

LITTLE DAVID

TAPE CARTRIDGE MANUAL

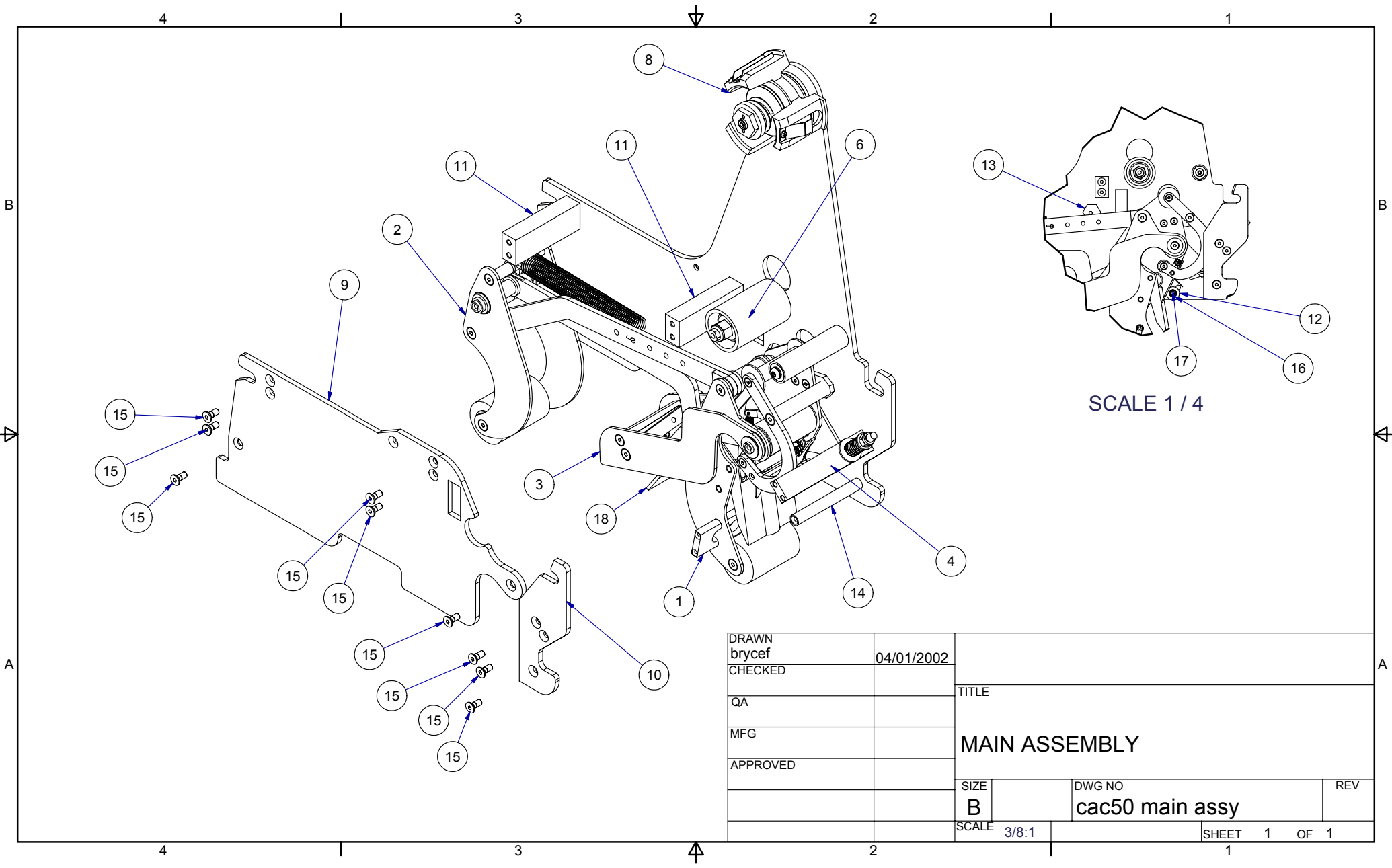


.CAC50

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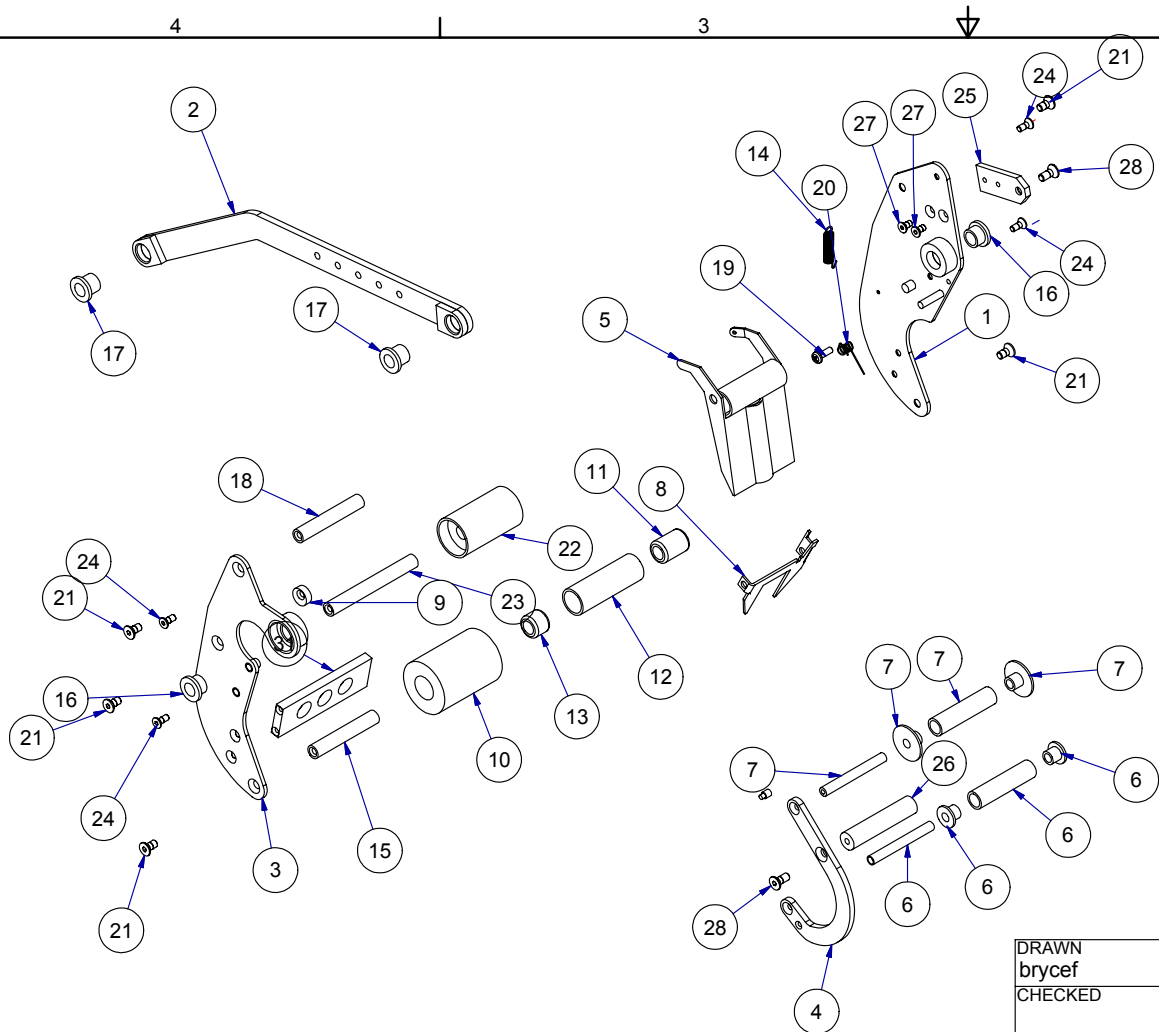
LOVESHAW - EUROPE
UNIT 9, BRUNEL GATE
W. PORTWAY INDUSTRIAL ESTATE
ANDOVER, HAMPSHIRE SP103SL
ENGLAND
44-264-3575-11



