

LITTLE DAVID

TAPE CARTRIDGE MANUAL



.CAC50

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ANDOVER, HAMPSHIRE SP103SL
ENGLAND
44-264-3575-11

Part and Instruction Manual

Loveshaw Pressure Sensitive Tape Cartridge

CAC50 – 2” wide tape

CAC51 – 3” wide tape

Theory of Operation:

Pressure sensitive tape is applied to the corrugated box as it passes by the cartridge. The box will contact the front arm roller which has pressure sensitive tape adhesive side facing outward towards the oncoming box. The front leading side of the box will contact the front roller arm and the tape will adhere to the box. As the box continues to move forward the front roller arm and knife arm will be rotated into the frame of the cartridge. The amount of force exerted on the box as tape is being applied is adjustable by changing the position of the main spring. The front arm initial application force can be set to accommodate the strength of the box as well as the sturdiness of the contents in the box.

As the front arm application roller transitions from the leading panel of the box to the top major flaps, the knife arm contacts the major flaps. The knife guard is linked to the front roller arm and retracts to clear the knife blade. As the knife arm rotates into the cartridge the knife activation spring compresses, generating cut force.

As the box proceeds pass the cartridge the front arm roller will no longer contact the major flaps of the box, but the rear wipe roller will still contact the major flaps. Eventually as the box travels the knife arm will completely stop contacting the major flaps of the box. This will allow the knife arm to travel back towards its home position allowing the knife blade to puncture and cut through the tape. As the box continues move the rear wipe arm roller will no longer contact the major flaps of the box. This will allow the wipe arm roller to spring out of the cartridge and contact the rear tab length of tape and press against the trailing panel of the box.

The box travelling pass the cartridge is the vehicle which pulls the tape through the cartridge. The cartridge is design to run most pressure sensitive tapes with no required adjustments. However in some cases it may be necessary to adjust tape tensions. The cartridge will operate at speeds up to 90 feet/minute.

Important Safety Notices:

Before installing operating or servicing the tape cartridges read carefully and understand the following precautions:

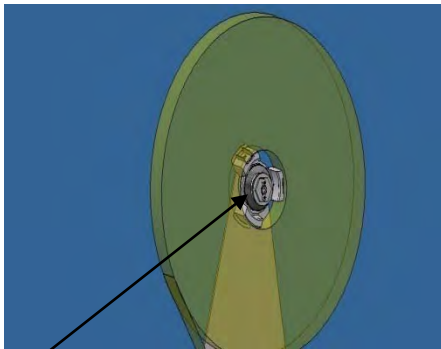
- **Never service the tape cartridges when installed in an operating machine.**
- **Use lock out / tag out protocols before installing or removing cartridges from machinery.**
- **Do not bypass or remove safety guard on knife blade.**
- **Observe caution when near tape cartridge knife. The knife blade is protected by a locking cover which is held closed by the link bar.**
- **Never make any adjustments to the tape cartridges when installed in an operating machine.**

Tape Threading:

The first step is to place the tape roll, on the cartridge tape core. Make sure that the tape roll is fully bottomed against the face of the core. The first step is to place the tape roll, on the cartridge tape core. Make sure that the tape roll is fully bottomed against the face of the core. Spring clips on the side of the tape core makes up for inner diameter core fluctuations of the tape roll.

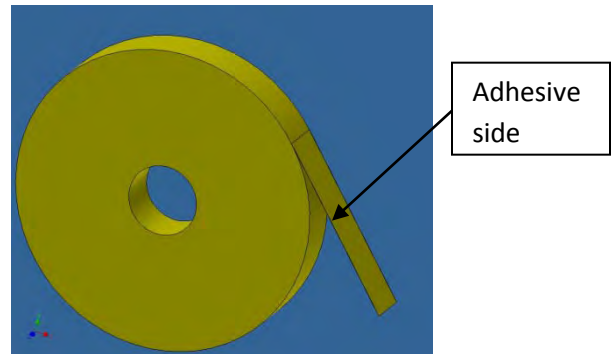
Tape roll must be placed on tape core with adhesive side of tape facing to the right. Refer to figure 2 and 3 for proper orientation.

Figure 1



Tape
core

Figure 2



Adhesive
side

Continue threading the tape behind the black knurled tension roller. The adhesive side of the tape contacts the knurled roller. The tape is then threaded over the aluminum idler roller with the non adhesive side of the tape contacting it. The tape is then fed through the horse shoe bracket roller section of the cartridge. The tape is threaded behind the two small diameter black knurled rollers (upper and lower) and in front of the nylon idler roller. The adhesive side

of the tape contacts both small knurled rollers. The tape is then threaded between the finger plate and the tape guide fingers. This completes the threading Refer to figure 3 and 4.

Figure 3

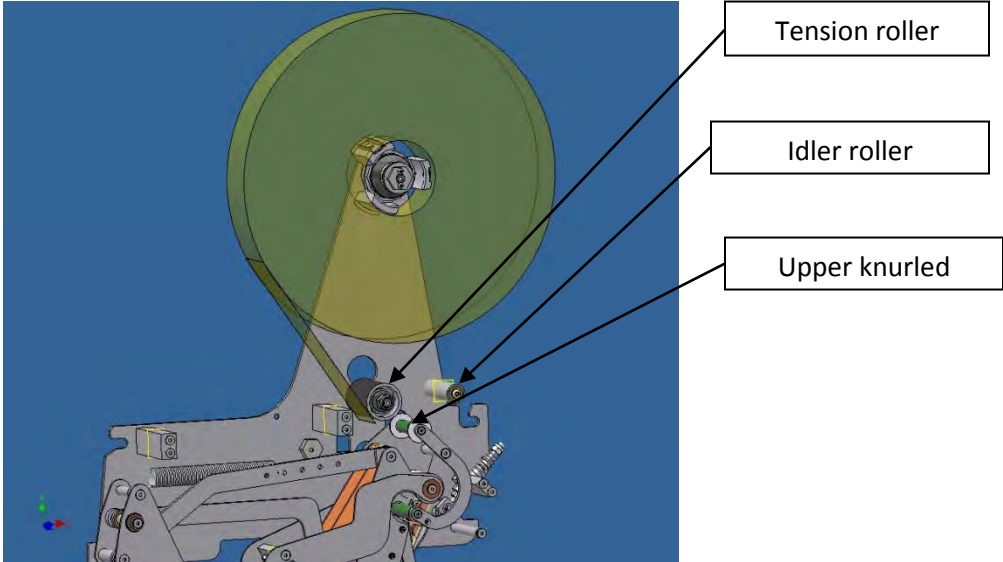
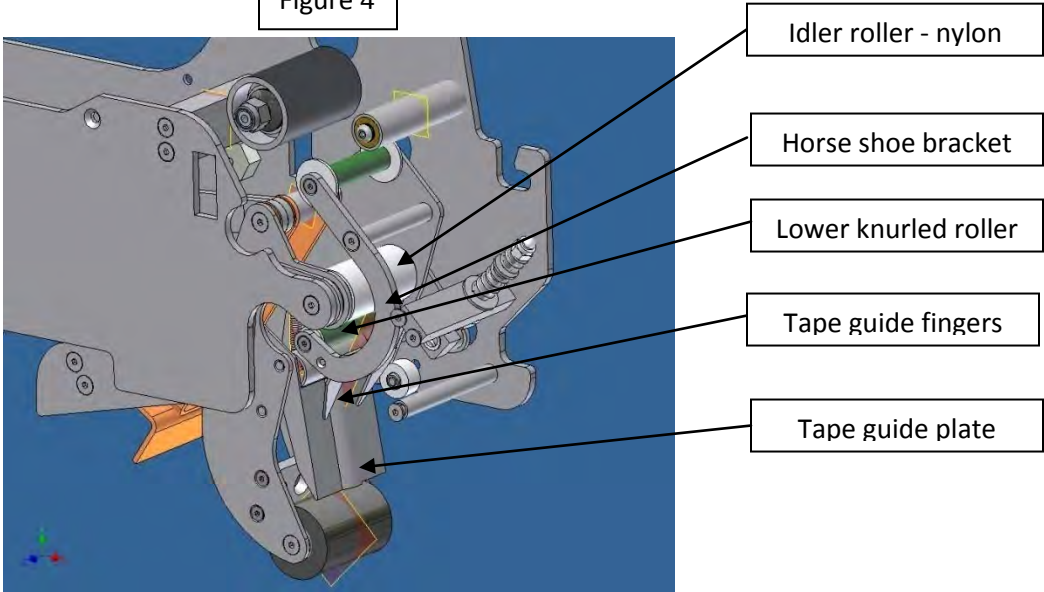


