BOLT BODY ASS. COMP.

Bin Holders	Part	X	Part #	Tote Size	Dem. Of Bin Holder
	Firing Pin Ass.				
1	Bolt Plug		300368	1	Holder #1 **12h x 18w**
	Tumbler	x	300418	2	Lock Plunger
	Lock Plunger	x	201224	1	Tumbler
	Lock Spring	x	201217	2	Lock Spring
	Spring Retainer	x	300427	2	Spring Retainer
	Firing Pin	x	300334	3	Firing Pin Tip
	Firing Pin Tip	x	300335	2	Firing Pin Head
	Firing Pin Head	x	300336	2	Holder #2 **16h x 18w**
	Firing Pin Spring	x	300399	4	Firing Pin
					Firing Pin Spring
	Bolt Head Ass.				
2	Extractor	x	93712	2	**10h x 12w**
	Ejector	x	300342	2	
	Ejector Spring	x	300367	2	
	Ejector Pin	x	94555	1	
	Bolt Ass. Comp.				
3	Bolt Assembly Pin	x	300330	3	

83

Does a table need to have a hanger if it only has 1 bin assigned to that table?

BOLT Body Assembly Complete

TOTE #
5

FINAL BUILD ASS.

Part #	Description	Qty.	I 1	O 2	I 3	E 4	S 5	6	LBS.	Weight per tote	# of Stickers
F94084	Front Sights	1000			2				19.2	9.6	4
F94657	Front Sight Ramp	250			8				94.4	11.8	16
F28505	Front Sight Ramp Screw (2)	4000		2					5.6	2.8	4
F90906	Elevation Screw	2000		1					2.3	2.3	1
F94333	Rear Sight Aperature	1000			2				19.4	9.7	4
F103530	Rear Sight Base	250			8				77.6	9.7	16
F94335	Rear Sight Slide	1000			2				24.8	12.4	4
F90904	Windage Screw	2000	1						1.1	1.1	1
F28505	Rear Sight Base Screw (2)	4000		2					5.6	2.8	4
F94996	Sling Swivel Stud	1000			2				23.4	11.7	4
F104131	Front Takedown Screw	2000			2						4
F104133	Middle Takedown Screw	2000			2						4
F300425	Rear Takedown Screw	2000			2						4

Print (1) → F90906 Elevation Screw 2000

Print (1) → F90904 Windage Screw 2000

Print (2) → F28505 Rear Sight Base Screw (2) 4000

F300345 Bolt Stop 000

F300454 Recoil Bracket 000

Reciever Plug Screw 8000 #2

83

TRIGGER Ass. Comp.

Bin Holders	Part	Steps	X	Part #	Tote Size	Dem. Of Bin Holder
	Insert Ass.					
1	Threaded Insert	1		300347	3	
	Receiver Insert			300327	6	
	Trigger Ass.					
2	Trigger	13	x	109835	4	**18h x 19w**
	Trigger Connector	14	x	19461	3	
	Trigger Pivot Pin	15	x	300463	2	
	Pin Retaining Clip	16	x	300465	2	
						Holder #1 **12h x 24w**
						Side Plate Pin
3	Sear Safety Cam	9	x	15666	3	Trigger Eng. Screw
	Sear Spring	7	x	17047	2	Trigger Stop Screw
	Trigger Eng. Screw	3	x	300448	3	Trigger Screw Front
	Trigger Spring	6	x	15400	1	Trigger Spring
	Trigger Screw Front	5	x	17053	2	Sear Spring
	Trigger Stop Screw	4	x	300426	3	
	Sear Retaining Pin	11	x	300464	2	Holder #2 **12h x 20w**
	Pin Retaining Clip	12	x	300465	2	Side Plate
	Pivot Pin	10	x	300351	1	Sear Safety Cam
	Side Plate	8	x	300333	4	Pivot Pin
	Side Plate Pin	2	x	300328	2	Sear Retaining Pin
						Pin Retaining Clip
4	Safety	18	x	300408	4	**15h x 18w**
	Safety Spring	17	x	300407	3	
	Safety Pivot Pin	19	x	17043	2	
	Safety Snap Washer	20	x	17044	1	

BOLT BODY ASS. COMP.

Bin Holders	Part	X	Part #	Tote Size	Dem. Of Bin Holder
	Firing Pin Ass.				
1	Bolt Plug		300368	1	Holder #1 **12h x 18w**
	Tumbler	x	300418	2	Lock Plunger
	Lock Plunger	x	201224	1	Tumbler
	Lock Spring	x	201217	2	Lock Spring
	Spring Retainer	x	300427	2	Spring Retainer
	Firing Pin	x	300334	3	Firing Pin Tip
	Firing Pin Tip	x	300335	2	Firing Pin Head
	Firing Pin Head	x	300336	2	Holder #2 **16h x 18w**
	Firing Pin Spring	x	300399	4	Firing Pin Firing Pin Spring
	Bolt Head Ass.				
2	Extractor	x	93712	2	**10h x 12w**
	Ejector	x	300342	2	
	Ejector Spring	x	300367	2	
	Ejector Pin	x	94555	1	
	Bolt Ass. Comp.				
3	Bolt Assembly Pin	x	300330	3	

Does a table need to have a hanger if it only has 1 bin assigned to that table?

BOLT Body Assembly Complete

TOTE #
5

FINAL BUILD ASS.

Part #	Description	Qty.	T 1	O 2	I 3	E 4	S 5	6	LBS.	Weight per tote	# of Stickers
F94084	Front Sights	1000			2				19.2	9.6	4
F94657	Front Sight Ramp	250			8				94.4	11.8	16
F28505	Front Sight Ramp Screw (2)	4000		2					5.6	2.8	4
F90906	Elevation Screw	2000		1					2.3	2.3	1
F94333	Rear Sight Aperature	1000			2				19.4	9.7	4
F103530	Rear Sight Base	250			8				77.6	9.7	16
F94335	Rear Sight Slide	1000			2				24.8	12.4	4
F90904	Windage Screw	2000	1						1.1	1.1	1
F28505	Rear Sight Base Screw (2)	4000		2					5.6	2.8	4
F94996	Sling Swivel Stud	1000			2				23.4	11.7	4
F104131	Front Takedown Screw	2000			2						4
F104133	Middle Takedown Screw	2000			2						4
F300425	Rear Takedown Screw	2000			2						4

Print (1)
Print (1) →
Print (1) →
Print (2) →

F300345 Bolt Stop 000
F300454 Recoil Bracket 000
Reciever Plug Screw 8000 #2

83

TRIGGER Ass. Comp.

Bin Holders	Part	Steps	X	Part #	Tote Size	Dem. Of Bin Holder
	Insert Ass.					
1	*Threaded Insert*	1		300347	3	
	Receiver Insert			300327	6	
	Trigger Ass.					
2	Trigger	13	x	109835	4	**18h x 19w**
	Trigger Connector	14	x	19461	3	
	Trigger Pivot Pin	15	x	300463	2	
	Pin Retaining Clip	16	x	300465	2	
						Holder #1 **12h x 24w**
						Side Plate Pin
3	Sear Safety Cam	9	x	15666	3	Trigger Eng. Screw
	Sear Spring	7	x	17047	2	Trigger Stop Screw
	Trigger Eng. Screw	3	x	300448	3	Trigger Screw Front
	Trigger Spring	6	x	15400	1	Trigger Spring
	Trigger Screw Front	5	x	17053	2	Sear Spring
	Trigger Stop Screw	4	x	300426	3	
	Sear Retaining Pin	11	x	300464	2	Holder #2 **12h x 20w**
	Pin Retaining Clip	12	x	300465	2	Side Plate
	Pivot Pin	10	x	300351	1	Sear Safety Cam
	Side Plate	8	x	300333	4	Pivot Pin
	Side Plate Pin	2	x	300328	2	Sear Retaining Pin
						Pin Retaining Clip
4	Safety	18	x	300408	4	**15h x 18w**
	Safety Spring	17	x	300407	3	
	Safety Pivot Pin	19	x	17043	2	
	Safety Snap Washer	20	x	17044	1	

BOLT BODY ASS. COMP.