DRAWN brycef	04/01/2002	TITLE	
CHECKED		MAIN ASSEMBLY	
QA		SIZE B	DWG NO cac50 main assy
MFG		SCALE 3/8:1	REV
APPROVED		SHEET 1	OF 1

CAC50 MAIN ASSEMBLY

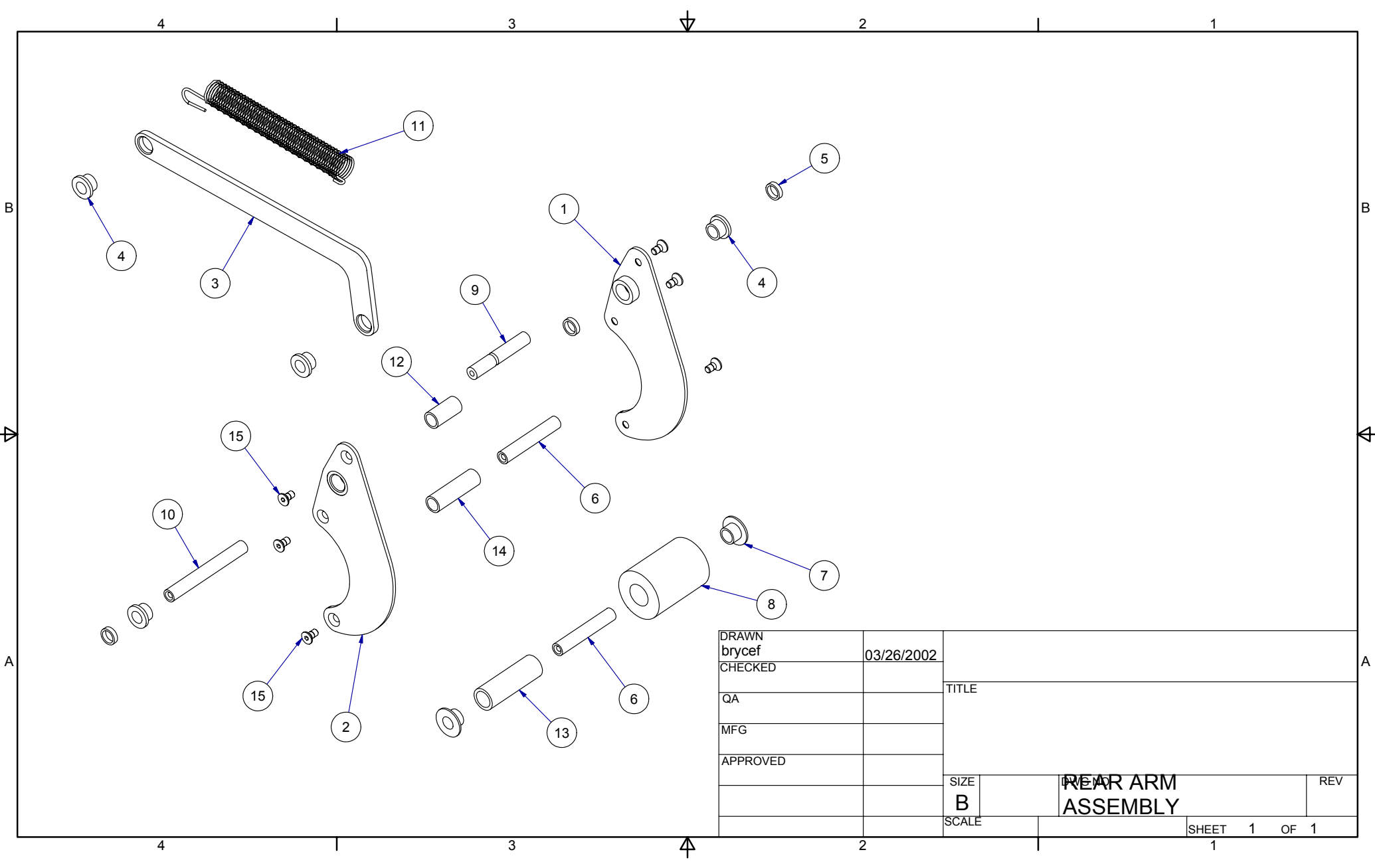
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	FRONT ARM ASSY.	SEE SEPARATE ASSEMBLY
2	1	REAR ARM ASSY.	SEE SEPARATE ASSEMBLY
3	1	KNIFE ARM ASSY.	SEE SEPARATE ASSEMBLY
4	1	KNIFE ARM SPRING ASSY.	SEE SEPARATE ASSEMBLY
5	1	CAC50-102-6	MAIN FRAME
6	1	TENSION ROLLER ASSY.	SEE SEPARATE ASSEMBLY
7	1	IDLER ROLLER ASSY.	SEE SEPARATE ASSEMBLY
8	1	TAPE CORE ASSEMBLY	SEE SEPARATE ASSEMBLY
9	1	CAC50-002-5	FRAME – TOP
10	1	CAC50-012-3	FRAME – TOP ACCESS
11	2	CAC50-015-3	BLOCK FRAME
12	1	CAC50-050-3	STOPPER – FRONT ARM
13	1	PSC301117-3	STOP ROLLER ARM
14	1	PSC321025B-4	SHAFT CARTRIDGE PLATE
15	21	-----	FL. HD. SOC. SCREW M5 X 12
16	1	-----	M5 HEX NUT
17	1	-----	FL. HD. SOC. SCREW M5 X 16
18	1	KNIFE GUARD ASSY.	SEE SEPARATE ASSEMBLY