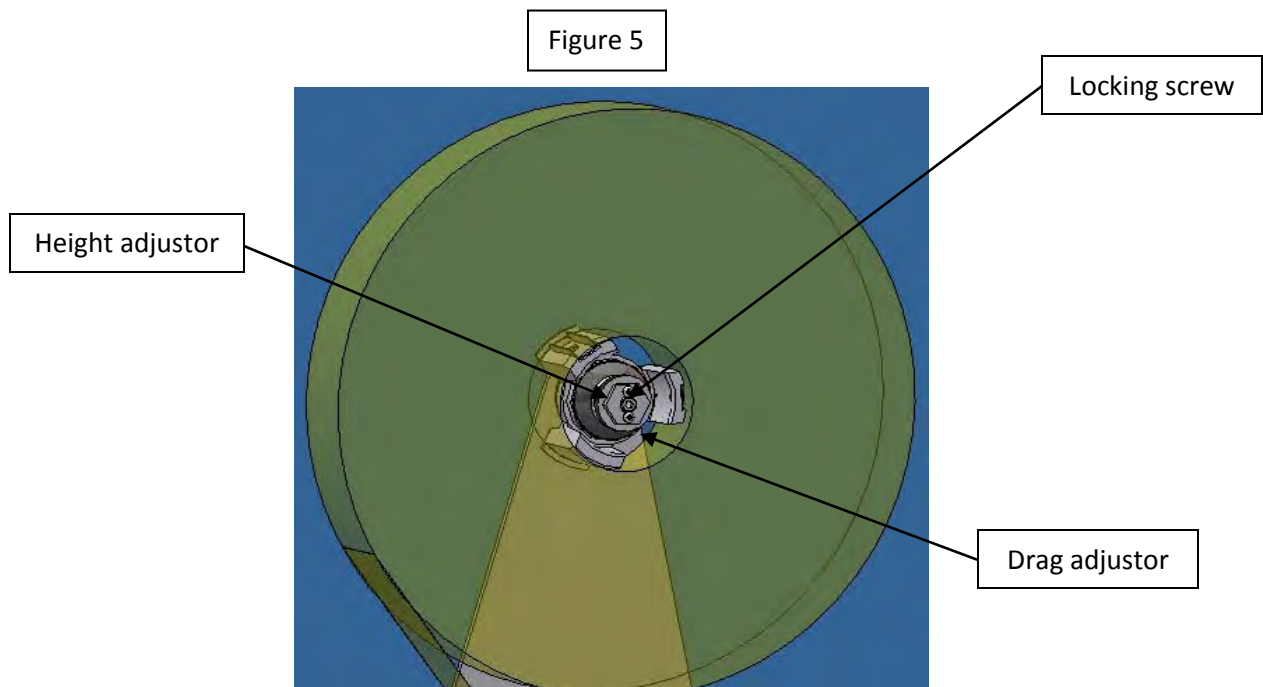
Figure 4



Adjustments:

- **Aligning tape :**

Aligning tape side to side within the cartridge frame is done by changing the position of the tape core. This is done by first loosening the tape core locking screw with a 3mm hex key. Turn the tape core locking screw counter clockwise allowing for the desired amount of adjustment to be made. Now turn the tape core height adjusting nut until the desired result is obtained. By turning the tape core height adjusting nut clockwise the tape core height position will decrease moving the tape closer to the mill stand side of the cartridge. By turning the tape core height adjusting nut counter clockwise the tape core height position will increase. This will make the tape track further away from the mill stand. After each adjustment always tighten the tape core locking screw. Failure to do so will allow the tape core position to change as tape is being pulled off the tape roll. Refer to figure 5

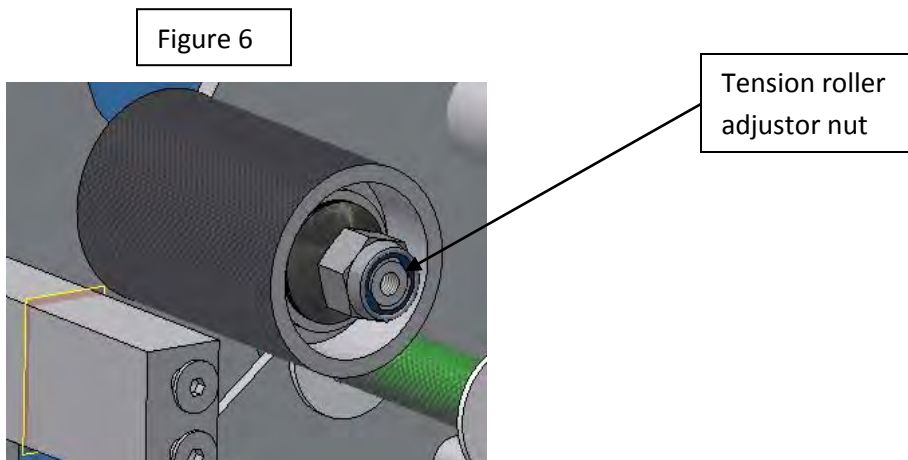


- **Setting tape core drag:**

The tape core drag setting is factory set to not allow a full roll of tape to free wheel as tape is being pulled off it. Different types of tapes adhesives require different pull off force. It is crucial for proper operation that the tape roll is not allowed to free wheel or roll up on its self. To increase tape drag turn the knurled adjustor clockwise and to decrease turn it counter clockwise. Refer to figure 5.

- **Setting the knurled tension roller:**

The knurled tension roller is factory set to its optimal setting for a thin milled tape. Not enough tension results in poor tape cutting; adversely too much tension results in tape breakage or the tape snapping back when the tape is cut. Rotating the tension roller adjustor nut clockwise increases tension and rotating it counter clockwise decreases tension. Refer to figure 6.

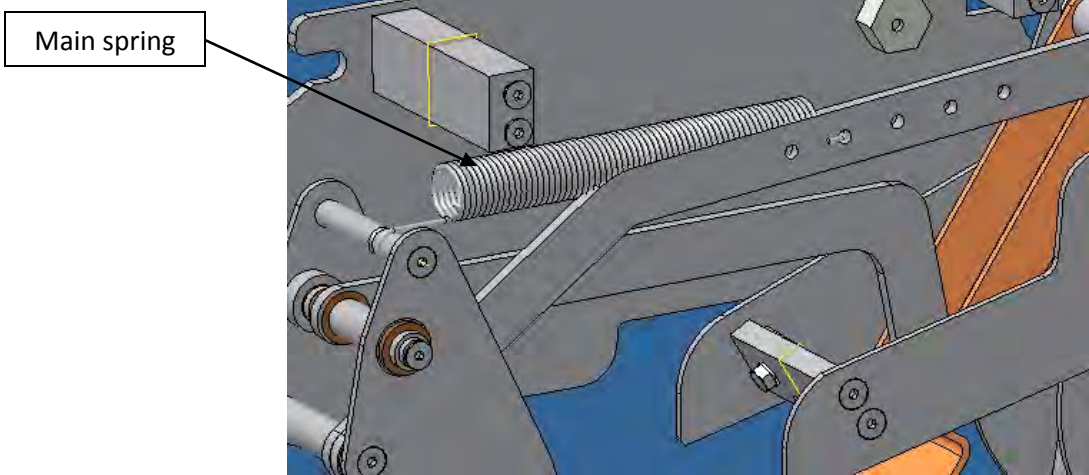


- **Setting main spring tension:**

Setting the main spring tension is done by moving the end of the spring to a different preset position. The main spring tension is factory set to a mid position. The spring is set from lightest to stoutest dependant on the

strength of the corrugated box and the fill of the contents. Void filled, weak corrugated boxes would be set to the lightest setting while strong corrugated box with overfill would process better with the main spring set stronger. The main spring only effects the application and wipe rollers. Refer to figure 7.

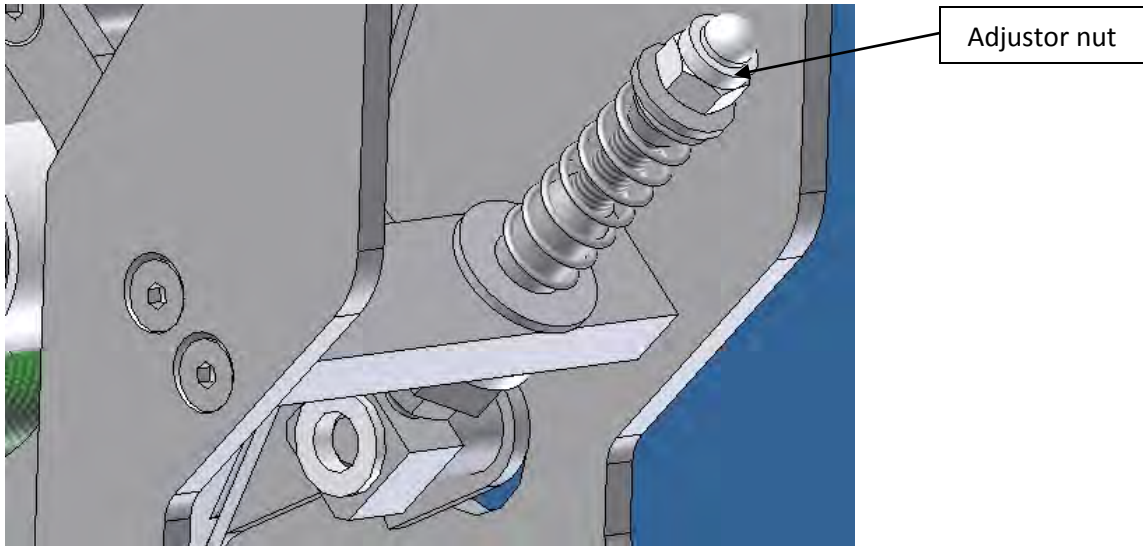
Figure 7



- **Setting knife cut force spring:**

The knife cut force spring is a compression type spring. The spring is used to articulate the knife arm when the box release it. The knife springs out of the cartridge and through the tape. The amount of force that the knife arm cuts with is controlled by the compression spring. By turning the adjust nut clockwise the amount of spring force is increased. By turning the adjustor nut counter clockwise the force is decreased. Refer to figure 8.