Bin Holders	Part	X	Part #	Tote Size	Dem. Of Bin Holder
	Firing Pin Ass.				
1	Bolt Plug		300368	1	Holder #1 **12h x 18w**
	Tumbler	x	300418	2	Lock Plunger
	Lock Plunger	x	201224	1	Tumbler
	Lock Spring	x	201217	2	Lock Spring
	Spring Retainer	x	300427	2	Spring Retainer
	Firing Pin	x	300334	3	Firing Pin Tip
	Firing Pin Tip	x	300335	2	Firing Pin Head
	Firing Pin Head	x	300336	2	Holder #2 **16h x 18w**
	Firing Pin Spring	x	300399	4	Firing Pin
					Firing Pin Spring
	Bolt Head Ass.				
2	Extractor	x	93712	2	**10h x 12w**
	Ejector	x	300342	2	
	Ejector Spring	x	300367	2	
	Ejector Pin	x	94555	1	
	Bolt Ass. Comp.				
3	Bolt Assembly Pin	x	300330	3	

Does a table need to have a hanger if it only has 1 bin assigned to that table?

Bolt Body Assembly Complete

TOTE #
5

FINAL BUILD ASS.

Part #	Description	Qty.	T 1	O 2	T 3	E 4	S 5	6	LBS.	Weight per tote	# of Stickers
F94084	Front Sights	1000			2				19.2	9.6	4
F94657	Front Sight Ramp	250			8				94.4	11.8	16
F28505	Front Sight Ramp Screw (2)	4000		2					5.6	2.8	4
F90906	Elevation Screw	2000		1					2.3	2.3	1
F94333	Rear Sight Aperature	1000			2				19.4	9.7	4
F103530	Rear Sight Base	250			8				77.6	9.7	16
F94335	Rear Sight Slide	1000			2				24.8	12.4	4
F90904	Windage Screw	2000	1						1.1	1.1	1
F28505	Rear Sight Base Screw (2)	4000		2					5.6	2.8	4
F94996	Sling Swivel Stud	1000			2				23.4	11.7	4
F104131	Front Takedown Screw	2000			2						4
F104133	Middle Takedown Screw	2000			2						4
F300425	Rear Takedown Screw	2000			2						4

Print (1) → F90906 Elevation Screw 2000

Print (1) → F90904 Windage Screw 2000

Print (2) → F28505 Rear Sight Base Screw (2) 4000

F300345 Bolt Stop 000

F300454 Recoil Bracket 000

Reciever Plug Screw 8000 #2

83

TRIGGER Ass. Comp.

Bin Holders	Part	Steps	X	Part #	Tote Size	Dem. Of Bin Holder
	Insert Ass.					
1	Threaded Insert	1		300347	3	
	Receiver Insert			300327	6	
	Trigger Ass.					
2	Trigger	13	x	109835	4	**18h x 19w**
	Trigger Connector	14	x	19461	3	
	Trigger Pivot Pin	15	x	300463	2	
	Pin Retaining Clip	16	x	300465	2	
						Holder #1 **12h x 24w**
						Side Plate Pin
3	Sear Safety Cam	9	x	15666	3	Trigger Eng. Screw
	Sear Spring	7	x	17047	2	Trigger Stop Screw
	Trigger Eng. Screw	3	x	300448	3	Trigger Screw Front
	Trigger Spring	6	x	15400	1	Trigger Spring
	Trigger Screw Front	5	x	17053	2	Sear Spring
	Trigger Stop Screw	4	x	300426	3	
	Sear Retaining Pin	11	x	300464	2	Holder #2 **12h x 20w**
	Pin Retaining Clip	12	x	300465	2	Side Plate
	Pivot Pin	10	x	300351	1	Sear Safety Cam
	Side Plate	8	x	300333	4	Pivot Pin
	Side Plate Pin	2	x	300328	2	Sear Retaining Pin
						Pin Retaining Clip
4	Safety	18	x	300408	4	**15h x 18w**
	Safety Spring	17	x	300407	3	
	Safety Pivot Pin	19	x	17043	2	
	Safety Snap Washer	20	x	17044	1	

Part Program: 300320 BOLT HANDLE 2 Date/Time: 08/28/2000 07:59:23
Inspector: Administrator CMM: CMM1

#1
TYPE: I.D.
NAME: RADIUS_LEFT

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
Y	-0.1991	-0.2000	0.0050	0.0050	0.0009	+
Z	2.5495	2.5440	0.0050	0.0050	0.0055	0.0005
RD	0.3469	0.3425	0.0020	0.0020	0.0044	0.0024
PS			0.0060		0.0111	0.0051

#2
TYPE: I.D.
NAME: RADIUS_RIGHT

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
Y	-0.2001	-0.2000	0.0050	0.0050	-0.0001	-
Z	2.5410	2.5440	0.0050	0.0050	-0.0030	-85
RD	0.3406	0.3425	0.0020	0.0020	-0.0019	---
PS			0.0060		0.0060	++++

#3
TYPE: BORE
NAME: BOLT_PIN_HOLE

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
X	0.1972	0.2000	0.0050	0.0050	-0.0028	---
Y	-0.1993	-0.2000	0.0050	0.0050	0.0007	+
DI	0.2502	0.2500	0.0015	0.0015	0.0002	+
PS			0.0060		1.0000	0.9940

#4
TYPE: I.D.
NAME: COUNTERBORE_BURR_RELIEF

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
X	0.1993	0.2000	0.0050	0.0050	-0.0007	-
Y	-0.2000	-0.2000	0.0050	0.0050	0.0000	-
DI	0.2817	0.2813	0.0020	0.0020	0.0004	+
PS			0.0060		0.0013	+

#5
TYPE: POINT
NAME: PIN_DEPTH

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
X	0.1956	0.2000	0.0050	0.0050	-0.0044	----
Y	-0.1993	-0.2000	0.0050	0.0050	0.0007	+
Z	2.2028	2.1770	0.0050	0.0050	0.0258	0.0208

Part Program: 300320 BOLT HANDLE 2 Date/Time: 08/28/2000 08:01:03
Inspector: Administrator CMM: CMM1

#1
TYPE: I.D.
NAME: RADIUS_LEFT

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
Y	-0.1991	-0.2000	0.0050	0.0050	0.0009	+
Z	2.5504	2.5440	0.0050	0.0050	0.0064	0.0014
RD	0.3479	0.3425	0.0020	0.0020	0.0054	0.0034
PS			0.0060		0.0130	0.0070

#2
TYPE: I.D.
NAME: RADIUS_RIGHT

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
Y	-0.2001	-0.2000	0.0050	0.0050	-0.0001	-
Z	2.5413	2.5440	0.0050	0.0050	-0.0027	---
RD	0.3410	0.3425	0.0020	0.0020	-0.0015	---
PS			0.0060		0.0054	+++

#3
TYPE: BORE
NAME: BOLT_PIN_HOLE

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
X	0.1973	0.2000	0.0050	0.0050	-0.0027	---
Y	-0.1993	-0.2000	0.0050	0.0050	0.0007	+
DI	0.2504	0.2500	0.0015	0.0015	0.0004	+
PS			0.0060		1.0002	0.9942

#4
TYPE: I.D.
NAME: COUNTERBORE_BURR_RELIEF

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
X	0.1994	0.2000	0.0050	0.0050	-0.0006	-
Y	-0.2000	-0.2000	0.0050	0.0050	0.0000	+
DI	0.2817	0.2813	0.0020	0.0020	0.0005	+
PS			0.0060		0.0013	+

#5
TYPE: POINT
NAME: PIN_DEPTH

	ACTUAL	NOMINAL	+ TOL	- TOL	DEV	OUT-TOL
X	0.1955	0.2000	0.0050	0.0050	-0.0045	----
Y	-0.1994	-0.2000	0.0050	0.0050	0.0006	+
Z	2.2030	2.1770	0.0050	0.0050	0.0260	0.0210

Elizabethtown Research Division — PARTS LIST #YYY

Date: 03/07/00

Model 710
Bolt Action
Centerfire Rifle R.H.

