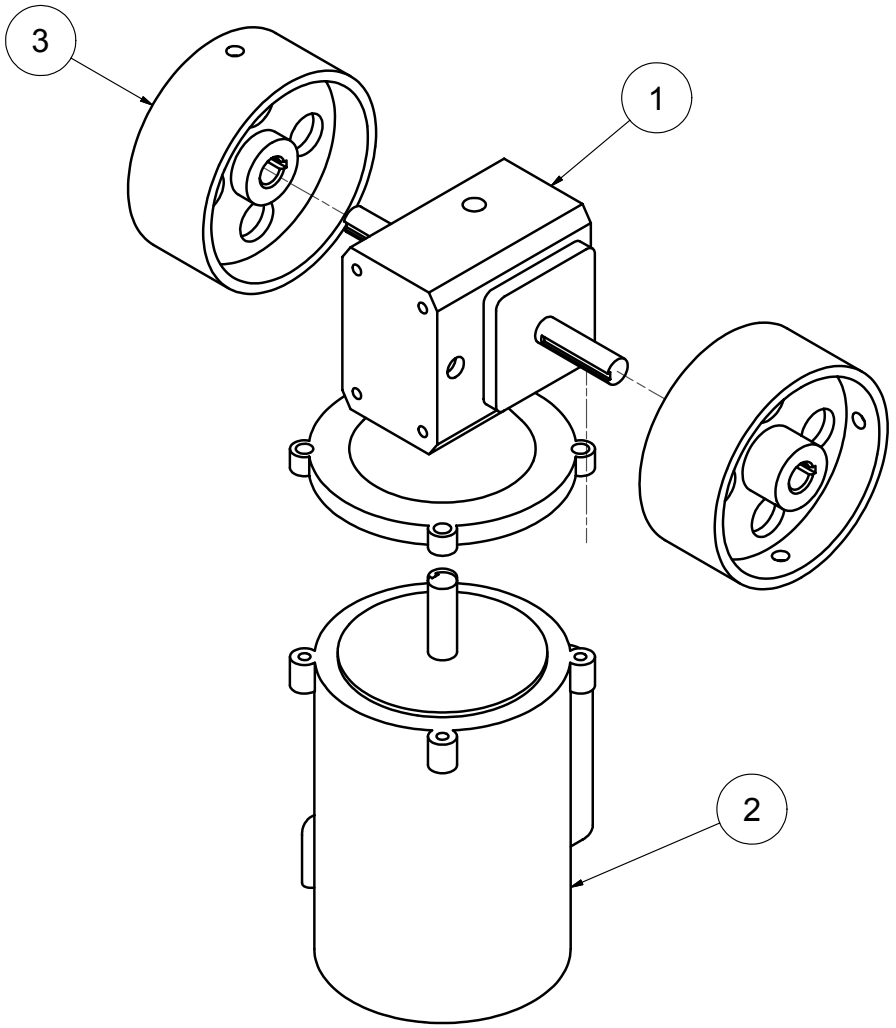
FRACTIONS ± 1/64

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

TITLE: 3 FLAP FOLDER ASSY

DWG NO .TFFA100A /.TFFA100W	SCALE
MATERIAL	CHECKED
DRAWN tonys	APPROVED

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	4/12/2005	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC301238	REDUCER
2	1	PSX4795/3/X/LES	MOTOR
3	2	PSC301217-4	DRIVE ROLLER
N/S	1	PSC614	BELT LAGGING
N/S	1	PSC301255-380-4	MOTOR CABLE
N/S	1	A106-AB-12-X3	MOTOR STARTER
N/S	1	PSC301254-380-4	LINE CABLE
N/S	1	A106-AB-33	HEATER