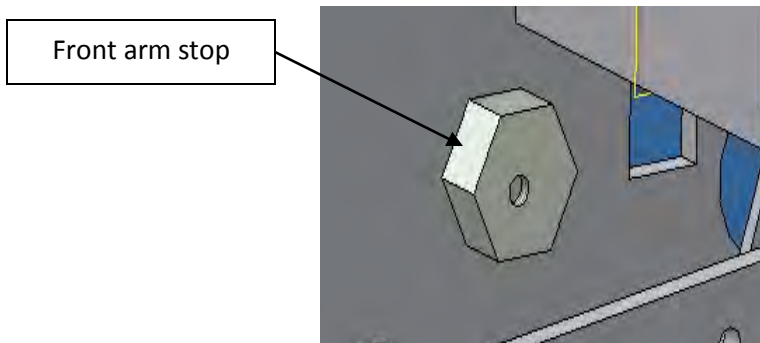
Figure 8



- **Front arm stopper adjustment:**

The front arm stop adjustment is factory set to insure that the front arm roller stays in contact with major flaps of the box. This allows for a tight tape seal across the horizontal length of the box. The adjuster does not need to be adjusted for normal applications. In some cases it may be necessary to adjust the stop depending on the type of machine that the cartridge is being used in. If the cartridge is placed in a machine and the tape is not being applied to the major flaps with enough pressure an adjustment will be necessary. This will be evident by inspecting the box as it exits the machine. Normal symptoms include the tape bridging across the major flaps, or the tape bunching up on the major flaps after the tape was cut. Refer to figure 9.

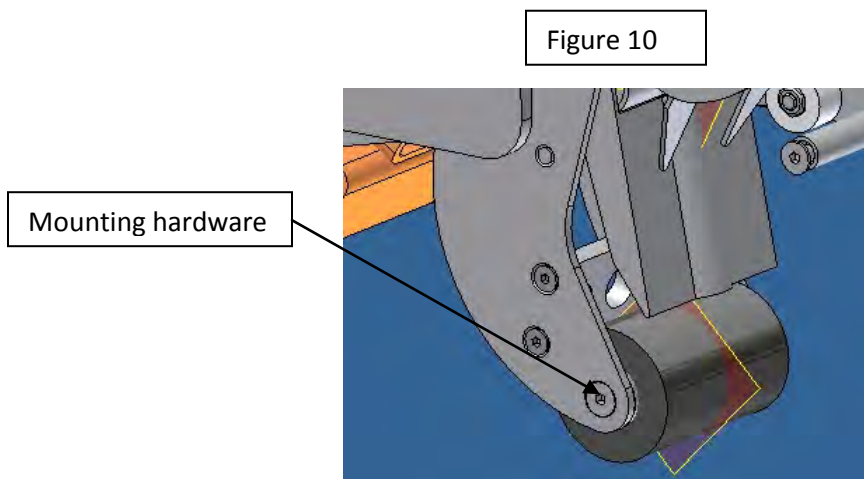
Figure 9



Maintenance:

- **Application / Wipe roller replacement:**

Roller replacement requires the use of a 3mm hex key wrench and a propane torch. The screws must first be heated in order to break the loctite screw adhesive loose. The application roller has a one way clutch roller in it and the rear wipe roller does not have the clutch roller. It is important to check to rotation of the new application roller when installing it. The roller must turn in the direction of box travel. Refer to figure 10.

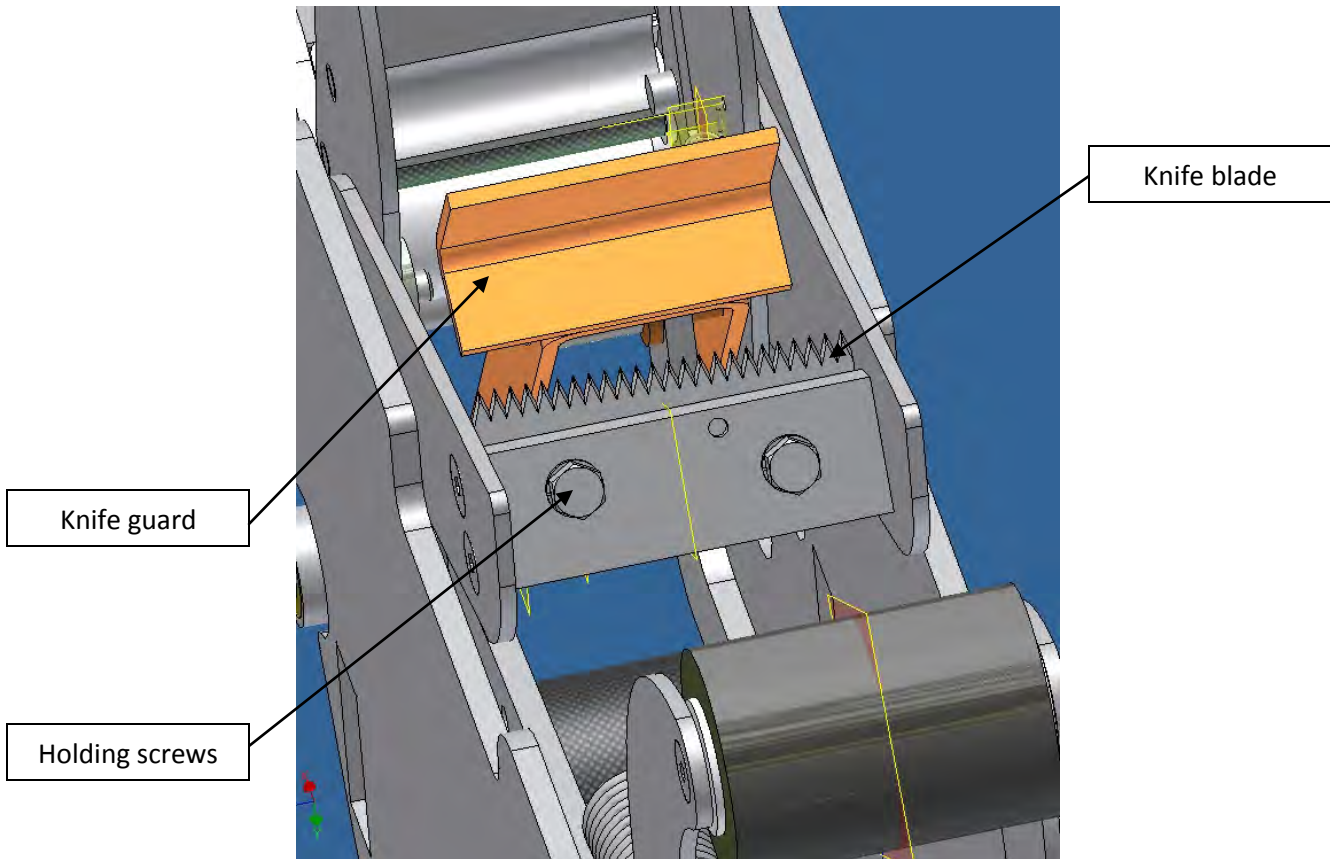


- **Knife blade replacement:**

Knife blade replacement requires either an 8mm box or socket wrench. By loosening the two holding screws the blade can be slid out and the new blade slid in. There is locating pin that insures proper orientation. Take caution not to set the blade too high in the holder so that the knife guard doesn't collide with it. Refer to figure 11.

Warning: – Use extreme care when working near the knife blade. The blade is extremely sharp. If care is not taken severe personal injury can occur.