DRAWN brycef	03/25/2002	TITLE	
CHECKED		FRONT ARM ASSEMBLY	
QA		SIZE B	DWG NO
MFG		SCALE 3/8:1	REV
APPROVED		FRONT ARM ASSY	
		SHEET 1	OF 1

FRONT ARM ASSEMBLY

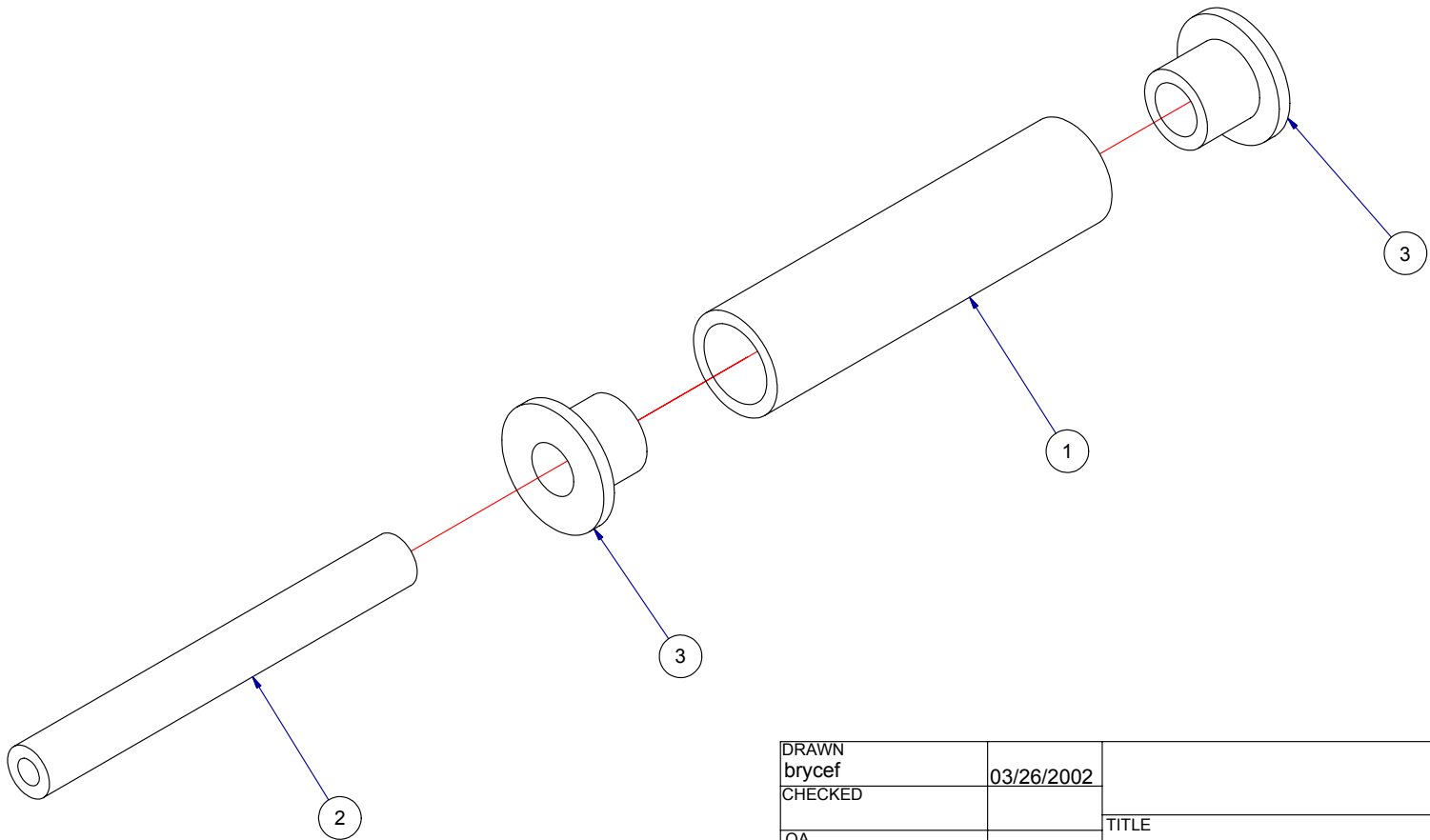
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-005-4	FRONT ARM – MAIN
2	1	CAC50-003-4	CONNECTING LINK
3	1	CAC50-006-4	FRONT ARM – TOP
4	1	JBW1014-3	HORSE SHOE
5	1	CAC50-018-4	TAPE GUIDE PLATE
6	1	.KNRA200/50/T	KNURLED ROLLER ASSY. TOP (SEE SEPARATE ASSEMBLY)
7	1	.KNRA200/50/B	KNURLED ROLLER ASSY. BOTTOM (SEE SEPARATE ASSEMBLY)
8	1	PSC311003-4	TAPE HOLD DOWN PLATE
9	1	PSC139-3	TAPE GUIDE PLATE STOP
10	1	PSC12/1-3*	WIPE ROLLER
11	1	J205-PS*	CLUTCH BEARING
12	1	CAC50-039-3*	SLEEVE – NEEDLE BEARING
13	1	J206-PS*	NEEDLE BEARING
14	1	PSC26-3	EXTENSION SPRING
15	1	CAC50-037-3*	FRONT ROLLER SHAFT
16	4	50186-039	BRONZE FLANGE BUSHING
17	2	50186-007	BRONZE FLANGE BUSHING
18	1	CAC50-036-3	WIPE ROLLER SHAFT
19	1	MS7M4-12	PAN HD. SCREW M4 X 12
20	1	PSC321022-4	TORSION SPRING
21	5	MS2M5-10	FL. HD. SOC. SCREW M5 X 10
22	1	CAC50-046-3	CENTER ROLLER
23	1	CAC50-034-3	PIVOT ARM SHAFT
24	4	MS2M4-10	FL. HD. SOC. SCREW M4 X 10
25	1	CAC50-131-3	SHAFT EXTENSION BRACKET
26	1	CAC50-132-3	SHAFT HORSE SHOE BRACKET
27	2	MS2M4-8	FL. HD. CAP SCREW M4 X 8
28	2	MS2M5-12	FL. HD. CAP SCREW M5 X 12
31	1	CAC51-028A-3	SPACER – FRONT ARMS
	*	.CRA50	SOLD AS FULL ASSEMBLY