Supersedes Previous Model XXX Parts List #AAA

Sheet 1 of 2

Dotted line (- - -) indicates same part number

DWG. NO.	PART NAME	PART NUMBERS	30-06	270	7mm Rem Mag	300 Win Mag
	RAMAC #					
	DOCUMENT ENVELOPE ASSEMBLY	XXXX	----	----	----	
	Document Envelope	1649	----	----	----	
	Instruction Book	xxxx	----	----	----	
	Product Owners Card	1426	----	----	----	
	Remington Authorized Gunsmith	3413	----	----	----	
	Safety Booklet	3499	----	----	----	
	Remington Museum Flyer	3475	----	----	----	
	Oval Label	3491	----	----	----	
	CARTON ASSEMBLY		----	----	----	
	Box & Envelope Label (Label To Read "Model 710")	993002	----	----	----	
	NOTE: THE ABOVE PARTS ARE FOR PACKAGING ONLY					
C-305410-	**BARREL ASSEMBLY COMPLETE**	305410	305411	305412	305413	
C-305400-	**BARREL ASSEMBLY**	305400	305401	305402	305403	
E-305315-21	BARREL (Blank 300447)	305315	305316	305317	305318	
D-305465-	BARREL MARKING					
E-300340-19	RECEIVER	300340	----	----	----	
D-300401-A	**RECEIVER INSERT ASSEMBLY COMPLETE**	300401	----	----	----	
C-300400-	**RECEIVER INSERT ASSEMBLY**	300400	----	----	----	
1E-300327-17	RECEIVER INSERT	300327	----	----	----	
2E-300327-30						
A-300347-A	THREADED INSERT	300347	----	----	----	
C-300333-5	SIDE PLATE	300333	----	----	----	
A-300328-2	SIDE PLATE PIN (2)	300328	----	----	----	
C-15566	SEAR SAFETY CAM (Blk. C-91919)	15566	----	----	----	
B-300351-	PIVOT PIN (3)	300351	----	----	----	
A-17047	SEAR SPRING	17047	----	----	----	
C-300435-C	TRIGGER (Blk. 300436)	300435	----	----	----	
C-19461	TRIGGER CONNECTOR (Blk. C-91921)	19461	----	----	----	
B-17053	TRIGGER SCREW FRONT (Blk. B-91920)	17053	----	----	----	
B-300448-	TRIGGER ENGAGEMENT SCREW	300448	----	----	----	
A-15400	TRIGGER SPRING	15400	----	----	----	
A-300426-	TRIGGER STOP SCREW	300426	----	----	----	
D-300408-16	SAFETY	300408	----	----	----	
B-17043	SAFETY PIVOT PIN (Blk. B-91918)	17043	----	----	----	
B-17044	SAFETY SNAP WASHER (Blk. 200042)	17044	----	----	----	
B-300407-3	SAFETY SPRING	300407	----	----	----	
C-300345-	BOLT STOP	300345	----	----	----	
B-17034	RECEIVER PLUG SCREW (4)	17034	----	----	----	
B-300361-B	RECOIL BRACKET	300361	----	----	----	
B-300403-	**BOLT BODY ASSEMBLY**	300403	----	----	----	
C-300339-16	BOLT BODY	300339	----	----	----	
C-300370-C	BOLT HANDLE	300370	----	----	----	
D-300360-C	BOLT HANDLE BLANK	300360	----	----	----	
A-300329-2	BOLT HANDLE PIN	300329	----	----	----	
B-305390-2	**BOLT HEAD ASSEMBLY**	305390	----	305391	----	
E-300338-18	BOLT HEAD (30-06, 270)	300338	----			
C-300416-F	BOLT HEAD (7mm Rem, 300 Win)			300416	----	
D-300434-	BOLT HEAD BLANK	300434	----	----	----	
	EXTRACTOR					
C-93712	30-06, 270 (Blk. 93711)	93712	----			
C-97322	7mm Rem, 300 Win (Blk. 97321)			97322	----	
C-27340	EXTRACTOR RIVET			27341	----	
B-300342-2	EJECTOR	300342	----	----	----	
A-300367-	EJECTOR SPRING	300367	----	----	----	
A-94555	EJECTOR PIN	94555	----	----	----	
B-300330-	BOLT ASSEMBLY PIN	300330	----	----	----	
B-300404-A	**FIRING PIN ASSEMBLY**	300404	----	----	----	
D-300368-5	BOLT PLUG	300368	----	----	----	
B-300346-D	BOLT PLUG INSERT	300346	----	----	----	
B-300418-B	TUMBLER	300418	----	----	----	
D-300420-D	TUMBLER BLANK	300420	----	----	----	

Elizabethtown Research Division — PARTS LIST #YYY

Date: 03/07/00

Model 710
Bolt Action
Centerfire Rifle R.H.

Supersedes Previous Model XXX
Parts List #AAA

Sheet 2 of 2

Dotted line (- - -) indicates same part number

DWG. NO.	PART NAME	PART NUMBERS	30-06	270	7mm Rem Mag	300 Win Mag
	FIRING PIN ASSY CONTINUED					
C-201224	LOCK PLUNGER (Blk. 201223)	201224	----	----	----	
A-201217	LOCK SPRING	201217	----	----	----	
A-300427	SPRING RETAINER	300427	----	----	----	
C-300334-A	FIRING PIN	300334	----	----	----	
C-300335-2	FIRING PIN TIP	300335	----	----	----	
C-300336-G	FIRING PIN HEAD	300336	----	----	----	
A-300399-E	FIRING PIN SPRING	300399	----	----	----	
	FRONT SIGHT					
C-15373	30-06, 270 (Blk. 90393)	94084	----			
B-14659	7mm REM. 300 WIN				94095	----
B-28510	FRONT SIGHT RAMP (Blk. B-16724)	94657	----	----	----	----
B-28505	FRONT SIGHT RAMP SCREW (2) (Blk. 90347)	28505	----	----	----	----
B-103145	**REAR SIGHT ASSEMBLY**	103145	----	----	----	----
A-90906	ELEVATION SCREW	90906	----	----	----	----
C-93905	REAR SIGHT APERATURE (Blk. C-93906)	94333	----	----	----	----
C-103530	REAR SIGHT BASE (Blk. 94023)	103530	----	----	----	----
C-93904	REAR SIGHT SLIDE (Blk. C-93907)	94335	----	----	----	----
B-90904	WINDAGE SCREW (Blk. 91911)	90904	----	----	----	----
B-28505	REAR SIGHT BASE SCREW (2) (Blk. 90347)	28505	----	----	----	----
B-305455	**STOCK ASSEMBLY COMPLETE**	305455	----	----	----	----
C-300437	STOCK	300437	----	----	----	----
B-15161	FRONT SCREW BUSHING (Blk 91915)	15161	----	----	----	----
C-97971	GRIP CAP	97971	----	----	----	----
D-97973	RECOIL PAD	97973	----	----	----	----
C-97972	RECOIL PAD BACKER	97972	----	----	----	----
A-98008	RECOIL PAD SCREW (2)	98008	----	----	----	----
C-300362-8	MAGAZINE LATCH	300362	----	----	----	----
B-300398-B	LATCH SPRING	300398	----	----	----	----
B-300371-A	LATCH PIVOT PIN	30037	----	----	----	----
B-15358	SLING SWIVEL STUD (2)	94996	----	----	----	----
C-104125	FRONT TAKE DOWN SCREW (Blk. 104141)	104131	----	----	----	----
C-104125	MIDDLE TAKE DOWN SCREW (Blk. 104142)	104133	----	----	----	----
B-300425-	REAR TAKE DOWN SCREW	300425	----	----	----	----
B-305395-	**MAGAZINE ASSEMBLY**	305395	----	----	----	----
E-300363-LA	MAGAZINE BOX	300363	----	----	----	----
D-300364-16	MAGAZINE FOLLOWER	300364	----	----	----	----
D-300365-20	MAGAZINE BOTTOM	300365	----	----	----	----
B-300406-	BOTTOM ARTWORK					
C-300405-	MAGAZINE SPRING	300405	----	----	----	----
	FOR ACCESSORY SALES					
D-300441-A	SCOPE RAIL	300441				
B-28505	SCREW (4 REQ'D)	28505				

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Golemboski, Matt R.

From: Bristol, II Ronald H.
Sent: Friday, March 31, 2000 1:15 PM
To: Keeney, Mike; Golemboski, Matt R.

I let the folks in consumer service see the 710 today for the first time

Their key questions are as follows:

- Chemical effect on synthetic liner
- Bolt dragging on comb of stock
- Rough lock up
- Bolt stop - spring loaded or really this loose in final version
- Magazine box side need some nurling to ease in pull out of box
- Effect on liner of ice, snow etc..
- How can magazine be disassembled for cleaning
- any specil cleaning reuirements for gun given the sytnhetic liner
- Safety need cosmetic improvement
- willfire and safe be marked on stock and if so how???
- Locking lugs on firing pin are very small - any concern about it holding up in a blow back
- Bolt head attachment to bolt body - will pin stand up over time

Ronald H. Bristol II
VP & GM, Firearms
Tel: 336.548.8875
Fax: 336.548.7875
email: bristolrh@remington.com

4/18/00

To: M. Golemboski
From: J. Helmer

Material Handling Update

* One barrel basket here, other due now.

* Black Oxide Racks:

    * Three barrel racks complete, one to be made outside.
    * One Bolt Body/Bolt head rack complete, one to be made outside.

* Barrel Cell truck:

    * One truck made, needs handles.
    * Three more to be made here.