Figure 11

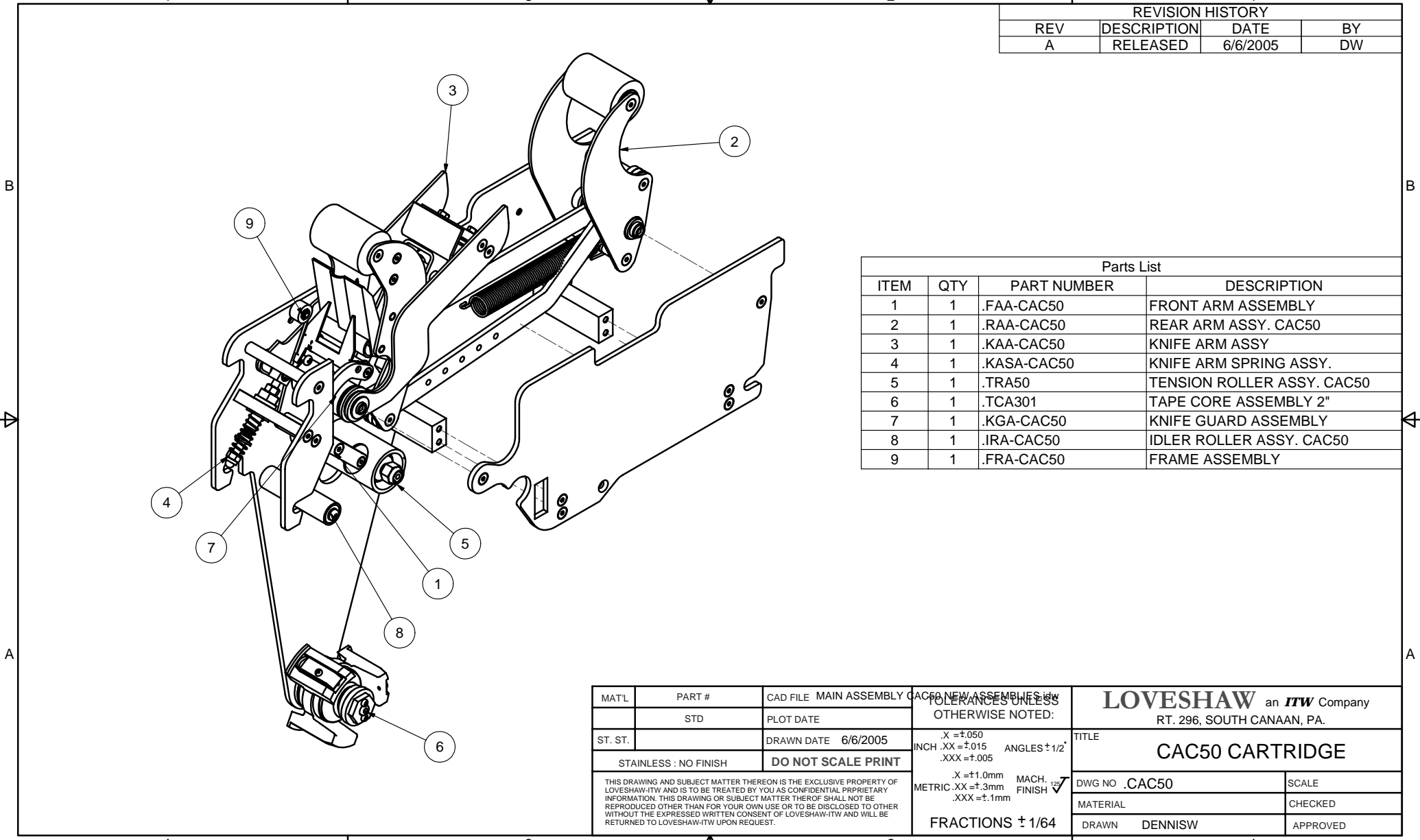


Troubleshooting:

Problem	Cause	Corrective Action
The tape is not cut, or the cut is not clean.	<p>Knife blade is damaged or needs to be cleaned.</p> <p>Tape tension needs to be increased.</p> <p>Tape is not centered on rollers.</p> <p>Knife spring missing or worn.</p>	<p>Replace knife blade.</p> <p>Increase drag on knurled tension roller.</p> <p>Adjust tape core height.</p> <p>Replace spring.</p>
Front tab length too long.	<p>Cartridge threaded incorrectly.</p> <p>Tape tension needs to be increased.</p> <p>Tape is not centered on rollers.</p>	<p>Check threading diagram on cartridge frame.</p> <p>Increase drag on knurled tension roller.</p> <p>Adjust tape core height.</p>
Rear tab not fully wiped down	<p>Rear tab length too long.</p> <p>Main spring tension too weak.</p> <p>Main spring broken or worn.</p>	<p>Increase drag on knurled tension roller.</p> <p>Adjust main spring tension.</p> <p>Replace main tension spring.</p>
Rear tab too long.	<p>Knife spring worn.</p> <p>Not enough tape tension</p>	<p>Replace knife spring.</p> <p>Increase drag on knurled tension roller.</p>

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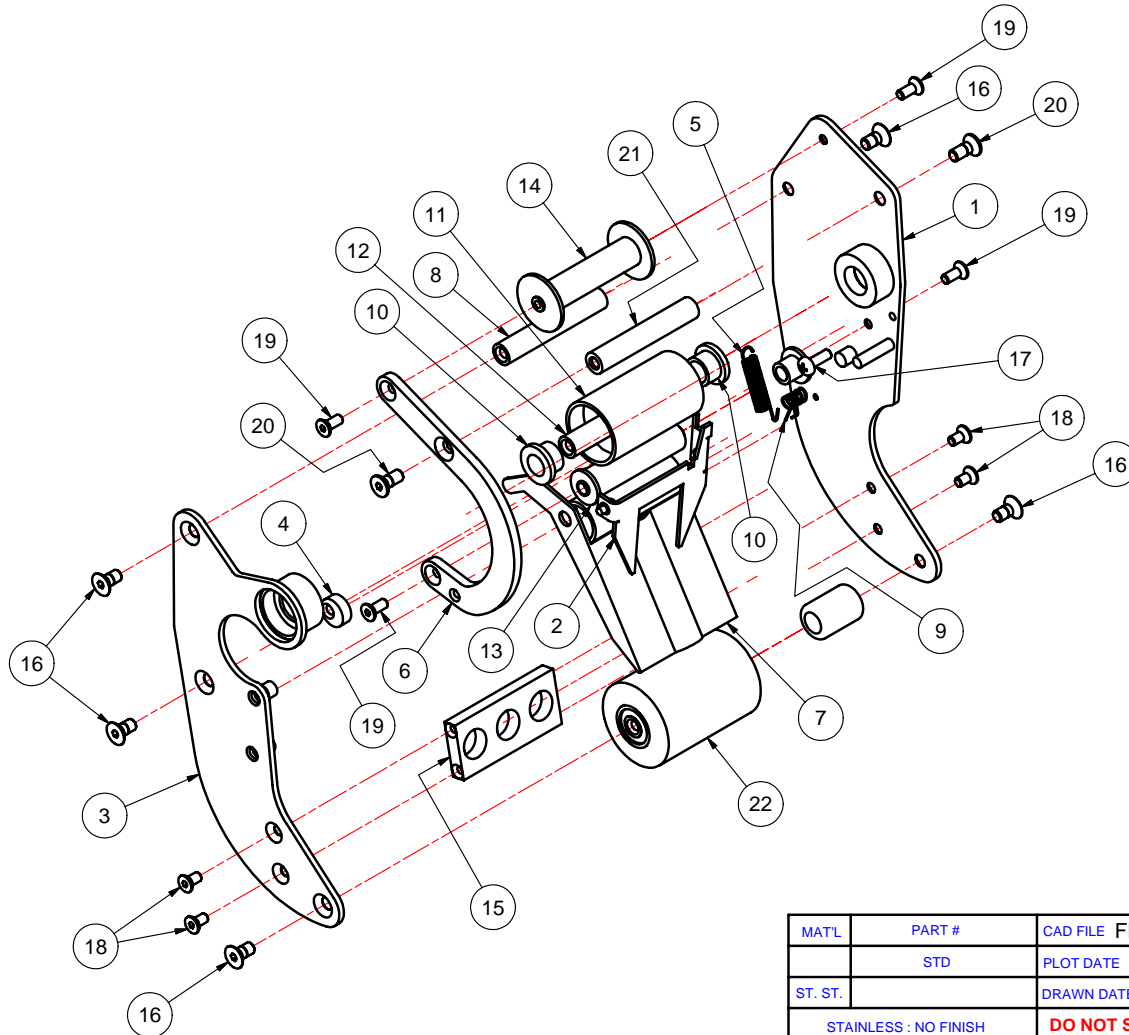


Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	.FAA-CAC50	FRONT ARM ASSEMBLY
2	1	.RAA-CAC50	REAR ARM ASSY. CAC50
3	1	.KAA-CAC50	KNIFE ARM ASSY
4	1	.KASA-CAC50	KNIFE ARM SPRING ASSY.
5	1	.TRA50	TENSION ROLLER ASSY. CAC50
6	1	.TCA301	TAPE CORE ASSEMBLY 2"
7	1	.KGA-CAC50	KNIFE GUARD ASSEMBLY
8	1	.IRA-CAC50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

MATL	PART #	CAD FILE MAIN ASSEMBLY CAC50	NEW ASSEMBLY FILE: OTHERWISE NOTED:	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.
ST. ST.	STD	PLOT DATE	OTHERWISE NOTED:	
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DO NOT SCALE PRINT		THIS DRAWING AND SUBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF LOVESHAW-ITW AND IS TO BE TREATED BY YOU AS CONFIDENTIAL PROPRIETARY INFORMATION. THIS DRAWING OR SUBJECT MATTER THEROF SHALL NOT BE REPRODUCED OTHER THAN FOR YOUR OWN USE OR TO BE DISCLOSED TO OTHER WITHOUT THE EXPRESSED WRITTEN CONSENT OF LOVESHAW-ITW AND WILL BE RETURNED TO LOVESHAW-ITW UPON REQUEST.	.X =±1.0mm MACH. FINISH ✓ METRIC .XX =±.3mm .XXX =±.1mm	CAC50 CARTRIDGE
FRACTIONS ± 1/64			DWG NO .CAC50 MATERIAL DRAWN DENNISW	SCALE CHECKED APPROVED

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B	CCRP #05-0094	9/15/2005	AMYR