DRAWN	brycef	03/26/2002		
CHECKED			TITLE	
QA				
MFG				
APPROVED				
SIZE	B		REAR ARM ASSEMBLY	REV
SCALE			SHEET 1 OF 1	

REAR ARM ASSEMBLY

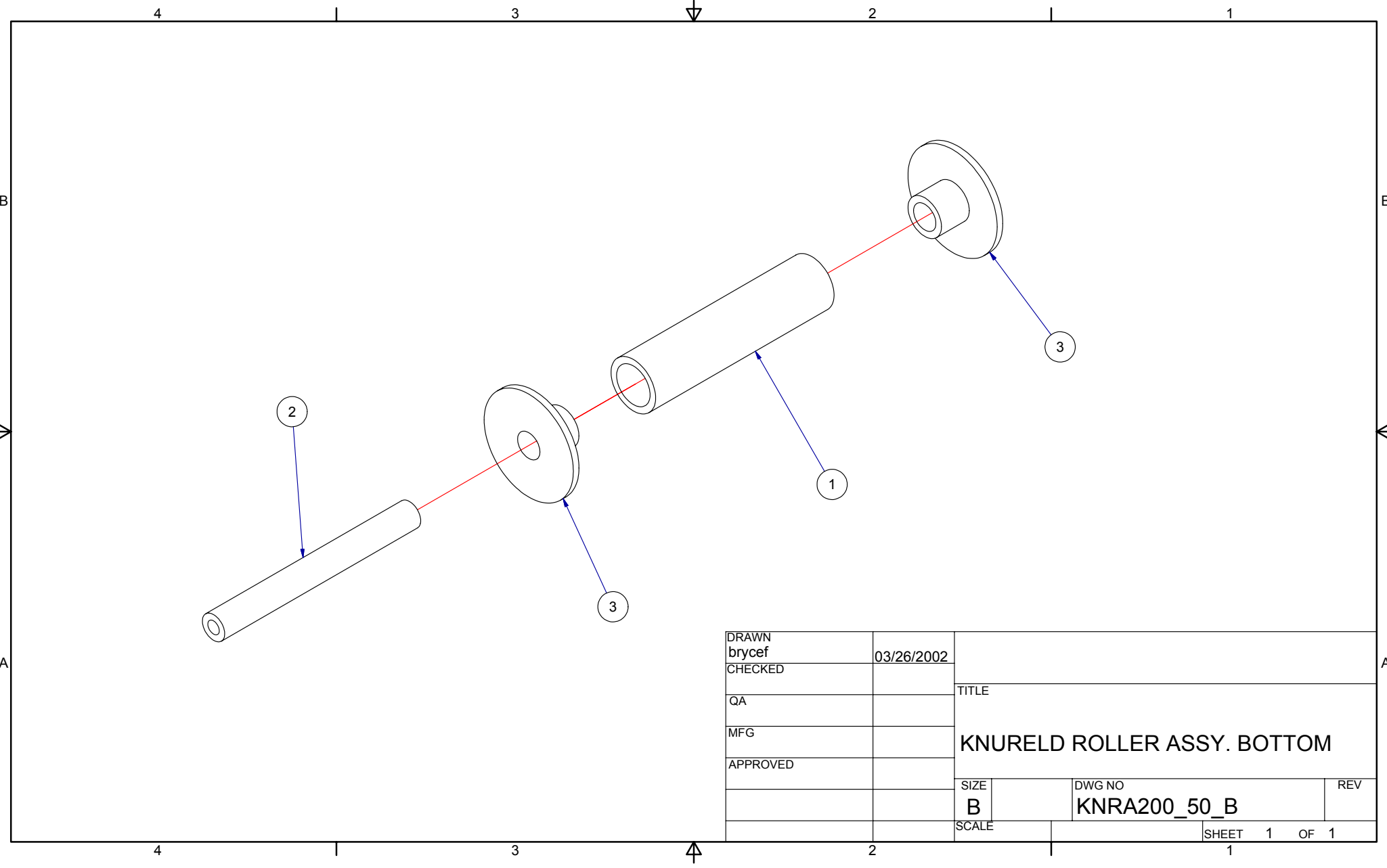
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-007-4	REAR ARM RIGHT
2	1	CAC50-008-4	REAR ARM LEFT
3	1	CAC50-004-4	CONNECTING LINK – KNIFE GUARD
4	4	50186-007	BRONZE FLANGE BUSHING
5	3	CAC50-049-3	REAR ARM PIVOT SPACER
6	2	CAC50-036-3	WIPE ROLLER SHAFT
7	2	PSC12/3-3	WIPE ROLLER BUSHING
8	1	PSC12/1-3	WIPE ROLLER
9	1	CAC50-022-3	REAR ARM SPRING STUD
10	1	CAC50-034-3	PIVOT ARM SHAFT
11	1	PSC501101-4	CARTRIDGE MAIN SPRING
12	1	CAC50-043-3	REAR PIVOT ARM SPACER
13	1	PSC12/2-3	WIPE ROLLER SLEEVE
14	1	CAC50-042-3	REAR CONNECTING ARM SPACER
15	6	-----	FL. HD. SOC. SCREW M5 X 10



DRAWN brycef	03/26/2002	TITLE	
CHECKED		KNURLED ROLLER ASSEMBLY TOP	
QA		SIZE	DWG NO
MFG		B	KNRA200_50_T
APPROVED		SCALE	REV
		2:1	
		SHEET	1 OF 1