* Barrel Trucks:

    * Three frames have been made.
    * One frame is being completed with bottom, middle and top installed to checkfit of barrels (vertical). Truck is being designed to convert from M/710 barrels to M/597 barrels. The top tray will change only.

* Trays and Totes:

    * Janice has communicated with drake and ordered four totes to check color (BLUE). Drake can possibly give us all the trays and totes that we need in BLUE.

* Parts Rack:

    * Janice and Brian have one sample Parts Rack. This rack is proposed to hold the monthly supply of parts needed for monthly assembly build. For example – one parts rack would be issued to assembly for the month and Janice would have another for the next months issue.

* Assembly Gun racks:

    * It is proposed to use the same style racks as currently being used for the M/597.

* Ammo Handling:

    * Proposed to purchase synthetic type push trucks (like current stores & quality push trucks) for dispensing of daily needed ammo from stores to the gallery.

Remington Arms Company 870 Remington Drive, P.O. Box 700, Madison, NC 27284-0700

Date: **04/25/00 9:43 AM**

Number of pages including cover sheet: **2**

FAX

To:

Matt Golemboski

Phone:

Fax phone: 270-8563233

CC: Mett Morgan

From:

Drew Kohler

Phone: 336-548-8599

Fax phone: 336-548-7799

Internet: KOHLERAA@REMINGTON.COM

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

Tasco scope and rings info.

DK

MF0541

tasco

Mark J. Shore
DIRECTOR OF SALES NORTH AMERICA

2819 COMMERCE PARKWAY, MIRAMAR, FL. 33025
P.O.BOX 26900, PEMBROKE PINES, FL. 33026
PHONE: (954) 252-3405 / FAX: (954) 252-5705
mshore@tascosales.com

April 20, 2000

Mr. Drew Kohler
Remington Arms Co., Inc.
870 Remington Drive
Madison, NC. 27025

Dear Drew:

Thank you for the opportunity to further grow our business partnership. Tasco can supply Remington with a Pronghorn 3X-9X32 with or without rings based on the below listed 2000 quote. I sent a scope and ring mounts to your attention via overnight. They will arrive Friday, please give me a call when the merchandise arrives and let me know that you received it or if you have any questions.

Item No.	Description	2000 Cost
PH39X32	Pronghorn 3X-9X32 riflescope	$22.00
791C	1" standard ringmounts	$ 3.00

Based on Remington's minimum purchase of 5000 units for the year 2000, we will accommodate the above pricing and prepay the freight.

Thanks again.

Best regards,

Mark Shore
Director of Sales
Tasco WorldWide, Inc.

Remington.

REMINGTON ARMS COMPANY, INC.
22 RIFLE TRAIL
P.O. BOX 99
HICKORY, KY 42051

TEL: 270-856-4200
FAX: 270-856-3233

4/28/00

Mr. Larry Crouch
Crouch Building Associates
P.O. Box J
Mayfield, KY 42066

Larry,

For your records, please use contract Purchase Order # M017602 to begin construction of the 100 yard range.

A formal hard copy of this contract will be faxed and mailed to you on Monday, May 1st. Per our phone conversation, this contract will be written with the option of Remington subcontracting the electrical work. The final decision of who is doing this work will be given to you as soon as possible.

This letter is to allow you to begin your project, without further delay.
If you have any questions after reviewing your hard copy of the contract, please feel free to contact me at the plant. Phone: 856-4204

Sincerely,

Metty E Morgan

Metty E. Morgan
Materials Manager
Remington Arms Company, Inc.

cc: Matt Golemboski

Golemboski, Matt R.

From: Cook, Todd D.
Sent: Monday, February 28, 2000 12:39 PM
To: Keeney, Mike; Golemboski, Matt R.
Subject: Mold Try-out on Bolt Plug

Mike & Matt,

Mike Bennett called from Kellems & Coe, and they want to do a trial on the new Bolt Plug mold on Friday. They wanted some help getting the material--which as you know has been specified the same as the stock, but in black.

I do NOT have the currently specified material, RTP 199X83039E, in black. However, I did have 199X83039D in black; and I shipped it to Kenny at Kellems & Coe, so they will have it in time for the Friday trial.

The "D" version differs from the currently specified "E" grade only in the UV stabilizer--which will not effect the color, shrink, or properties (other than UV stability). "D" should be fine for tool check out for dimensions and for testing. The correct thing to do is to order the "E" material and re-sample for T&P; but I am not convinced that would be necessary, as we do no long-term weathering tests in T&P. For EET & even DAT, I think these parts will be fine. We just need to make sure that the final product has the "E" version for added UV stability.

ASIDE
This bolt plug material is a common material with M/597 Magnum Stocks, so there may be some volume discounts available. If you need more info on the specifics, let me know.

Todd

3/17/2000

To: S. Truax
From: E. M. Douglass

Here are some suggestions and considerations regarding the new range design. I expect to have some additional input on exhaust and electrical items for you Monday.

1. Consider modifying the entry to the 100 yd range to allow access from the shooters area without shutting down the proof/test area.
2. Doors to the shooting area should have Best locks so that the area can be secured when not in use and should be connected to the ADT security system.
3. Provide some type of partition (fixed or movable) between shooting positions faced with sound absorbing material.
4. Line at least a portion of the South wall of the 40 yd target area with wood. The wood should be easily removable for replacement when necessary and should be installed in lengths that can be contained in a 55 gallon drum for disposal.
5. Increase the thickness of the South wall of the 40 yd target area to 18".
6. Installation of a sliding door or other type of barrier should be considered for future installation to contain shotgun pellets.
7. Provide smoke detectors in the shooters area and ammo storage area and connect to the ADT system.
8. Provide panic alarm buttons at each shooting position that are connected to the ADT system.
9. Keyed (Best) locks should be provided for all exterior range doors in addition to the magnetic interlocks. The exterior doors should also be monitored by the ADT system.
10. Permanent markers should be installed at the 40 and 100 yd points.
11. Your Factory Mutual representative should review the range plans.
12. The roof installation should have at least a 10 year total system warrantee and a 20 year membrane warrantee. .
13. Concrete surfaces should be rubbed, any voids filled and then coated with paint or other suitable material.
14. Add steps at snail to allow safe access to 100 yd target area without having to go outside range.
15. Compressed air or nitrogen will be needed to blow down the dust collector filters.
16. The leading edge of the snail should be recessed into the concrete floor.
17. Any electrical panels, switchgear, breakers, etc. required for the range should be consistent with the brands currently used in your plant.
18. If you need any help determining what equipment and personal protective gear is needed for range cleanup I'm sure that Ron Gurtowsky can be of assistance.

Golemboski, Matt R.

From: Helmer, Gerald A.
Sent: Tuesday, January 18, 2000 11:16 AM
To: Truax, Sheldon F.
Cc: Golemboski, Matt R.; Zajk, Joseph J; Chavis, William T.; Gooch, Jim C.; Morgan, Metty E.
Subject: 3 Sided cart

Shelly, Jimmy Gooch has quoted to build one three sided cart for the M/710 barrels after cutoff. Jimmy's price is approx. $600.00 (versus a vendor price of $1,066.05). He has ordered material this morning which is all due this week. Estimated completion of the cart is 2/1/00.

Golemboski, Matt R.

From: Keeney, Mike
Sent: Tuesday, January 18, 2000 8:19 AM
To: Morgan, Metty E.
Cc: Golemboski, Matt R.
Subject: RE: F300346

Matt and Mett,
I misspoke yesturday, I did not think the drawing called out a fillet at the corner of the "ears" and main body. I was thinking it was a sharp intersection but when I pulled the drawing in preparation for a conversation with Swiss Precision Machining I noticed that we have spec'd a .02" fillet which will work fine. I had trouble with the protos at .062" radius, but .02 will not cause problems. If Swiss did not take exception to the .02 radius on their quote, i do not need to discuss it with them. Mett can go ahead and place the proto order to the drawing B-300346 (no rev. levels).

sorry for the confusion,
Mike

.....

From: Morgan, Metty E.
Sent: Monday, January 17, 2000 3:35 PM
To: Keeney, Mike
Subject: F300346

01/17/2000

Mike, **Bolt Plug Insert**

Matt said you need to talk with the supplier before I ask for 300 prototype parts. These would be coming from Swiss Precision Machining, phone 847-647-7111 contact is Mr. Joe Haupers. Let me know when you have all the technicals squared away and he can call me and we will take care of the Purchase Order.

Thanks,
Mett
Mayfield

Golemboski, Matt R.