DRAWN	AMYR	7/23/2004
CHECKED		
QA		
MFG		
APPROVED		

TITLE

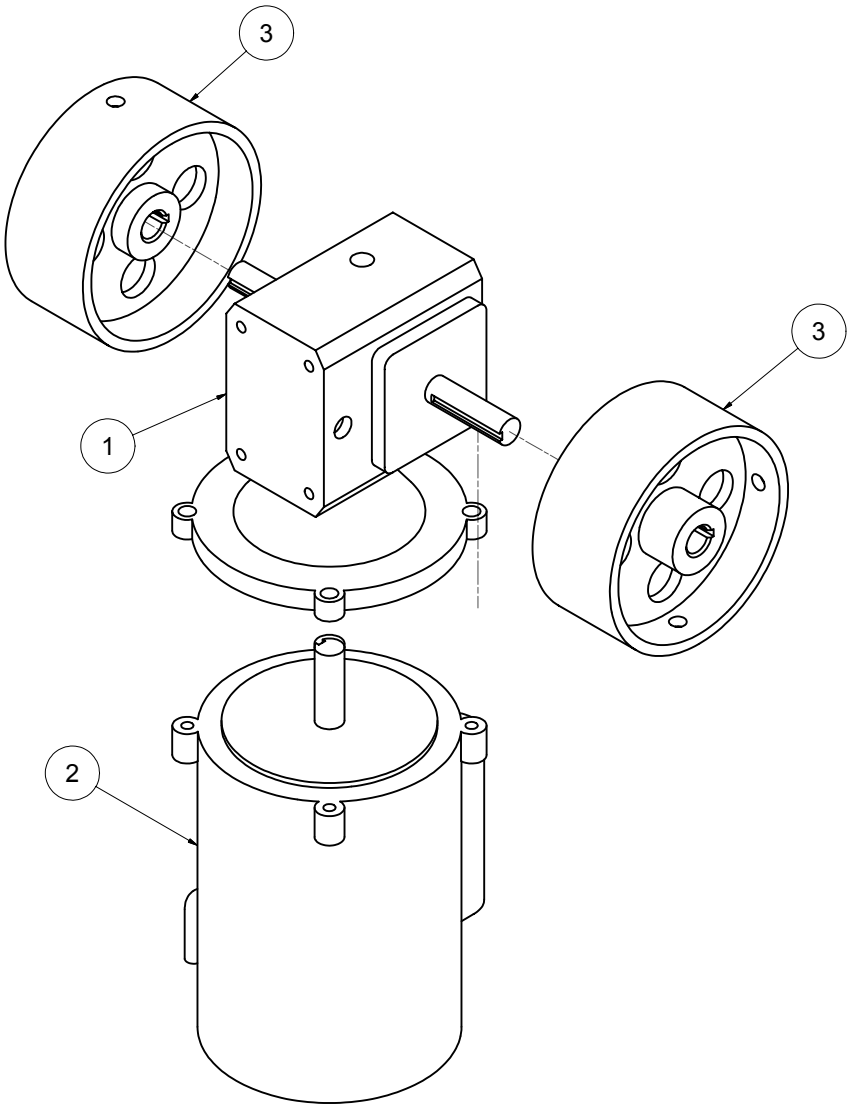
ELECTRICAL COMPONENT ASSEMBLY

SIZE	DWG NO	REV
B	LDCA100X-440/3	

SCALE

SHEET 1 OF 1

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	7/23/2004	DW



Parts List			
ITEM	QT	PART NUMBER	DESCRIPTION
1	1	PSC301238	REDUCER
2	1	PSC634E-BAL	MOTOR
3	2	PSC301217-4	DRIVE ROLLER
N/S	1	A204	CONNECTOR
N/S	1	PSC614	BELT LAGGING
N/S	1	PSC301253-4	MOTOR CABLE
N/S	1	PSC301287/AEG	MOTOR STARTER
N/S	1	PSC505A-115-4	LINE CABLE
N/S	1	PSC611	STRAIN RELIEF
N/S	1	PSC636G-GE	HEATER
N/S	1	PSC627	LUG TERM.

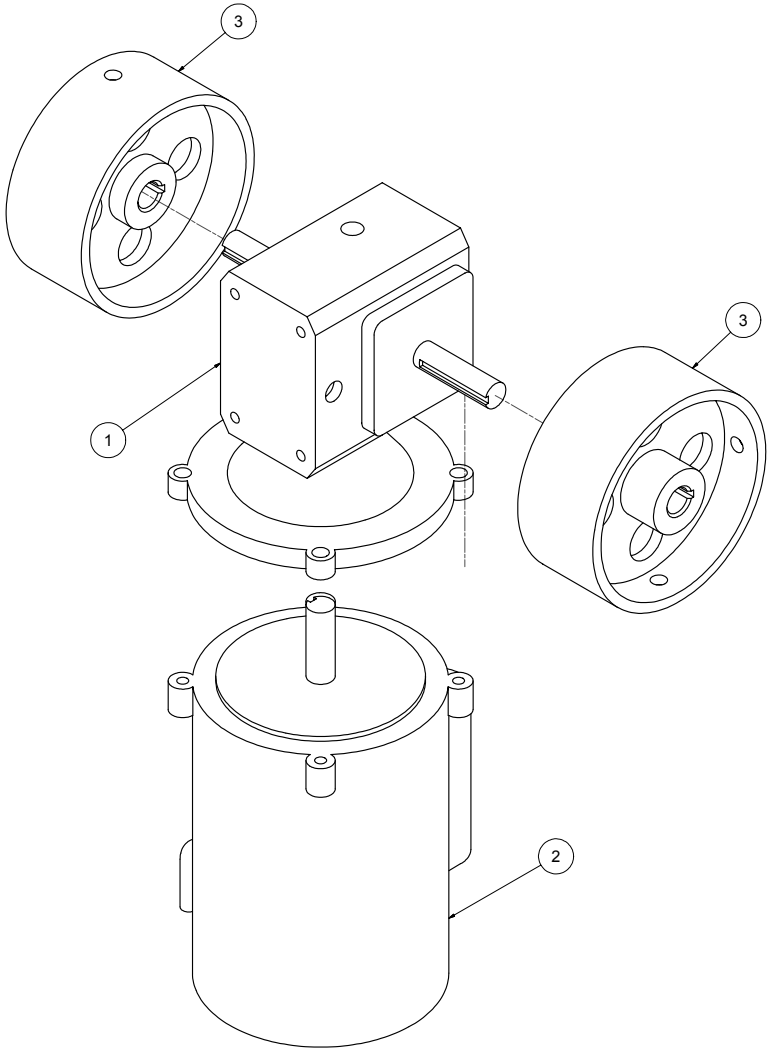
DRAWN	Dennisw	7/23/2004
CHECKED		
QA		
MFG		
APPROVED		