KNURLED ROLLER ASSEMBLY – TOP

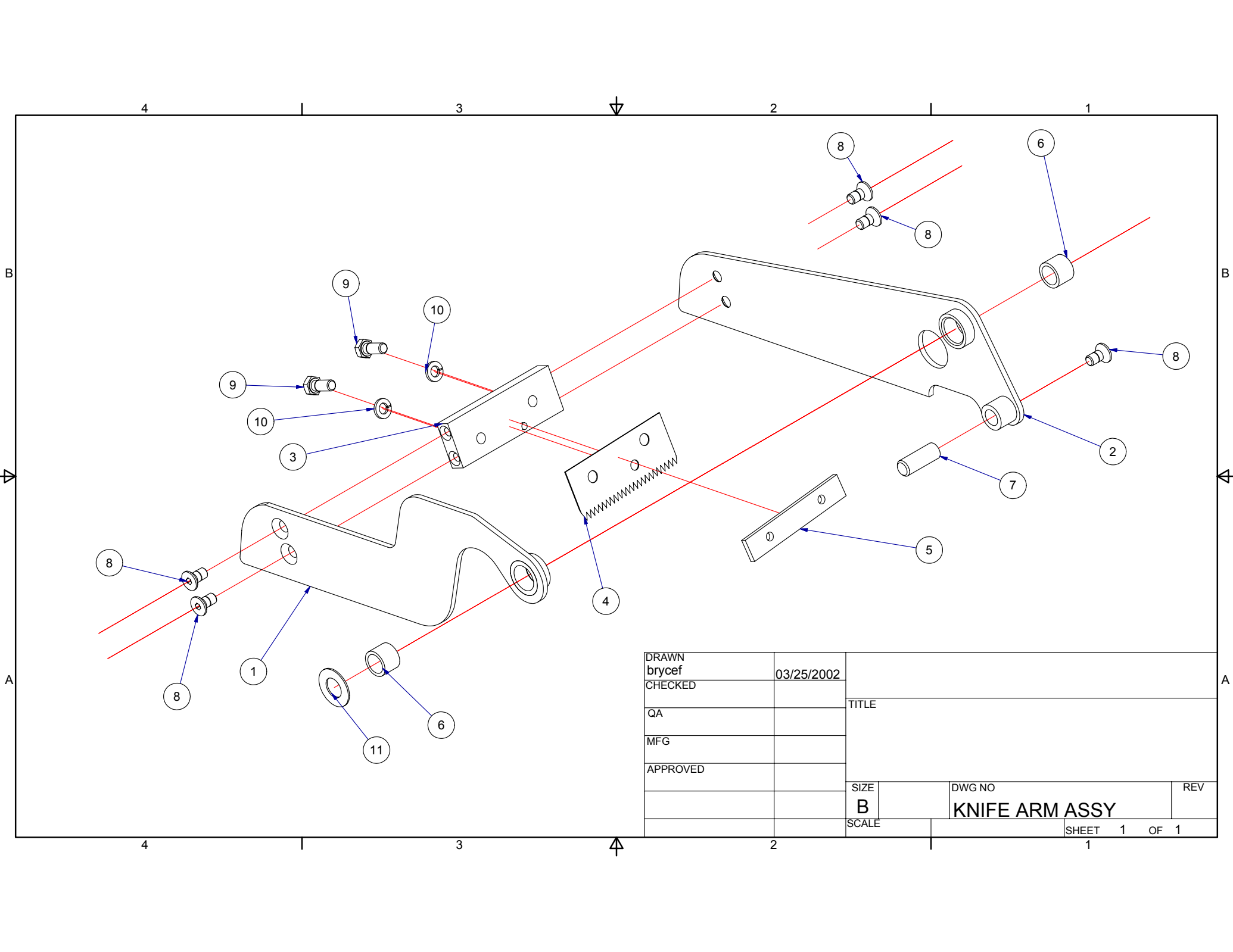
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-045-3	KNURLED ROLLER
2	1	CAC50-044-3	SHAFT KNURLED ROLLER
3	2	CAC50-116-3	BUSHING



DRAWN brycef	03/26/2002		
CHECKED		TITLE	
QA		KNURELD ROLLER ASSY. BOTTOM	
MFG			
APPROVED		SIZE B	DWG NO KNRA200_50_B
		SCALE	REV
		SHEET 1 OF 1	

KNURLED ROLLER ASSEMBLY – BOTTOM

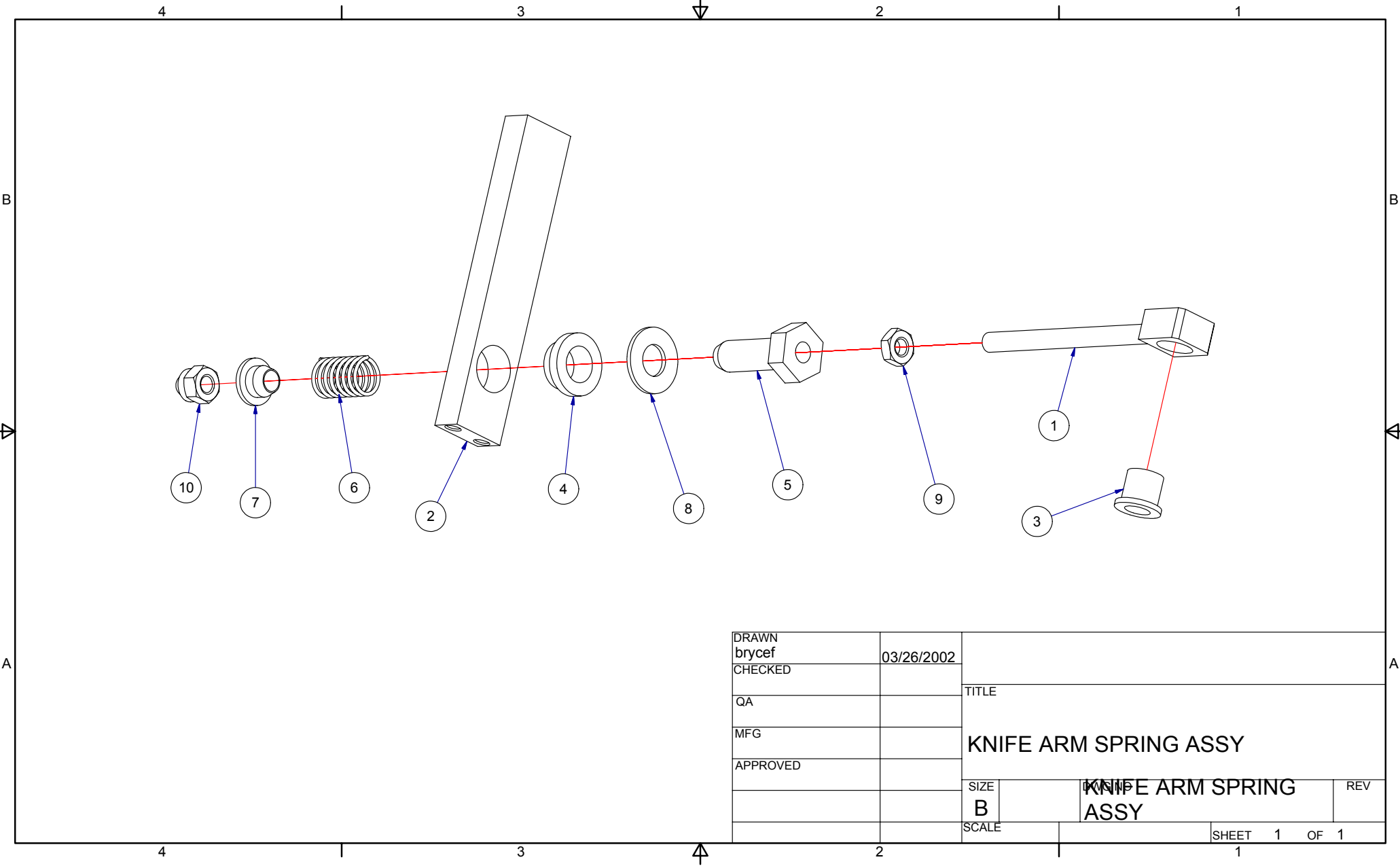
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-045-3	KNURLED ROLLER
2	1	CAC50-044-3	SHAFT KNURLED ROLLER
3	2	CAC50-117-3	BUSHING