From: Cook, Todd D.
Sent: Thursday, February 10, 2000 6:59 AM
To: Golemboski, Matt R.; Zajk, Joseph J; Keeney, Mike
Subject: New Gray Plaques

Update on M/710 Gray Material Development:

I have a promise date of 2/23/00 for the plaques of the new gray. It's supposed to be half way between the ear muff gray and the M/597 gray. Once plaques arrive, I will check to make sure that is true and forward some to Hickory. Hopefully, upon examination, it is half way between the two colors in question and all of us can approve moving forward. The next step would be ordering a quantity to sample stocks (M/597 prototype has been discussed and is available at Par 4 for this purpose).

There is a cost reduction angle to this that I want to discuss briefly. The RTP 199X 83039D is shrink-matched to the current M/597 molds. It is chemically-coupled but has no UV stabilizer. We asked RTP to add that and get new pricing together for a one-to-one comparison. The new compound, RTP 199X83039E, is available for sampling. I think we should get some of each. UV Stabilizer is $0.05/lb adder, but will dramatically improve resistance to fading and property retention for our gun-in-the-pickup-rack customers. The new pricing should still reflect a cost savings, although not as dramatic. I am guessing it will come in around $.83 initially, with some negotiations, perhaps down to $.80.

That's my update. Comments and Feedback welcome.

Todd

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Forging Inspection using Quasar Resonant Inspection

photo

A forging operation in the United States recently installed two fully automated Quasar systems to 100% inspect hub bearing component forgings. The management was driven by customer requirements for improved quality at minimum cost. They evaluated several NDT methods and chose the Quasar system for three reasons: more reliable defect detection, reduced scrap rate and reduced labor cost. This article describes the results of the installation after several months successful operation.

Reliable defect detection

The Quasar system has eliminated the false acceptance of defective parts due to human error and magnetic particle equipment misapplication or malfunction. Customers have reported to plant management that for the first time they are receiving forgings with no significant defects. This forging operation, which supplies safety critical automotive components, was caught between customer demands for "zero defects" or "six sigma" and the generally accepted estimate that the typical magnetic particle operator detects only about 80% of the defective parts. Quasar offers the best way to realistically meet customer demands.

Reduced scrap rate

Scrap rate is down compared to the previous magnetic particle inspection because superficial mars, scratches, thin flaps or overlaps of metal that do not extend structurally into the forging, and other surface blemishes are saved because they do not alter the structural integrity of the part. Resonant Inspection is based on structural discrimination and not visual indications. Typically, well over 50% of the forgings rejected by magnetic particle inspection operators are acceptable when reviewed by plant management. The percentage of false rejects exceeded 80% of the total rejects in several forging operations.

Reduced labor costs

The most obvious effect from a management perspective is the reduction in the cost of inspection. The operation had been using an outside magnetic particle inspection service at a cost of $0.32 to $0.42 per part. More recently, they moved the service in-house at and reduced the cost to $0.18 per part. With the Quasar system, their cost is $0.04 per part, including labor and depreciation. This is a typical situation where the Quasar system pays for itself in terms of labor cost, in less than a year.

Automated material handling

In each of the two systems, the parts are manually loaded onto a turntable. A fully automated pick-and-place system moves the hub forgings from the turntable to the Quasar Production Nest. The nest is designed to provide an compatible interface with virtually any kind of material handling system. As long as the part is brought to within about ¼ inch (6 mm) of the target drop location, the Production Nest is designed to "catch" the part and position it for testing. The Production Nest also provides shock and vibration isolation from the production machinery and senses the part temperature to compensate for variations.

The Quasar systems detect all structurally significant defects:

- Structural weakness caused by seams or inclusions in the steel feed stock.
- Cracks from any cause
- Structural weakness caused by forging machine problems such as bar end sticking.
- Forging machine part positioning problems such as mis-strikes or double strikes.
- Eccentric piercing or forming.
- Material related problems, such as the wrong bar stock or out-of-spec steel.
- Material problems related to accidental quenching from tool-cooling sprays.
- Heat treatment problems, which cause unacceptable or uneven hardness.
- Missed operations.
- Underfill, underweight or overweight if it is significant.
- Significantly distorted or bent parts.

Computer controlled sorting decisions

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After the Production Nest receives the part, the automated computer controlled Quasar RI-2000 system takes about three seconds to measure a few key resonant frequencies. The computer then performs what amounts to a structural analysis of that part, based on the resonances measured. If the part falls within the acceptable limits for material, dimensions and freedom from structural defects, the part is accepted, and proceeds to packing and shipping. If the part is defective in any of the ways listed above the part is rejected, and the material handling system places the part in a reject bin. The entire test cycle takes about 7 seconds. The throughput is up to 500 parts per hour for each of the two systems. The throughput for a given application is a function of the part's size and complexity and the relative defect size. Throughputs up to 1200 parts per hour are possible with a dual nest system. Quasar has delivered multiple unit systems with throughputs up to 7500 parts per hour.

Quasar designed and supplied these two systems on a turnkey basis and would be pleased to do the same for your operation, or we will work with your preferred material handling supplier. Please call Quasar to learn more about how this technology can benefit your operation. We want to demonstrate the Quasar capability in your facility, on your parts.

Quasar's software makes it possible to inspect for defects that would be masked by the effect of normal product variations. The patented **pattern recognition** method detects localized structural differences that signal a crack or other defect. Material properties differences that are out of specification limits are also rejected. The responsible quality or production manager sets the acceptance limits, and the Quasar system enforces those standards. The same decision is made every time by the computer, with no chance for human judgment errors. Because Quasar **quantitatively** measures the **degree of defectiveness,** the greater the structural effect of the defect the greater the rejection measurement. The forging plant management decides where to "draw the line" for acceptance and rejection for each product and for each customer. The engineer responsible for the Quasar systems uses the Quasar software tools to set up the sorting to those standards.

Questions and Answers About Quasar

Q. I have never heard of Quasar International Inc. What kind of company is it?
A. Quasar is a privately held corporation, based in Albuquerque New Mexico. Quasar personnel design, produce and apply software and hardware tools of a unique nondestructive inspection technology used by factories around the world.

Q. What is this Quasar technology?
A. The Quasar system measures the frequencies of the natural mechanical vibration resonances and uses these measurements to compare the structural characteristics of similar parts. The relationship or "pattern" of these resonances determines which of these parts are within production tolerances and specifications and which are outside of these limits, and therefor are considered "defective" and should be rejected.

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Q. How are these frequencies measured?
A. The part to be tested is generally supported on three transducers. One of the transducers is driven by an alternating current with discrete frequency steps, over a range of specific frequencies, in narrow frequency bands chosen to excite specific expected resonances. Two other transducers sense the vibration motion of the part and generate an alternating current, at the frequencies determined by the vibration of the part. This signal is then filtered to pass only the frequency that is driving the transducer and that is exciting the part. This effectively measures the response of the part only to the exciting frequency, and ignores all the other frequencies that may be included in the signals from the sensing transducers.

Q. Why is this method used?
A. Because it quickly measures the frequencies of the resonances of the part more repeatably than any other practical method. It operates well in an industrial environment, and provides the data that enable the Quasar system to detect small differences that identify significant structural characteristics or defects.

Q. How does the Quasar system use the resonance data?
A. The Quasar system analyzes the frequency characteristics of many good and defective parts ("defective" as defined by the production and quality management) and recognizes patterns that correlate with the structural characteristics of these parts.

Q. Why use this pattern recognition method instead of just finding one or two frequencies that correlate with the presence of defects?
A. Acceptable variations in material, dimensions, heat treat and other attributes of a parts make more difference in frequencies than some of the small cracks, inclusions and other defects that disqualify the part for reliable use. It's easy to demonstrate how one or two frequencies will sort a small group of parts, or parts from one production run, but that does not work in a real production environment.

Q. How does this pattern recognition approach work?
A. The structural characteristic of many good parts, including those with a representative range of acceptable production variations, defines many acceptable patterns for good parts. Then, using the data from a variety of defective parts, the patented Quasar pattern recognition software detects the frequency patterns that only reject the defective parts.

Q. What is a clear way of explaining this sorting method?
A. One way of looking at this is to say that the resonant frequencies of a part are higher if the material is stiffer, and this overall stiffness creates a pattern of higher frequencies. A crack in one area of the part tends to lower the natural resonant frequency only of that area. That breaks the pattern, which is recognized by the Quasar system. This is really a structural comparison or structural analysis.

Q. What about a part with bad heat treat or the wrong material?
A. Material properties differences that are out of specification limits are also rejected, because they are so far from the examples of the good parts that even though they effect the entire part, they break the pattern allowed for good parts.