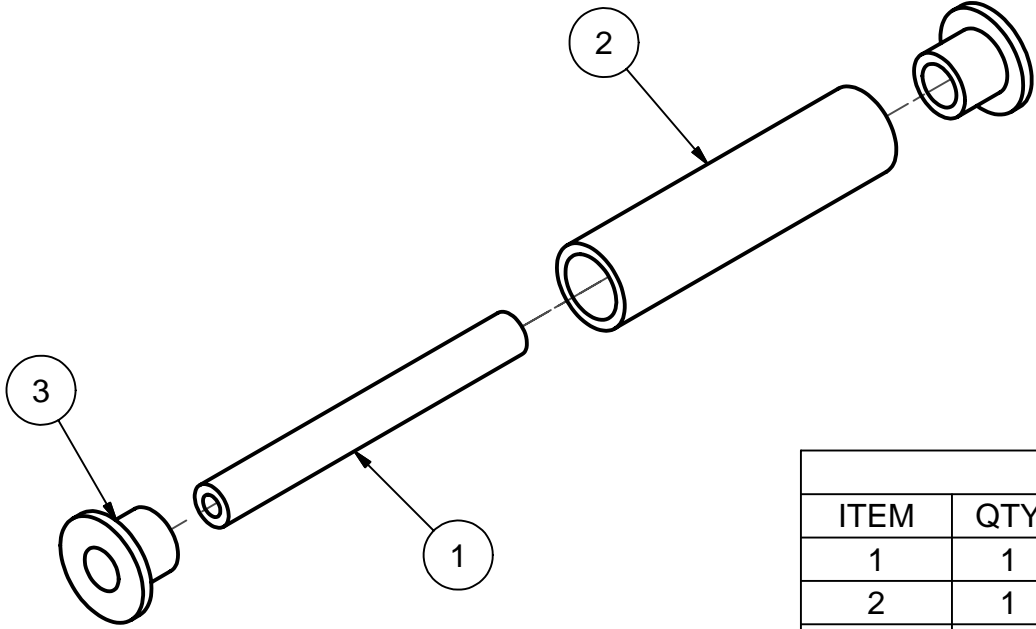
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ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-005-4	ARM, FRONT (MAIN)
2	1	PSC311003-4	TAPE HOLD DOWN PLATE
3	1	CAC50-006-4	ARM, FRONT (TOP)
4	1	PSC139-3	STOP, TAPE GUIDE PLATE
5	1	PSC26-3	SPRING, GUIDE PLATE
6	1	JBW1014-4	HORSE SHOE
7	1	CAC50-018-4	TAPE 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.

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 X = ±1.0mm MACH. FINISH
 METRIC .XX = ±.3mm
 .XXX = ±.1mm
 FRACTIONS ± 1/64

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TITLE FRONT ARM ASSEMBLY	
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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

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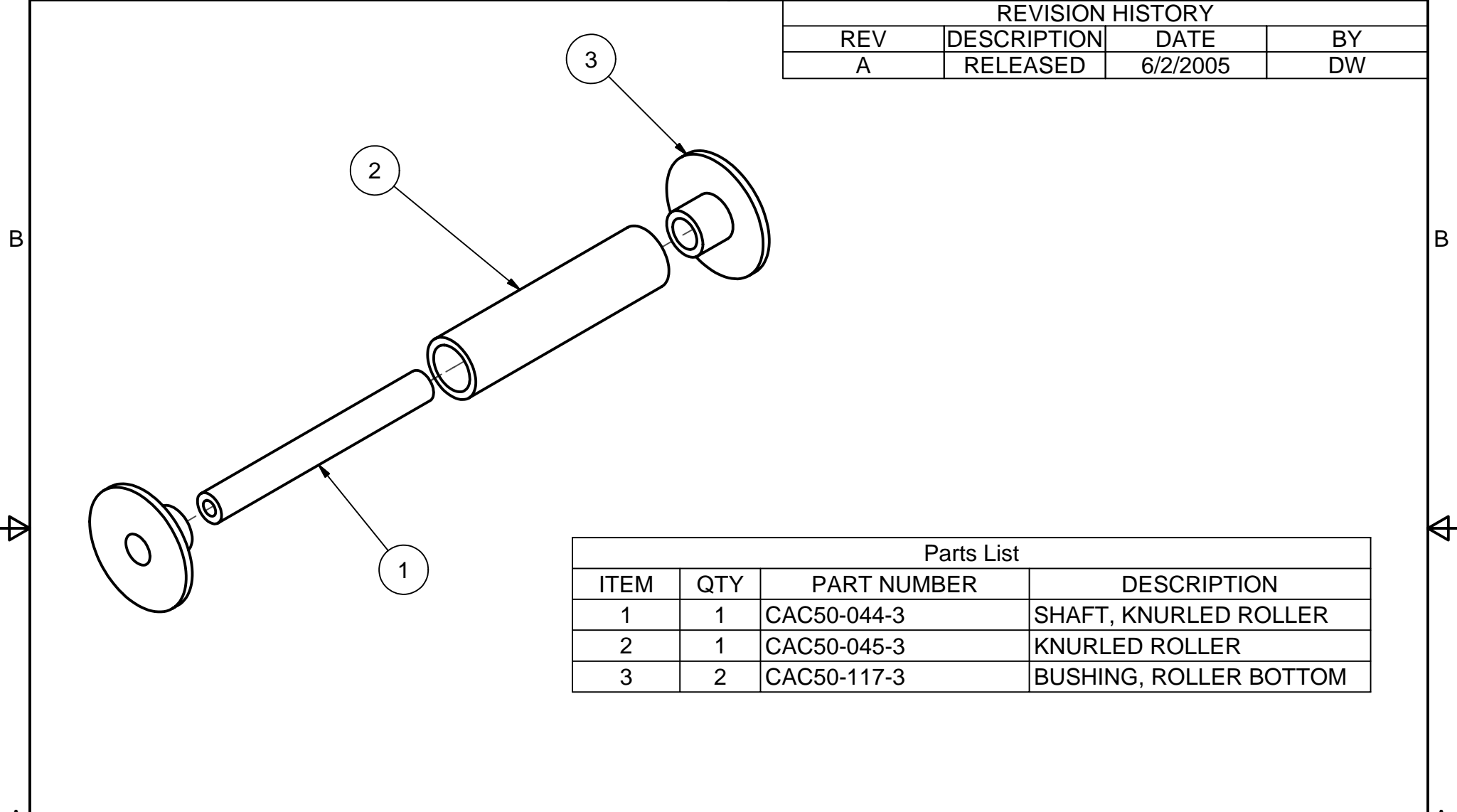
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 METRIC .XX = ±.3mm MACH. FINISH ✓
 .XXX = ±.1mm
 FRACTIONS ± 1/64

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TITLE KNURLED ROLLER ASSY.	
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DRAWN DENNISW	APPROVED

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1	1	CAC50-044-3	SHAFT, KNURLED ROLLER
2	1	CAC50-045-3	KNURLED ROLLER
3	2	CAC50-117-3	BUSHING, ROLLER BOTTOM

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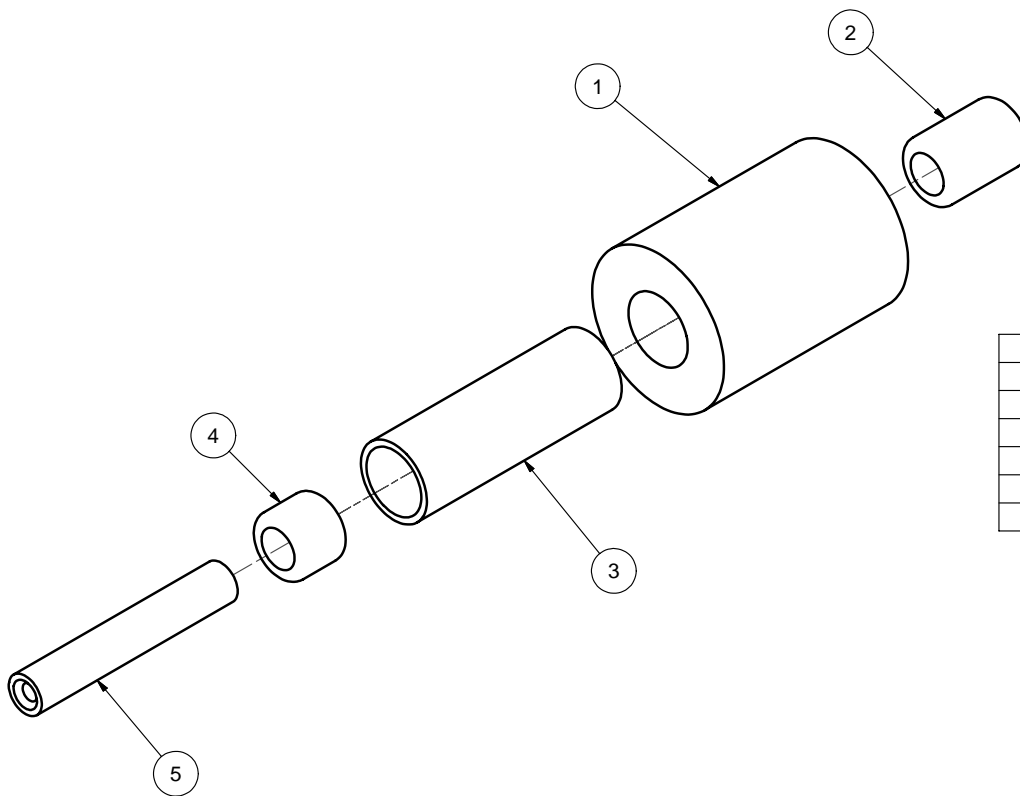
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Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC12/1-3	ROLLER, WIPE
2	1	J205-PS	BEARING
3	1	CAC50-039-3	SLEEVE, NEEDLE BEARING
4	1	J206-PS	BEARING
5	1	CAC50-037-3	SHAFT FRONT ROLLER

ITEMS #1 AND #3 ARE NOT SOLD SEPARATELY.