DRAWN brycef	03/25/2002	TITLE	
CHECKED		TITLE	
QA		TITLE	
MFG		TITLE	
APPROVED		TITLE	
		SIZE B	DWG NO
		SCALE	REV
			KNIFE ARM ASSY
			SHEET 1 OF 1

KNIFE ARM ASSEMBLY

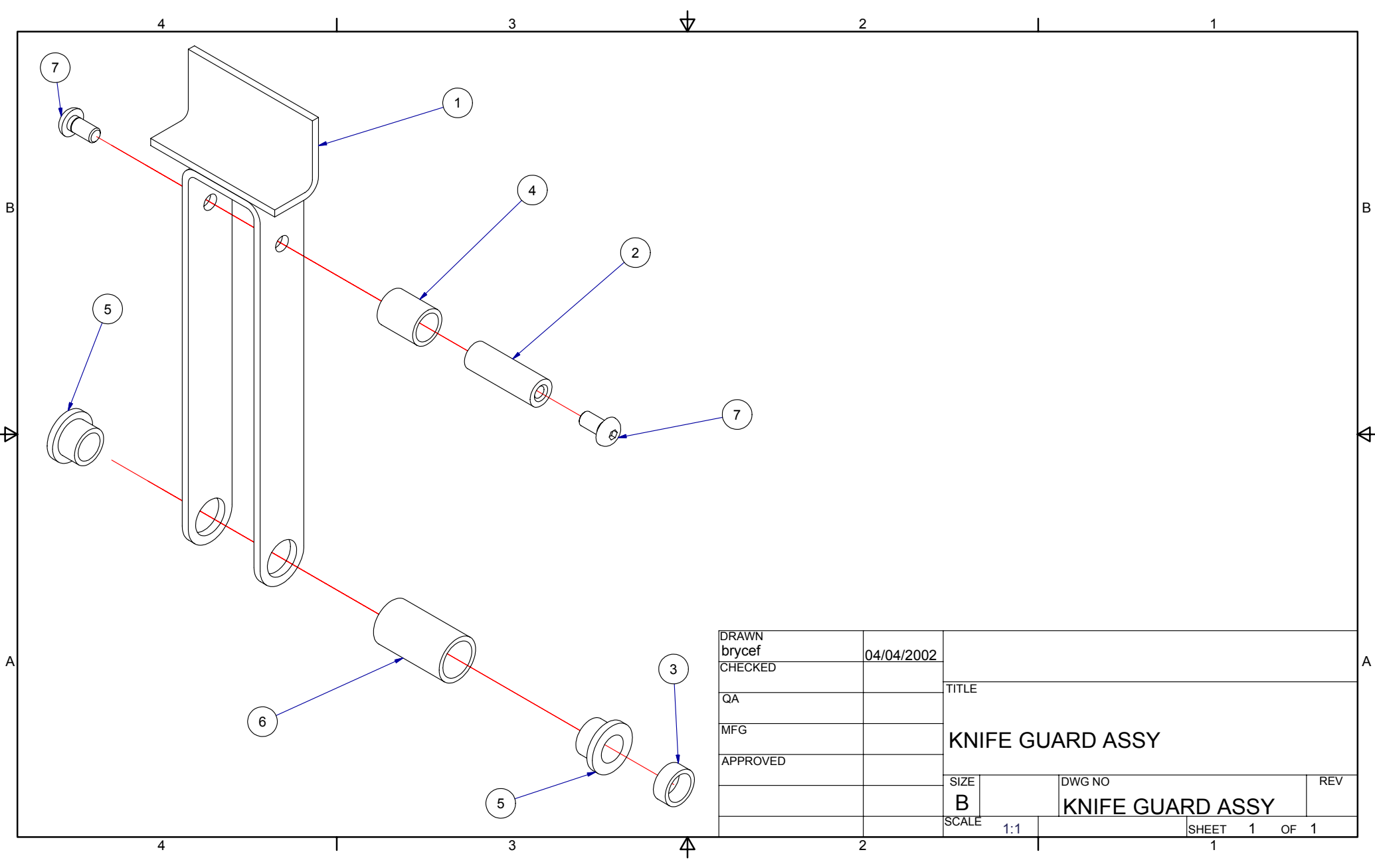
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-010-4	KNIFE ARM TOP
2	1	CAC50-009-4	KNIFE ARM MAIN
3	1	CAC50-013-3	KNIFE BRACKET
4	1	PSC11B-4	KNIFE
5	1	PSC9-3	KNIFE PLATE
6	2	50185-049	BRONZE FLANGE BUSHING
7	1	CAC50-017-3	KNIFE ARM SHAFT
8	5	-----	FL. HD. SOC. SCREW M5 X 10
9	2	-----	HEX HD. SCREW M5 X 12
10	2	-----	LOCK WASHER M5
11	1	PSC321040	BRONZE WASHER



DRAWN brycef	03/26/2002	TITLE	
CHECKED		KNIFE ARM SPRING ASSY	
QA		SIZE	REV
MFG		B	KNIFE ARM SPRING ASSY
APPROVED		SCALE	SHEET 1 OF 1