Q. Who sets the standard of acceptance?
A. The responsible quality or production manager sets the acceptance limits, and the Quasar system enforces those standards. The same decision is made every time by the computer, with no chance for human judgment errors. Because Quasar quantitatively measures the degree of defectiveness, the greater the structural effect of the defect the greater the rejection measurement.

Q. How are these standards brought to the factory floor?
A. The plant management decides where to "draw the line" for acceptance and rejection for each product and for each customer. The engineer or operator responsible for the Quasar systems uses the Quasar software tools to set up the sorting to those standards.

10Jan2000

#300333 - Side Plate

OP #	PROCESS DESCRIPTION	MACHINE DESCRIPTION	Capital $	Ops. $	Depart. Number	Depart. Labor $	Total % Overhead	Std. Run Hours	Material $	Labor $	Fixed Overhead $	Variable Overhead $	Total Overhead $	Oper. Cost
	Blank Material - Stamping		$ 9,300.00						$ 0.09					$ 0.09
	Gaging (vendor and Remington)			$ 500.00	Vendor									
10	Black Oxide Color		$ -	$ -	9551	$ 18.39	240.20%	0.000001	$ -	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
	Totals		$ 9,300.00	$ 500.00				0.000001	$ 0.09	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.09

Rev6-est

Sheffield Measurement
P.O. Box 1127
Dayton OH 45401-1127 USA

Phone: 937 259 5257
Fax: 937 254 5054
www.giddings.com

Sheffield Fax

To: Matt Golemboski

At: Remington Arms Co., Inc.

Fax Number: 270-856-3233

From: Jim Miller

Date: October 25, 1999

Subject: Revised part prog. quote

Total pages 4
(including cover page)

If you do not receive all pages,
Please call back as soon as possible to:
937 259 5257

Matt,

Here's the revised copy of your part program quotation for MeasureMax. I look forward to hearing from you soon. In the meantime, I'll have our retrofit department work on your CMM retrofit quotes. I just found out there is a discount for multiple CMMs. So let me know via email how many you want retrofitted. Per the contract, they will all be done at the same time, so keep that in mind.

Any questions, give me a call or email (jpmiller@sheffield-cmm.com).

Sheffield Measurement
721 Springfield Street
Dayton OH 45403 USA
P.O. Box 1127 Dayton OH 45401-1127 USA

Phone: 937 254 5377
Fax: 937 254 5054
www.giddings.com

Sheffield

REMINGTON ARMS COMPANY
22 Rifle Trail
Hickory, KY 42051
Matt Golemboski
Engineering Manager

File Number	13306901
Date	October 26, 1999
Inquiry Date	
Inquiry No.	
FOB	Dayton, OH
Approx. Delivery	Noted Within
Terms	Noted Within

Item	Description	Qty	Price/Unit
	V1a Inspection Part Program : Inspection program for Remington Arms Receiver Insert Part #300327 including Probe Calibration Program. PRICE	1	$5,565.00
	NOTE: Any requested additional hours spent at Remington Arms facility will be at the current published rate of $120.00 per hour. In addition, all extra business expenses (transportation and living) incurred for the services performed at your facility will be billed at actual cost.		
	PROJECT SCOPE / REQUIREMENT ITEMS: 1. The complete part program shall have all features measured which where marked on Remington part print 300327 sheets 1 & 2.		
	2. Part/S and the latest part print/s are required for part program development.		
	3. A Gage R & R study was not requested for the Recieiver Insert #300327. If one is needed it will be quoted at that time.		
	4. Schedule for delivery of the Part Program will be determined based on receipt of order and the above stated conditions.		
	NOTE: Any dimensional inspection referenced above are to be supplied as follows: Note 1: The Part Inspection Program will perform geometric tolerance evaluation for measured part features using standard Sheffield Measurement routines as described in the MLB programming documentation for the CMM System. Note 2: The complete Part Inspection Program to be written in MeasureMax (Microsoft Visual Basic 6.0) for use on your Sheffield Measurement CMM System. Note 3: One (1) copy of the Part Inspection Program will be supplied on 3.5" Floppy storage media compatible with the DirectInspect computer system. Note 4: Technical discussions will be required with Remington Arms personnel to establish parameters for the dimensional inspection. These parameters will include		

PLEASE REFER TO OUR FILE NUMBER ON ANY CORRESPONDENCE & PURCHASE ORDER RELATING TO THIS QUOTATION

MF0555

Sheffield

File # 13306900 Page #2

Item	Description	Qty	Price/Unit
	datum establishment, number of points required to properly inspect a feature, and customer interpretation of print / part features. Note 5: Customer requested inspection modifications after the initial discussions may result in a quotation for additional charges which would be incurred to meet any requested changes. Note 6: Part Program written for inspection shall assume for the part to be placed in a fixed orientation and location on the CMM as agreed to by Sheffield Measurement Representative and your personnel. Note 7: Probe configurations used with the Part Inspection Program will be compatible with Renishaw a PH6, TP200 and Stylus Changer furnished on Remington Arms CMM. Note 8: Technical visits to Remington Arms Co., Inc. facility by a Sheffield Measurement Representative engineer will be at the current published rate of $120.00 per hour for services performed on location. In addition, all transportation charges, living and other normal incidental expenses incurred for the services performed at your facility will be billed at actual cost. T1 **STANDARDS** The machine and accessories proposed in the enclosed quotation are largely standard commercially offered devices built to Giddings & Lewis Sheffield Measurement standards and specifications. Although it is the intent of Sheffield Measurement to provide products which meet applicable Government and Commercial standards, we cannot guarantee total compliance with all Commercial and Government standards and specifications other than those formally acknowledged by written agreement from Sheffield Measurement. Any attempt to completely conform to Buyer's specifications and requirements may require design and manufacturing changes which would result in a significant increase in the price charged for this equipment or additional charge to provide non-standard items being requested in your specifications and requirements. T4 **PAYMENT TERMS** All payment terms are subject to credit review. (a) Credit cards accepted - VISA Mastercard and American Express. (b) Repair parts, service work and software license - Net cash due 15 days from invoice date. (c) Standard products selling for less than $50,000 - Net cash due 30 days from invoice date.		

PLEASE REFER TO OUR FILE NUMBER ON ANY CORRESPONDENCE & PURCHASE ORDER RELATING TO THIS QUOTATION

Sheffield

File # 13306900 Page #3

Item	Description	Qty	Price/Unit
	(d) Standard products selling for more than $50,000 and available for shipment less than 12 months from order date shall be subject to the following progress payments.		
	1) 25% due with purchase order		
	2) 65% due in 15 days from date of shipment		
	3) 10% due in 15 days from date of acceptance, not to exceed (60) days from date of shipment, in accordance with the standard calibration procedure as indicated in the specifications of Sheffield Measurement.		
	Note: All purchase orders should be made out to Giddings & Lewis Sheffield Measurement and mailed to P.O. Box 1127, Dayton, OH 45401.		

TERMS OF QUOTATION

Prices quoted are firm for ninety (90) days from date of Seller's quotation, are thereafter subject to change without notice, and do not include costs relating to installation unless specifically so quoted.

This quotation is based on the attached Giddings & Lewis Terms and Conditions of Sale.

James P. Miller
Application Engineer

STERLING SINTERED TECHNOLOGIES, INC.

P.O. BOX 1057 • WINSTED, CONNECTICUT 06098
(860) 379-2753 • FAX: (860) 738-0664

QUOTATION

NUMBER 2965A DATE 10/06/99

TO REMINGTON ARMS CO., INC.
ATTN:MATT GOLEMBOSKI
MAYFIELD PLANT
22 RIFLE TRAIL
HICKORY KY 42051

SHIP TO

PH 270/856-4204 Fax 270/856-3233

TERMS	SHIP VIA	SALESPERSON	PAGE
NET 30 DAYS		6	1

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
	Part # C-15280 Rev 31 TRIGGER Ref: NO SERRATIONS		
20,000		377.10/M	7,542.00
40,000		367.55/M	14,702.00
120,000		347.70/M	41,724.00
	Misc Charges: TOOLING		15,225.00

* PLEASE NOTE: QUOTED WITH NO SERRATIONS

50% OF TOOLING CHARGE DUE WITH PURCHASE ORDER BALANCE UPON APPROVAL OF TOOLING SAMPLES. TOOLING SAMPLES WILL BE SHIPPED 12 WEEKS ARO PRODUCTION TO FOLLOW TOOL APPROVAL BY 6-8 WEEKS UNLESS CUSTOMER ACCEPTS RESPONSIBILITY FOR PRODUCTION, GIVEN THAT IT MEETS THE PRINT

THIS QUOTE IS GOOD FOR 30 DAYS FROM THE QUOTE DATE.