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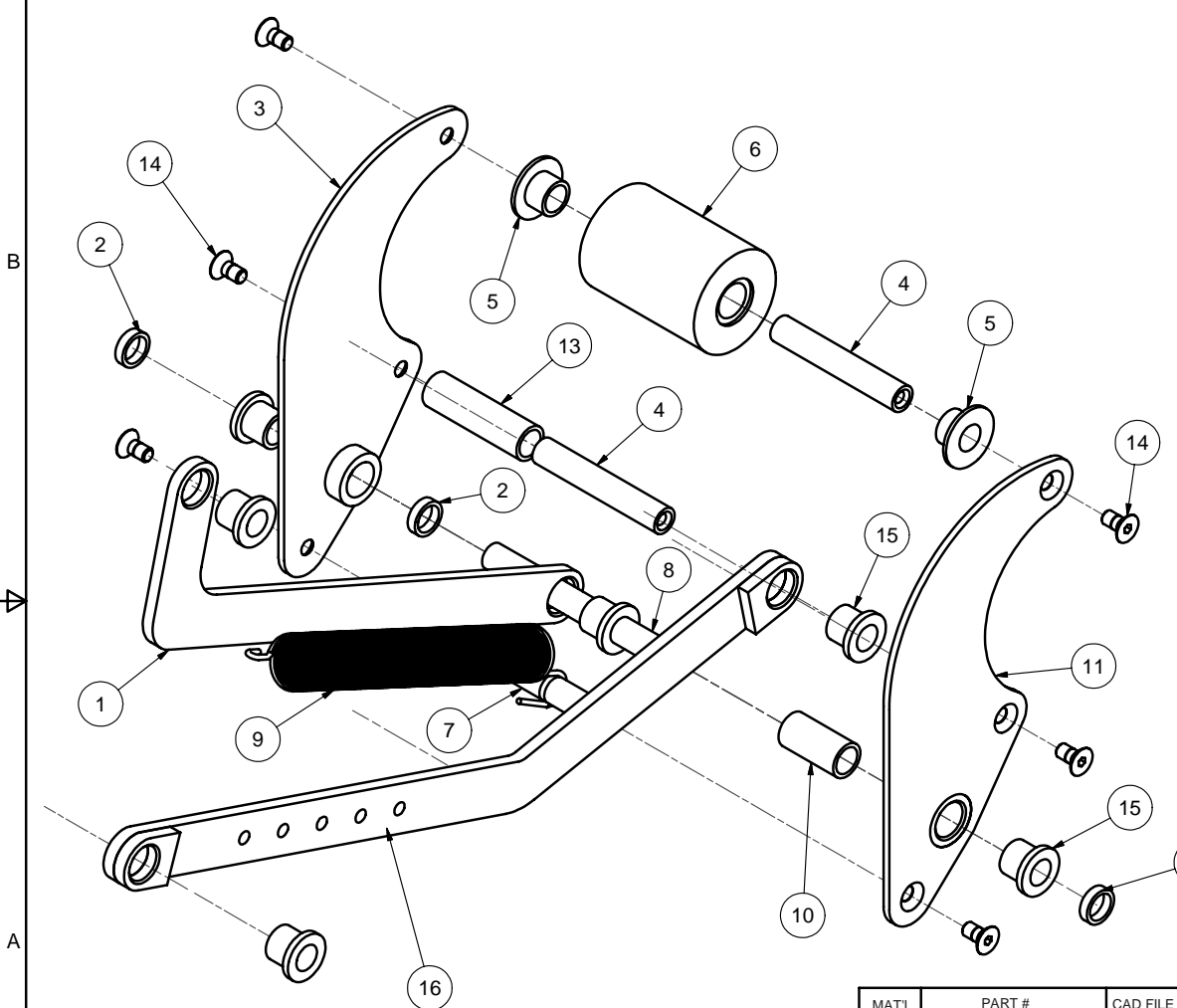
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Parts List			
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1	1	CAC50-004-4	CONNECTING LINK KNIFE GUARD
2	3	CAC50-049-3	SPACER REAR ARM PIVOT
3	1	CAC50-007-4	REAR ARM RIGHT
4	2	CAC50-036-3	SHAFT WIPE ROLLER
5	2	PSC12/3-3	BUSHING
6	1	PSC12/1-3	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

A

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SCALE	APPROVED

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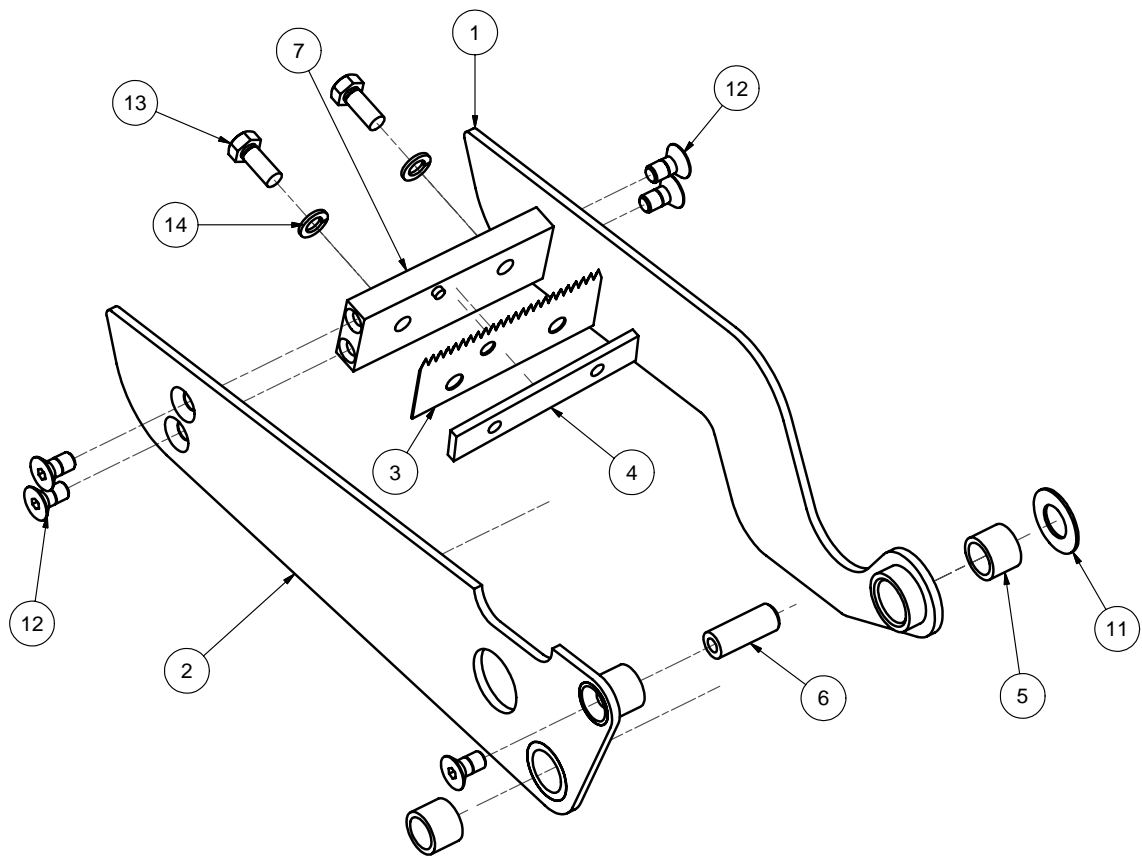
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1	1	CAC50-010-4	KNIFE ARM TOP
2	1	CAC50-009-4	ARM, KNIFE (MAIN)
3	1	PSC11B-4	KNIFE
4	1	PSC9-3	KNIFE PLATE CARTRIDGE
5	2	50185-049	BUSHING
6	1	CAC50-017-3	SHAFT KNIFE ARM
7	1	CAC50-013-3	KNIFE BRACKET
11	1	PSC321040	BEARING
12	5	FFHMF010P10	FLAT HEAD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

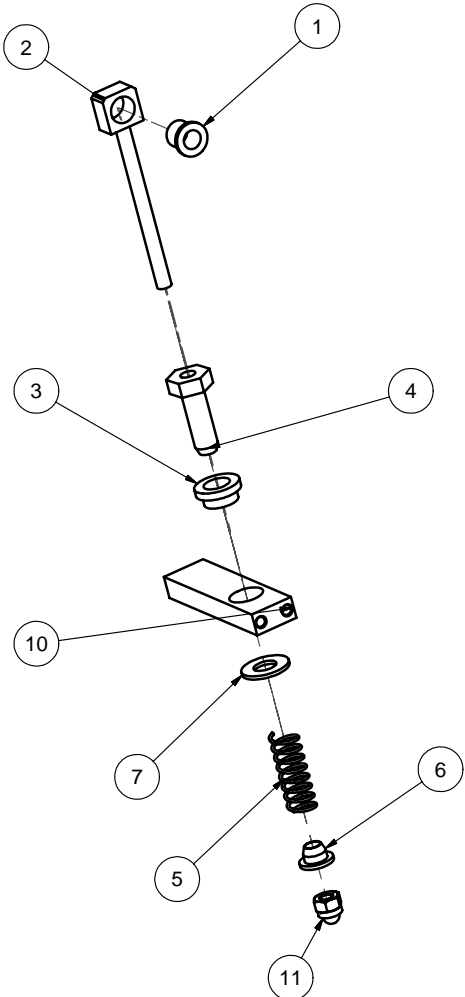
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ST. ST.	STD	PLOT DATE	DRAWN DATE		6/3/2005	KNIFE ARM ASSY
STAINLESS : NO FINISH		DO NOT SCALE PRINT		DWG NO .KAA-CAC50		SCALE
THIS DRAWING AND SUBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF LOVESHAW-ITW AND IS TO BE TREATED BY YOU AS CONFIDENTIAL PROPRIETARY INFORMATION. THIS DRAWING OR SUBJECT MATTER THEREOF SHALL NOT BE REPRODUCED OTHER THAN FOR YOUR OWN USE OR TO BE DISCLOSED TO OTHER WITHOUT THE EXPRESSED WRITTEN CONSENT OF LOVESHAW-ITW AND WILL BE RETURNED TO LOVESHAW-ITW UPON REQUEST.				MATERIAL		CHECKED
				DRAWN DENNISW		APPROVED