KNIFE ARM SPRING ASSEMBLY

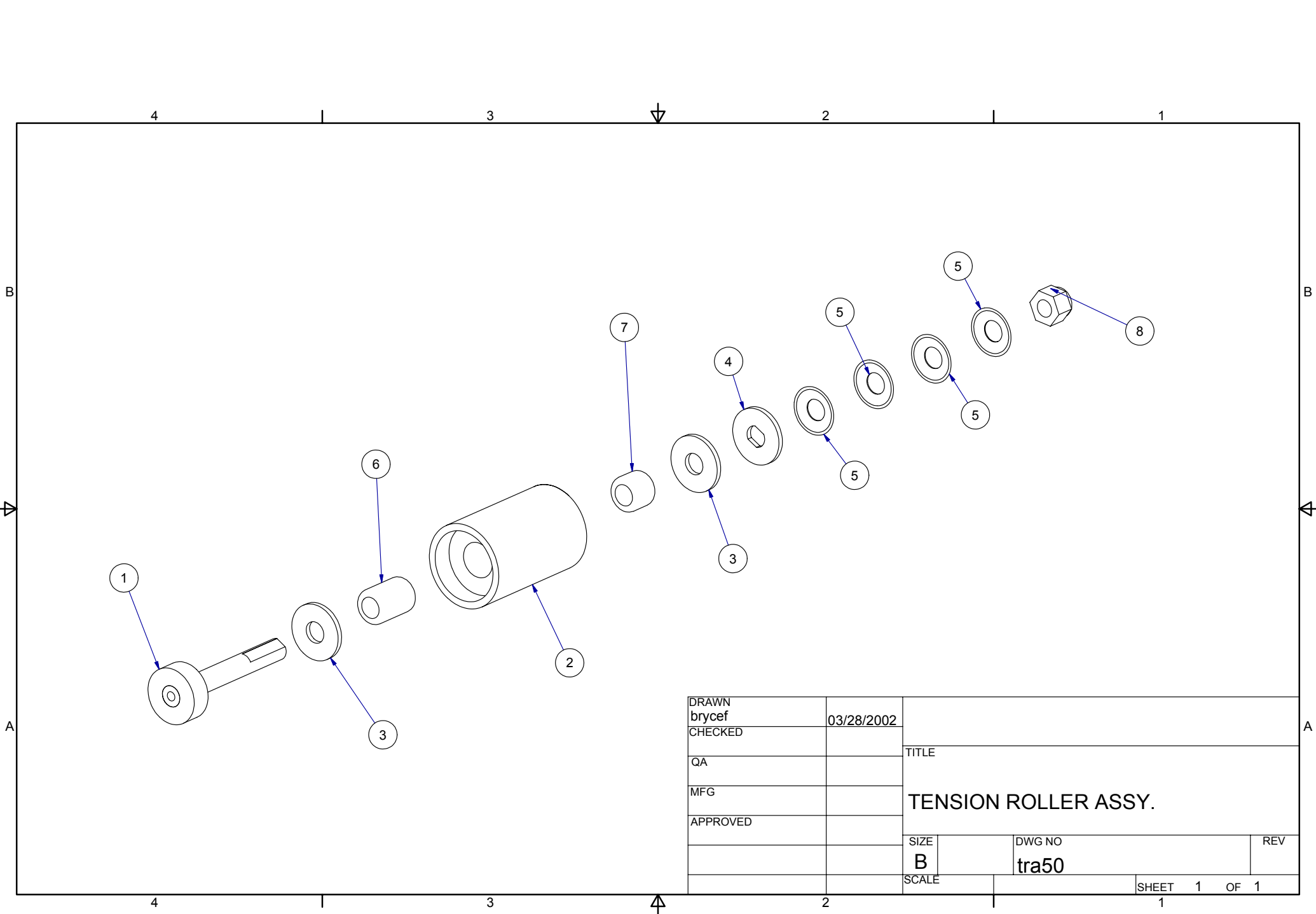
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-038-3	THREADED SUPPORT SHAFT
2	1	CAC50-016-3	BLOCK – KNIFE ARM SPRING
3	1	PSC510	BUSHING
4	1	PSC321044-3	BUSHING
5	1	PSC321046-4	STOP NUT
6	1	X111-PS	SPRING
7	1	PSC321045-4	SPRING GUIDE
8	1	AV960C616C	FLAT WASHER
9	1	-----	HEX NUT M6
10	1	-----	HEX NYLOCK NUT M6



DRAWN	brycef	04/04/2002		
CHECKED			TITLE	
QA			KNIFE GUARD ASSY	
MFG			SIZE	DWG NO
APPROVED			B	KNIFE GUARD ASSY
			SCALE	REV
			1:1	
			SHEET	1 OF 1
			1	

KNIFE GUARD ASSEMBLY

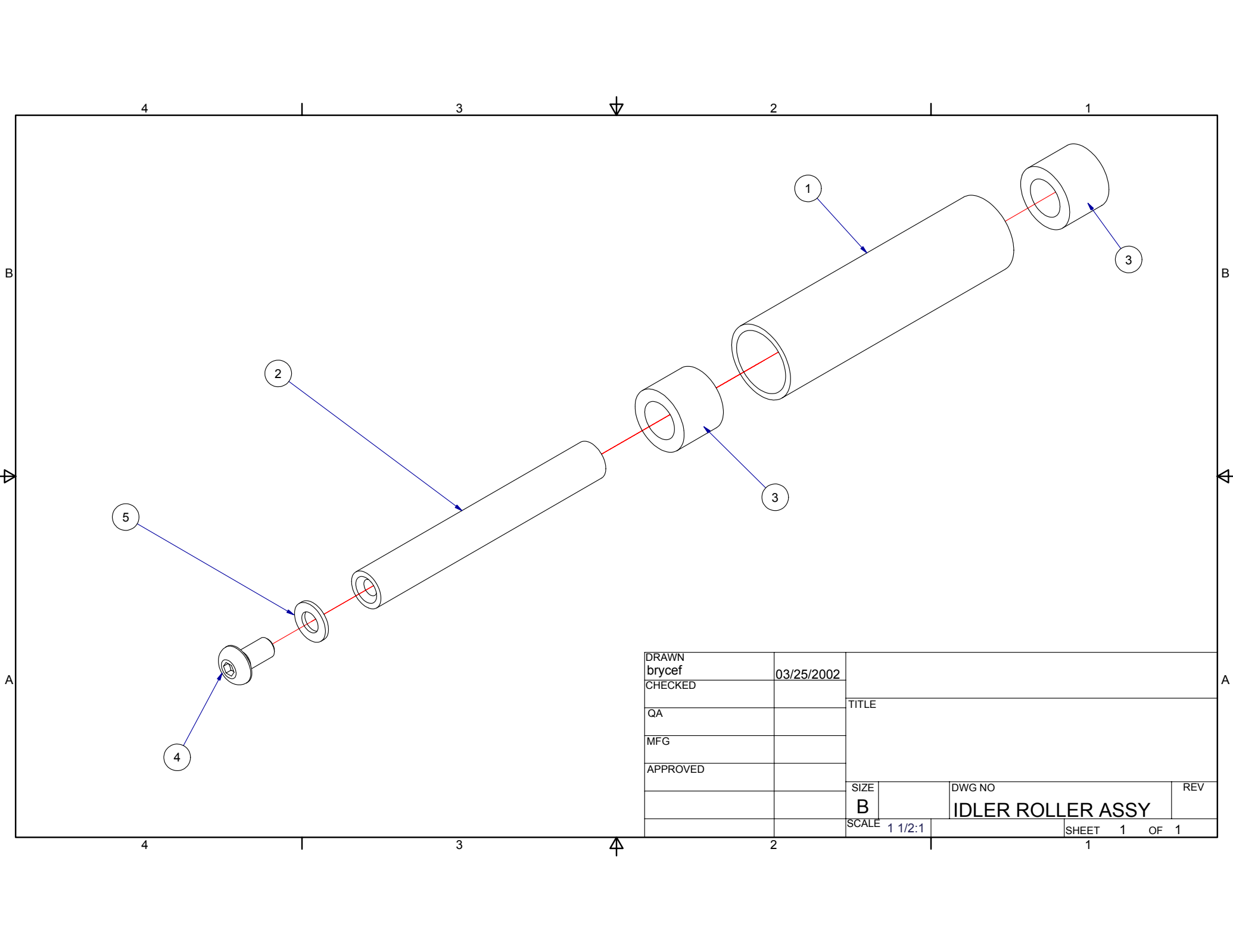
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-011-4	KNIFE GUARD
2	1	CAC50-048-3	KNIFE GUARD SHAFT
3	1	CAC50-040-3	SPACER CONNECTING ARM
4	1	CAC50-041-3	KNIFE GUARD SPACER
5	2	50186-039	BRONZE FLANGE BUSHING
6	1	PSC301110-3	SPACER
7	2	-----	BUT. SOC. CAP SCREW M5 X 10