OUR REVISION CONTROL PROCEDURE REQUIRES THAT PRINT REVISION LEVELS ACCOMPANY ALL PURCHASE ORDERS. PLEASE ASSIST US IN OUR CONTINUOUS IMPROVEMENT PROCESS.

THANK-YOU FOR THE OPPORTUNITY TO QUOTE.
ANN DELUTRIE

MF0558

copy

ORPACK-Stone Corporation 1

1800 WEST OAK STREET
HERRIN IL 62948

618/942-2112

618/942-3026 FAX

ORPACK-Stone Corporation

ISO 9001 DNV DNV Certification, Inc. REGISTERED FIRM

date 10/14/99

prices F.O.B. MAYFIELD KY

quotation to REMINGTON ARMS COMPANY
BOX 99
22 RIFLE ROAD
HICKORY KY 42051

delivery within 10 days of receipt of order

terms Net 30 days

your file no. 0780

Attention of METTY MORGAN

this quotation expires 11/13/99

We are pleased to quote as follows on your recent inquiry:

Description		Quantity	Price Per M
1010 LOCKING 26 1/2 x 62 5/8 D/R 200 B 1P1C	OUR ITEM 08053	20,000 40,000 60,000 200,000	502.35 471.60 448.20 430.60

CONFIDENTIAL 83

We wish to thank you for this opportunity to quote on your requirements.

ROBERT MORGAN
SALES REPRESENTATIVE

Yours very truly
ORPACK - STONE CORP.

BY LARRY HADFIELD
SALES MANAGER

This quotation is subject to the terms and conditions on the reverse side hereof.

CAVC 0050 Rev. 08/97

MF0559

This Should Be The Final Total

Sheet1

MODEL 710 BARREL PRESS PARTS LIST

VENDOR	DESCRIPTION	PART NUMBER	PRICE	RECEIVED DATE
GRANGER	DRILL	1M967	$53.50	9/16/99
GRANGER	DRILL	1M967	$53.50	9/16/99
MC-MASTER	HONE	4424A15	$15.61	9/15/99
MC-MASTER	HONE	4424A76	$23.44	9/15/99
MC-MASTER	FLAT STOCK	8910K35	$112.82	9/17/99
MC-MASTER	SQUARE BAR STOCK	8910K104	$97.49	9/14/99
FLUID POWER	CYLINDER	HBT 252B2PITSI	$1,537.00	
FLUID POWER	CYLINDER	HBT 256B2PITSI	$1,578.00	
MC-MASTER	BAR STOCK			9/15/99
BARCLAYS	4X2X1/4 SQUARE TUBE	N/A	$72.00	9/22/99
BARCLAYS	1/2 PLATE STEEL 4'X4'	N/A	$106.00	9/22/99
G&H TOOL&DIE	WIRE CUT SLOT	3484	$65.00	9/22/99
MC-MASTER	STEEL	8910K81	$118.58	9/22/99
MC-MASTER	STEEL	8892K39	$31.21	9/21/99
CED	ELECT. SUPPLIES	N/A	$2,192.77	10/15/99
FLUID POWER	ACCUMULATOR	AB005B3T1A1	$331.20	10/15/99
FLUID POWER	FITTING	12-8F5OG-S	$5.12	9/22/99
FLUID POWER	FITTING	8-6F5OG5-S	$2.70	9/22/99
FLUID POWER	MANIFOLD	ADO3PO22SLC	$83.38	9/22/99
FLUID POWER	FITTING	6-8 F50G-S	$1.55	
FLUID POWER	FITTING	6-8 F50X-S	$5.80	
FLUID POWER	FITTING	6-6-6 RTX-S	$9.50	
FLUID POWER	FITTING	6 C50X-S	$15.00	
FLUID POWER	HOSE	N/A	$20.00	
FLUID POWER	HOSE	N/A	$18.00	
FLUID POWER	HOSE	N/A	$16.00	
FLUID POWER	HOSE	N/A	$18.00	
FLUID POWER	HOSE	N/A	$13.00	
FLUID POWER	HOSE	N/A	$20.50	
FLUID POWER	HOSE	N/A	$25.00	
			$6,641.67	

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SUMMARY

Estimated Capital	$578,621.00
Actual Capital	$550,824.63
Delta	($27,796.37)
	-5%
Estimated Expense	$50,124.02
Actual Expense	$51,051.13
Delta	$927.11
	2%

LINE ITEM DETAIL

Op #	Operation Description	Tooling, Gages, Fixture, Machines, etc	Drawing Number	Capital or Expense (est)	Estimated Cost per Unit	Estimated Number Req'd	Estimated Total Cost	Capital or Expense (act)	Actual Cost per Unit	Actual Number Req'd	P O Number	Actual Total Cost	Delta (Actual - Estimated)	Comments
10	Cut to Length	Barrel Length Gage		E	$270 00	1	$270 00	E	$350 00	1		$350 00	$80 00	
		Saw Blade		E	$16 80	1	$16 80	E	$16 80	1	Stores	$16 80	$0 00	
						Capital Sub-Total	$0 00				Capital Sub-Total	$0 00	$0 00	
						Expense Sub-Total	$286 80				Expense Sub-Total	$366 80	$80 00	
20	Gundrill Bore	292 dia Gundrill		E	$10 02	16	$160 32	E	$76 00	16	M016618	$1,216 00	$1,055 68	
		Carbide Bushing Insert		E	$61 95	8	$495 60	E	$117 65	4	M015809	$470.60	($25 00)	
		Whip Guide		E	$4 50	40	$180.00	E	$3 71	16	M015804	$59 36	($120 64)	
		Whip Guide Bearing		E	$14 95	40	$598 00	E	$17 65	24	M015806	$423 58	($174 42)	
		Bearing Holder		E	$120 00	16	$1,920 00	E	$127 20	16	M015787	$2,035.20	$115 20	
		Bench Center		E	$2,380 00	1	$2,380 00	E	$1,931 00	1	M016563	$1,931 00	($449 00)	
		Magnetic Base					$0 00	E	$97 26	2	M016696	$194 51	$194 51	
		Dial Indicator					$0 00	E	$107 00	2	M016614	$214 00	$214 00	
		Plug Gage	BK-8059				$0 00	E	$21 75	1	M016754	$21 75	$21 75	
						Capital Sub-Total	$0 00				Capital Sub-Total	$0 00	$0 00	
						Expense Sub-Total	$5,573 60				Expense Sub-Total	$6,135 74	$401 82	
30	Ream Bore	299 Reamer		E	$97 90	8	$783 20	E		12	M015802	$0 00	($783 20)	
		Headstock Reamer Bushing		E	$200 00	2	$400 00	E				$0 00	($400 00)	
		Tailstock reamer Bushing		E	$200 00	2	$400 00	E		2		$0.00	($400 00)	
		Whip Guide		E	$174 00	8	$1,392 00	E		2		$0 00	($1,392 00)	
		5C Serrated Collet					$0 00	E	$70 00	8	M015807	$560 00	$560.00	
		Plug Gage	BK-8060	E	$80 00	1	$60 00	E	$31 25	1	M016754	$31.25	($48 75)	
						Capital Sub-Total	$0 00				Capital Sub-Total	$0 00	$0 00	
						Expense Sub-Total	$3,055 20				Expense Sub-Total	$591 25	($2,463 95)	