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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

MATL	PART #	CAD FILE	KNIFE ARM SPRING ASSY.dwg	UNLESS OTHERWISE NOTED:	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.	
ST. ST.	STD	PLOT DATE		.X =±.050 INCH .XX =±.015 ANGLES ±1/2° .XXX =±.005		
STAINLESS : NO FINISH		DO NOT SCALE PRINT		.X =±1.0mm MACH. FINISH ✓ METRIC .XX =±.3mm .XXX =±.1mm	TITLE	
THIS DRAWING AND SUBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF LOVESHAW-ITW AND IS TO BE TREATED BY YOU AS CONFIDENTIAL PROPRIETARY INFORMATION. THIS DRAWING OR SUBJECT MATTER THEREOF SHALL NOT BE REPRODUCED OTHER THAN FOR YOUR OWN USE OR TO BE DISCLOSED TO OTHER WITHOUT THE EXPRESSED WRITTEN CONSENT OF LOVESHAW-ITW AND WILL BE RETURNED TO LOVESHAW-ITW UPON REQUEST.				FRACTIONS ± 1/64	KNIFE ARM SPRING ASSY.	
				DWG NO	.KASA-CAC50	SCALE
				MATERIAL		CHECKED
				DRAWN	DENNISW	APPROVED

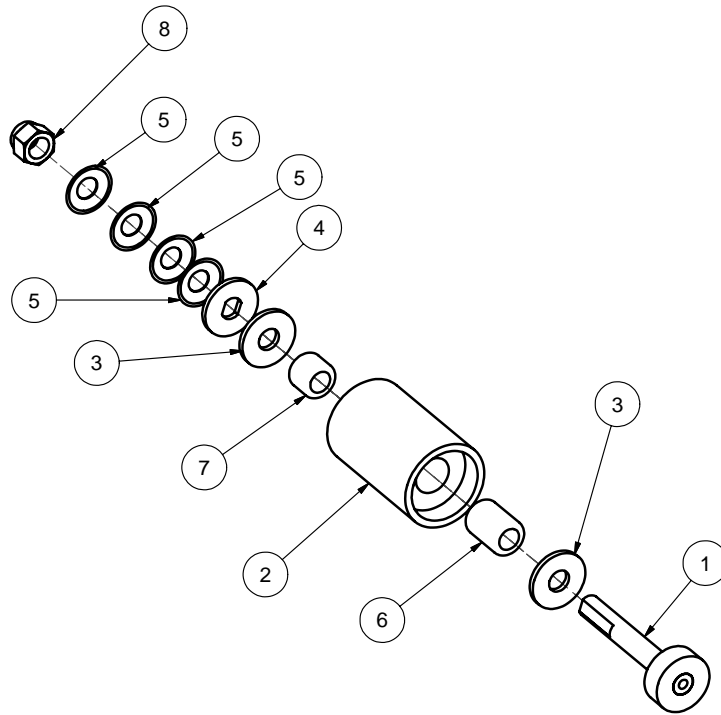
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REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/6/2005	DW



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

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MATL	PART #	CAD FILE TRA50.idw	TOLERANCES UNLESS OTHERWISE NOTED: .X =±.050 INCH .XX =±.015 ANGLES ±1/2° .XXX =±.005 .X =±1.0mm MACH. FINISH ✓ METRIC .XX =±.3mm .XXX =±.1mm FRACTIONS ± 1/64	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.	
ST. ST.	STD	PLOT DATE		TENSION ROLLER ASSY. CAC50	
STAINLESS : NO FINISH		DO NOT SCALE PRINT	DRAWN DATE 6/6/2005		DWG NO .TRA50
THIS DRAWING AND SUBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF LOVESHAW-ITW AND IS TO BE TREATED BY YOU AS CONFIDENTIAL PROPRIETARY INFORMATION. THIS DRAWING OR SUBJECT MATTER THEROF SHALL NOT BE REPRODUCED OTHER THAN FOR YOUR OWN USE OR TO BE DISCLOSED TO OTHER WITHOUT THE EXPRESSED WRITTEN CONSENT OF LOVESHAW-ITW AND WILL BE RETURNED TO LOVESHAW-ITW UPON REQUEST.			MATERIAL		CHECKED
			DRAWN DENNISW		APPROVED

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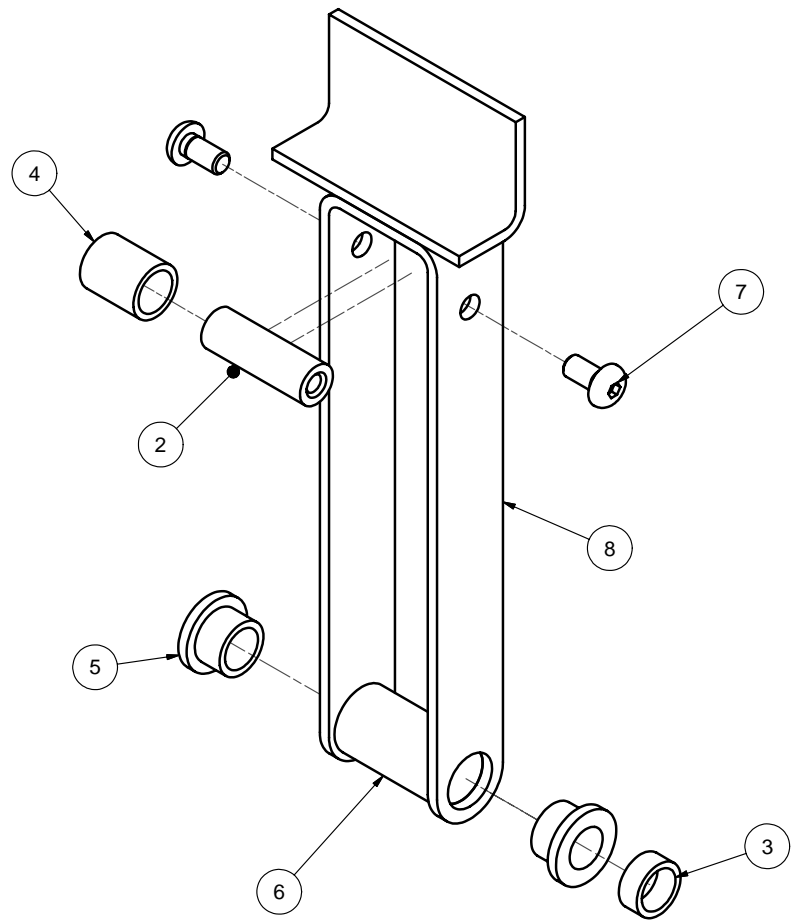
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REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/3/2005	DW



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

MATL	PART #	CAD FILE	KNIFE GUARD ASSY.dwg	DIMENSIONS UNLESS OTHERWISE NOTED: .X = ±.050 INCH .XX = ±.015 ANGLES ±1/2° .XXX = ±.005 .X = ±1.0mm MACH. FINISH ✓ METRIC .XX = ±.3mm .XXX = ±.1mm FRACTIONS ± 1/64	LOVESHAW an ITW Company RT. 296, SOUTH CANAAN, PA.	
ST. ST.	STD	PLOT DATE	DRAWN DATE 6/3/2005		TITLE	KNIFE GUARD ASSEMBLY
STAINLESS : NO FINISH		DO NOT SCALE PRINT		DWG NO	.KGA-CAC50	SCALE
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				DRAWN	DENNISW	APPROVED