DRAWN brycef	03/28/2002	TITLE	
CHECKED		TENSION ROLLER ASSY.	
QA		SIZE	REV
MFG		B	tra50
APPROVED		SCALE	SHEET 1 OF 1

TENSION ROLLER ASSEMBLY

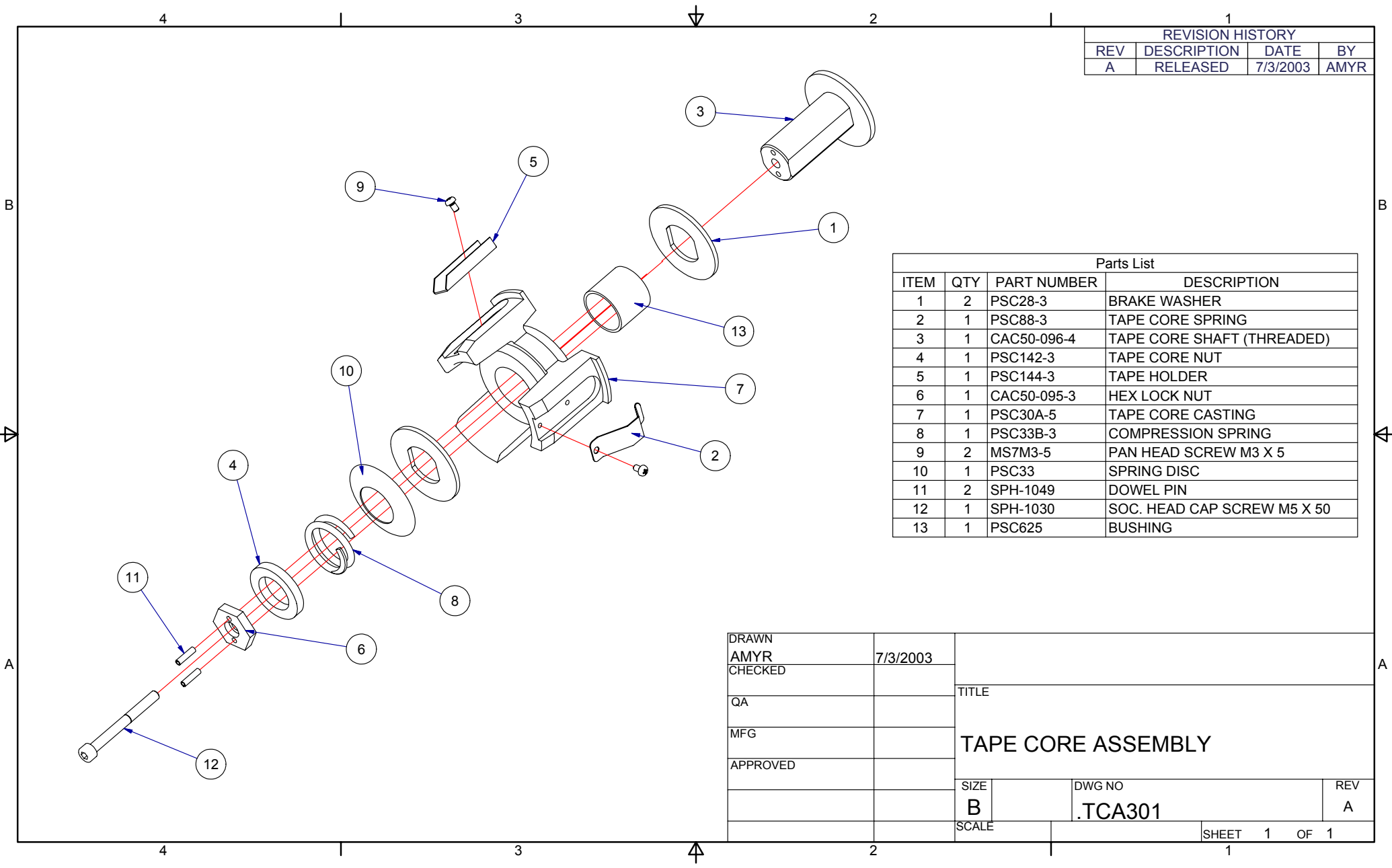
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CAC50-021-3	KNURLED ROLLER SHAFT
2	1	PSC321023-4	KNURLED ROLLER
3	2	PSC321031-3	BRAKE WASHER
4	1	PSC321032-3	LOCKING WASHER
5	4	PSC321039	SPRING WASHER
6	1	J205-PS	CLUTCH BEARING
7	1	J206-PS	NEEDLE BEARING
8	1	50299-028	NYLOCK HEX NUT 3/8-16



DRAWN	brycef	03/25/2002		
CHECKED				
QA			TITLE	
MFG				
APPROVED				
			SIZE	DWG NO
			B	IDLER ROLLER ASSY
			SCALE 1 1/2:1	SHEET 1 OF 1

IDLER ROLLER ASSEMBLY

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PSC49-3	IDLER ROLLER
2	1	CAC50-024-3	IDLER ROLLER SHAFT
3	2	PSC606	BRONZE BUSHING
4	1	-----	BUT. HS. SOC. SCREW M5 X 10
5	1	-----	WASHER M5



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
11	2	SPH-1049	DOWEL PIN
12	1	SPH-1030	SOC. HEAD CAP SCREW M5 X 50
13	1	PSC625	BUSHING

DRAWN AMYR	7/3/2003	TITLE		
CHECKED				
QA		TAPE CORE ASSEMBLY		
MFG				
APPROVED				
		SIZE B	DWG NO .TCA301	REV 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.