TITLE: ELECTRICAL COMPONENT ASSEMBLY

SIZE	DWG NO	REV
C	.LDCA100-240V	

SCALE | SHEET 1 OF 1

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/16/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC301238S	REDUCER
2	1	LD16B-2033-WD	MOTOR
3	2	PSC301217-4	DRIVE ROLLER
N/S	1	PSC505A-120-4	MOTOR CABLE
N/S	1	PSC636-AB-1	MOTOR STARTER
N/S	1	PSC505A-115-4	LINE CABLE
N/S	3 ft.	PSC614	BELT LAGGING
N/S	1	AH199B	CONNECTOR
N/S	1	PSC636-AB-D	HEATER ELEMENT
N/S	2	AH132A	FITTING
N/S	3	AH108	SEAL RING

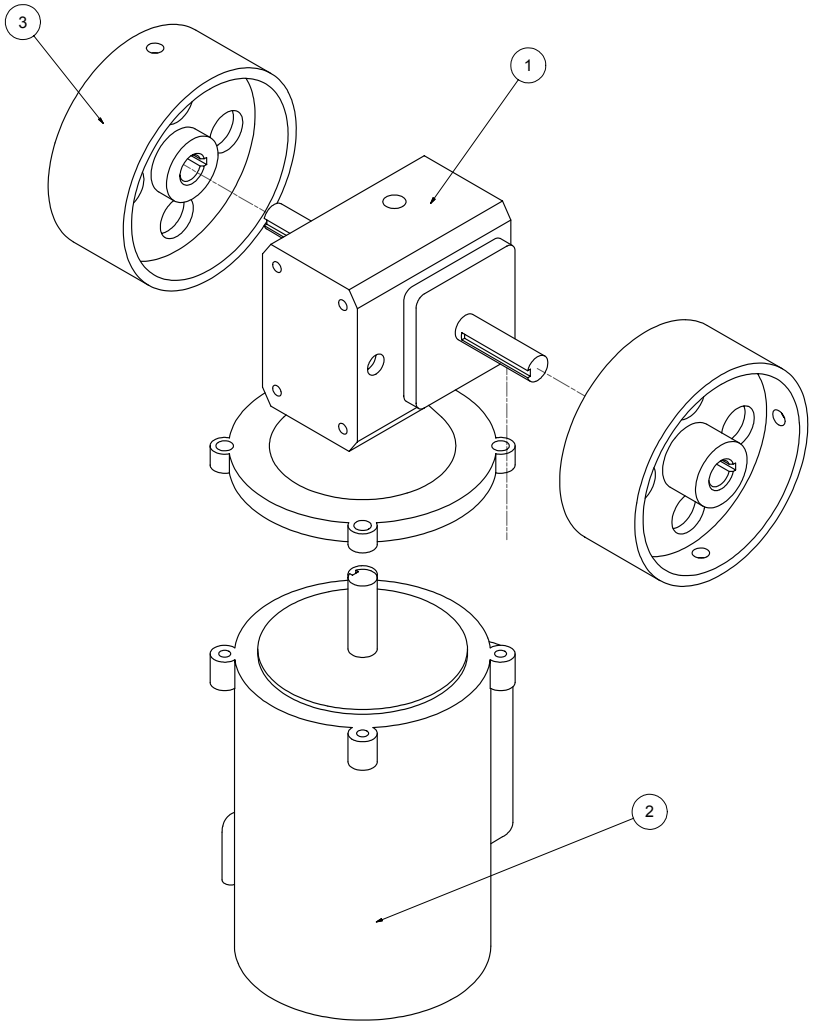
DRAWN	AMYR	5/26/2004
CHECKED		
QA		
MFG		
APPROVED		

TITLE: ELECTRICAL COMPONENT ASSEMBLY

SIZE: D | DWG NO: .LDCA100N4-115 | REV:

SCALE: | SHEET 1 OF 1

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	9/18/2003	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC301238	REDUCER
2	1	PSC634AT	MOTOR T.E.F.C.
3	2	PSC301217-4	DRIVE ROLLER
N/S	1	PSC301241-4	MOTOR CABLE
N/S	1	LD12B-2052-AEG	MOTOR STARTER
N/S	1	PSC301240-4	LINE CABLE
N/S	1	PSC301283/AEG	SURFACE MOUNT ENCLOSURE
N/S	1	AH199B	CONNECTOR
N/S	1	PSC611	STRAIN RELIEF
N/S	1	PSC612	STRAIN RELIEF
N/S	1	PSC614	BELT LAGGING
N/S	5	PSC617	LUG SPADE
N/S	2	PSC627	LUG TERM.
N/S	1	PSC645	FORK TERM.

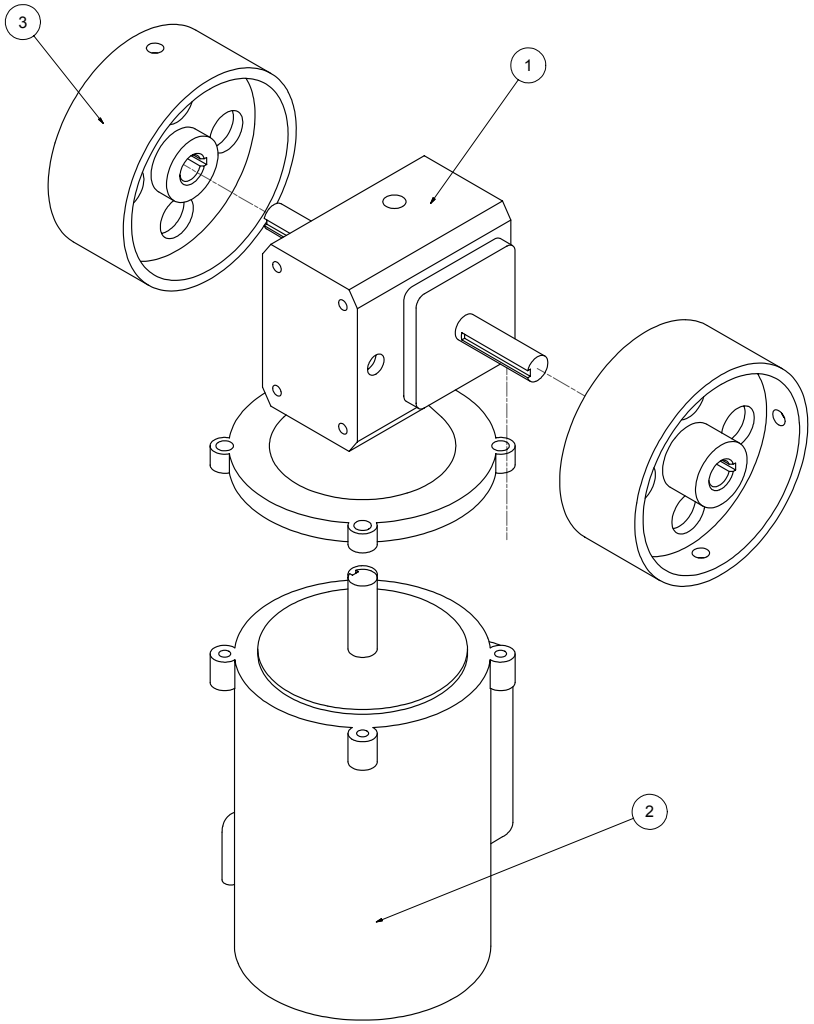
DRAWN	AMYR	9/18/2003
CHECKED		
QA		
MFG		
APPROVED		

TITLE
ELECTRICAL COMPONENT ASSEMBLY ST. STEEL

SIZE D | DWG NO LDCA100SS-115V | REV

SCALE | SHEET 1 OF 1

REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	5/16/2004	AMYR



Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC301237	REDUCER
2	1	LD16B-2033-WD	MOTOR
3	2	PSC301217-4	DRIVE ROLLER
N/S	1	PSC505A-120-4	MOTOR CABLE
N/S	1	PSC636-AB-1	MOTOR STARTER
N/S	1	PSC505A-115-4	LINE CABLE
N/S	3 ft.	PSC614	BELT LAGGING
N/S	1	AH199B	CONNECTOR
N/S	1	PSC636-AB-D	HEATER ELEMENT
N/S	2	AH132A	FITTING
N/S	3	AH108	SEAL RING

DRAWN	AMYR	5/26/2004
CHECKED		
QA		
MFG		
APPROVED		

TITLE: ELECTRICAL COMPONENT ASSEMBLY 60FT/MIN

SIZE: D | DWG NO: LDC100N4-11560 | REV:

SCALE: | SHEET 1 OF 1