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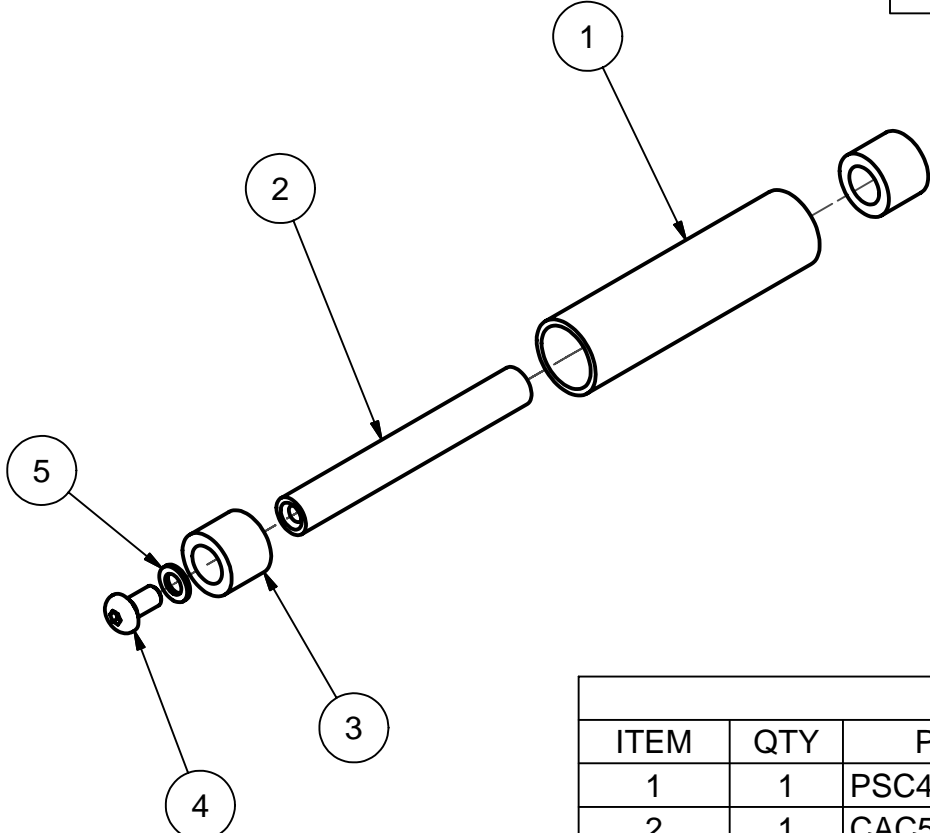
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REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	RELEASED	6/6/2005	DW



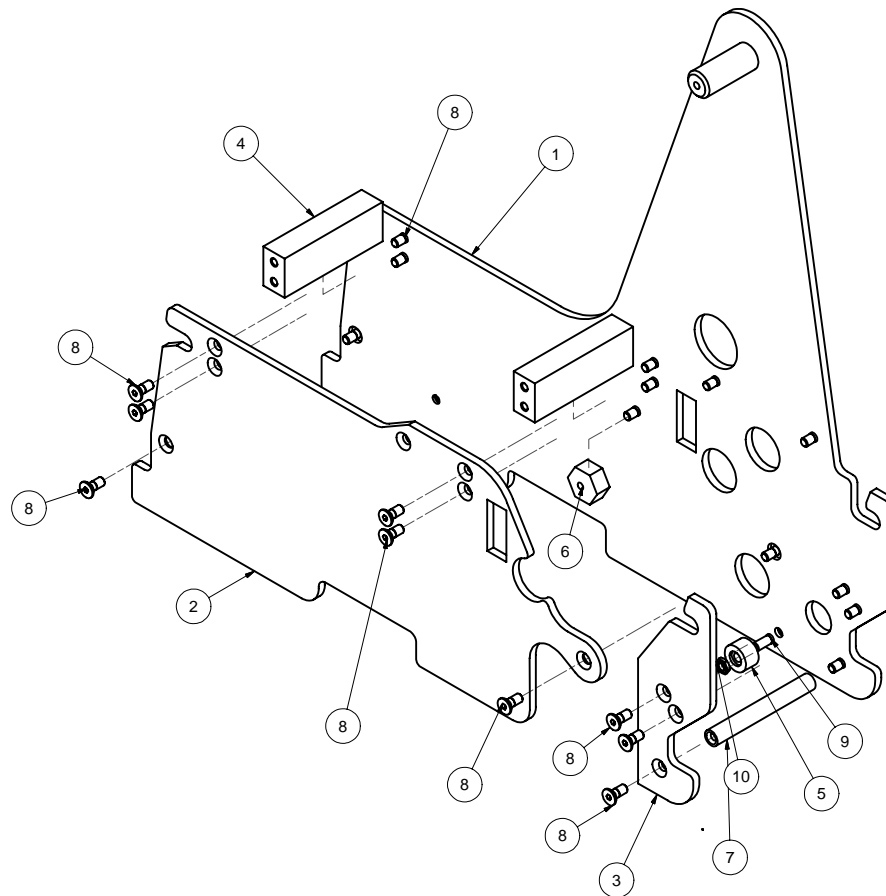
Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC49-3	ALUM. ROLLER CARTRIDGE
2	1	CAC50-024-3	SHAFT IDLER ROLLER
3	2	PSC606	BUSHING
4	1	FBHMF010P10	BUTT. HD. SCREW M5 X 10
5	1	FFWMFP	FLAT WASHER M5

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

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

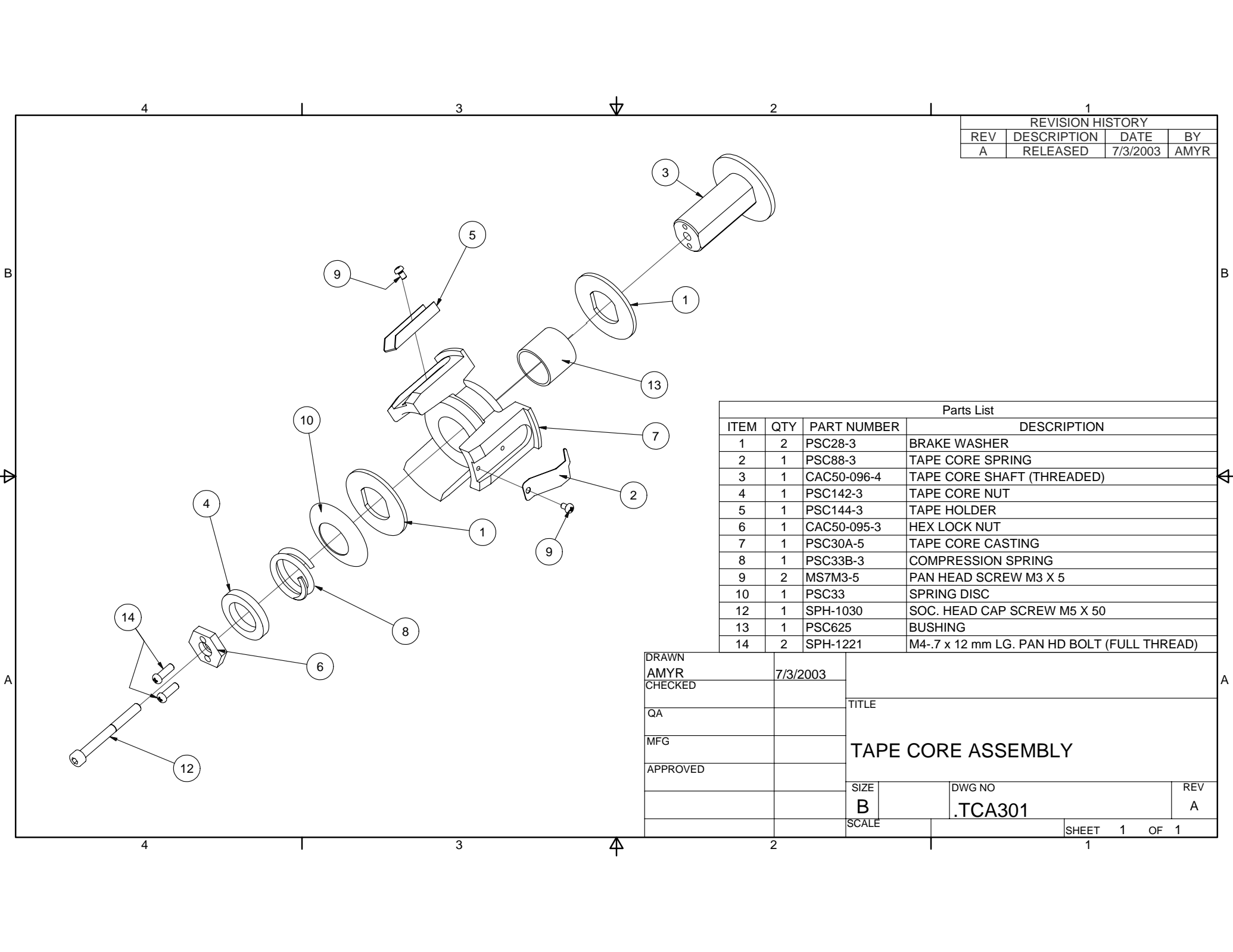


Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-102-6	MAIN FRAME
2	1	CAC50-002-5	FRAME, TOP
3	1	CAC50-012-4	FRAME TOP EXCESS
4	2	CAC50-015-3	BLOCK FRAME
5	1	CAC50-050-3	STOPPER FRONT ARM
6	1	PSC301117-3	STOP ROLLER ARM
7	1	PSC321025B-3	SHAFT, CARTRIDGE PLATES
8	21	FFHMF012P10	FLAT HD. M5 X 12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

MATL	PART #	CAD FILE	FRA-CAC50.idw
	STD	PLOT DATE	
ST. ST.		DRAWN DATE	5/31/2005
		DO NOT SCALE PRINT	
STAINLESS : NO FINISH			
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TOLERANCES UNLESS OTHERWISE NOTED:	
.X = ±0.050	ANGLES ±1/2°
.XX = ±0.015	
.XXX = ±0.005	
.X = ±1.0mm	MACH. FINISH ✓
METRIC .XX = ±.3mm	
.XXX = ±.1mm	
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	TITLE TAPE CORE ASSEMBLY		
CHECKED				
QA				
MFG				
APPROVED		SIZE B	DWG NO .TCA301	REV A
SCALE		SHEET 1 OF 1		