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Op #	Operation Description	Tooling, Gages, Fixture, Machines, etc	Drawing Number	Capital or Expense	Estimated Cost per Unit	Estimated Number Req'd	Estimated Total Cost	Capital or Expense	Actual Cost per Unit	Actual Number Req'd	P O Number	Actual Total Cost	Delta (Actual - Estimated)	Comments
40	Rifle Bore	2-Stage Rifling Button		E	$300 00	3	$900 00	E	$209 00	4	M016618	$836 00	($64 00)	
		Plug Gage-Bore Diameter	BK-8061	E	$80 00	1	$80 00	E	$28 00	1	M016754	$28 00	($52 00)	
		Twist Gage		E	$1,315 00	1	$1,315 00	E	$350 00	1	M016873	$350 00	($965 00)	
		Air Gauge		C	$6,080 00	1	$6,080 00	C	$0 00	0		$0 00	($6,080 00)	
		Air Gauge - Bore Diameter		E	$1,000 00	1	$1,000 00	C	$2,605 38	1	M016617	$2,605 38	$1,605 38	
		Ring Gage Masters for Air Gauge		E	$0 00	1	$0 00	E	$114 95	2	M016617	$229 90	$229 90	
		Air Gauge - Groove Diameter		E	$1,000 00	1	$1,000 00	E	$1,985 00	1	M016617	$1,985 00	$985 00	
		Ring Gage Masters for Air Gauge		E	$0 00	1	$0 00	E	$114 95	2	M016617	$229 90	$229 90	
		Hydraulic Pump		E	$2,377 00	1	$2,377 00	E	$2,366 00	1		$2,366 00	($11 00)	
		Small Body Automatic Broach Puller for Rifling Button					$0 00	E	$953 00	1	M015811	$953 00	$953 00	
		Rifler Headstock Bushing					$0 00	E	$54 50	1	M015849	$54 50	$54 50	
		Rifler Tailstock Bushing					$0 00	E	$85 50	1	M015849	$85 50	$85 50	
		Coolant Pump for new Oiling System					$0 00	E		1		$0 00	$0 00	
		Filter for new Oiling System					$0 00	E		1		$0 00	$0 00	
		Filter Bags for new Oiling System					$0 00	E				$0 00	$0 00	
					Capital Sub-Total		$6,080 00			Capital Sub-Total		$2,605 38	($3,474 62)	
					Expense Sub-Total		$6,672 00			Expense Sub-Total		$7,117 80	$445 80	
50	Wash & Stress Relieve	Barrel Basket for Furnace		C	$4,708 00	2	$9,416 00	E	$2,475 00	2	M016546	$4,950 00	($4,466 00)	
					Capital Sub-Total		$9,416 00			Capital Sub-Total		$0 00	($9,416 00)	
					Expense Sub-Total		$0 00			Expense Sub-Total		$4,950 00	$4,950 00	

Op #	Operation Description	Tooling, Gages, Fixture, Machines, etc	Drawing Number	Capital or Expense	Estimated Cost per Unit	Estimated Number Req'd	Estimated Total Cost	Capital or Expense	Actual Cost per Unit	Actual Number Req'd	P O Number	Actual Total Cost	Delta (Actual - Estimated)	Comments
60	Turn OD Complete	Dial Base Gage-Design & Build		C	$5,000 00	1	$5,000 00	C	$7,500 00	1		$7,500.00	$2,500 00	Estimate
		Bench Centers		E	$2,280 00	1	$2,280 00	E	$1,931 00	1	M016150	$1,931 00	($349 00)	
		Dial Indicator		E	$50 00	2	$100 00	E	$107 00	2	M016614	$214 00	$114 00	
		Federal Series 300 Snap Gage		E	$656 00	1	$656 00	E				$0 00	($656 00)	TBD
		1 230 Ring Gage		E	$270 00	2	$540 00	E				$0 00	($540 00)	Not used
		Tailstock Pilot		E	$179 00	4	$716 00	E	$179 00	3		$537 00	($179 00)	
		Headstock Pilot		E	$91 55	4	$366 20	E	$91 55	2		$183 10	($183 10)	
		Tool Holder - Rough Turn		E	$56 00	2	$112 00	E				$0 00	($112 00)	Using one on machine
		Tool Holder - Finish Turn		E	$84 50	2	$169 00	E				$0 00	($169 00)	Using one on machine
		Roughing Insert		E	$9 00	2	$18 00	E	$11 00	5		$55 00	$37 00	
		Finish Insert		E	$14 63	2	$29 26	E	$14 63	5	Stores	$73 15	$43 89	
		Rohm Face Driver					$0 00	E	$162 00	3	M015803	$486 00	$486 00	
		SMW Spherical Rollers					$0 00	E	$656 14	1	M016626	$656 14	$656 14	
		Autoblock Spherical Rollers					$0 00	E	$130 00	3	M016625	$390 00	$390 00	
					Capital Sub-Total		$5,000 00			Capital Sub-Total		$7,500 00		
					Expense Sub-Total		$4,986 46			Expense Sub-Total		$4,525 39		

Op #	Operation Description	Tooling, Gages, Fixture, Machines, etc	Drawing Number	Capital or Expense (est)	Estimated Cost per Unit	Estimated Number Req'd	Estimated Total Cost	Capital or Expense (act)	Actual Cost per Unit	Actual Number Req'd	P O Number	Actual Total Cost	Delta (Actual - Estimated)	Comments
70	Chamber Hub End Complete	LB-300MY 250T 4-Axis Turning Center		C	$222,880 00	1	$222,880 00	C	$219,700 00	1	M017435	$219,700 00	($3,180 00)	Okuma 10% increase in price from time of estimate to time of purchase
		Run-off for Above		C	included above	1	$0 00	C	$5,000 00	1	M017435	$5,000 00	$5,000 00	
		Microcentric Chuck for LB-300		C	included above	1	$0 00	C	$3,645 00	1	M016555	$3,645 00	$3,645 00	
		Thru-spindle locator for LB-300	E-K-10462	C	included above	1	$0 00	C	$5,530 00	1	M016929	$5,530 00	$5,530 00	
		Air Gage, Set Rings		C	$6,390 00	1	$6,390 00	C	$6,393 50	1	M016617	$6,393 50	$3 50	
		Air Comparator for Air Gage		C	$0 00	1	$0 00	C	$4,393 75	1	M016617	$4,393 75	$4,393 75	
		Shoulder Depth Gage & Master	D-K-10456	C	$3,780 00	1	$3,780 00	C	$8,732 00	1	M016586	$8,732 00	$4,952 00	
		Neck Depth Gage & Master	D-K-10457	C	$3,780 00	1	$3,780 00	C	$8,470 00	1	M016586	$8,470 00	$4,690 00	
		Throat Depth Gage & Master		C	$3,780 00	1	$3,780 00	C		0		$0 00	($3,780 00)	
		2 995 Length Gage		C	$3,500 00	1	$3,500 00	C	$3,500 00	1		$3,500 00	$0 00	CMM Fixture for checking slot & takedown screw holes
		Heading Gage & Heading Plugs		C	$9,240 00	1	$9,240.00	C		0		$0.00	($9,240 00)	
		708 C'Bore Plug Gage	BK-8058	E	$67 00	1	$67 00	E	$23 00	1	M016754	$23 00	($44 00)	
		7045 C'Bore Plug Gage	BK-8057	E	$67 00	1	$67 00	E	$23 00	1	M016754	$23 00	($44 00)	
		C'Bore Dial Gage		E	$550 00	1	$550 00	E	$302 72	1	M016610	$302 72	($247 28)	
		ID Groove Caliper Gage		E	$500 00	1	$500 00	E	$686 40	1	M016610	$686 40	$186.40	
		Chamfer Gage		E	$220 00	1	$220.00	E	$122 06	1	M016610	$122 06	($97 94)	
		325 Plug Gage w/ Design		E	$960 00	1	$960 00	E				$0 00	($960 00)	
		Form Gage/Locking Lug w/ Design		E	$570 00	1	$570 00	E	$285 00	1	M016904	$285 00	($285 00)	
	Face Barrel	Single Point Tool Holder		E	$170 00	1	$170 00	E	$170 00	1	Stores	$170 00	$0 00	
		Cutting Insert		E	$10 80	2	$21 60	E	$10 80		Stores	$21 60	$0 00	
	Rough C'Bore	5/8 Endmill		E	$59 48	2	$118 96					$0 00	($118 96)	
		Kennametal Drill Fix Insert Drill						E	$279 72	2	M016887	$559 44	$559 44	Changed tooling to inserted drill to lower tooling cost per part
		Inserts						E	$11 72	4	M016887	$46 88	$46 88	
		Floating Holder		E	$254 00	1	$254 00	E	$295 00	1	M015868	$295 00	$41 00	
		Collet		E	$15 00	2	$30 00	E	$10 83	2	M015868	$21 66	($8 34)	

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Op #	Operation Description	Tooling, Gages, Fixture, Machines, etc	Drawing Number	Capital or Expense (est)	Estimated Cost per Unit	Estimated Number Req'd	Estimated Total Cost	Capital or Expense (act)	Actual Cost per Unit	Actual Number Req'd	P O Number	Actual Total Cost	Delta (Actual - Estimated)	Comments
70 cont'd	Finish C'Bore	Special C'Bore tool	C-K-10449	E	$214 00	2	$428 00	E	$214 00	4		$856 00	$428 00	
		Floating Holder		E	$254 00	1	$254 00	E	$254 00	1	Stores	$254 00	$0 00	
		Collet		E	$15 00	2	$30 00	E	$10 83	2	M015868	$21 66	($8 34)	
	Core Drill Chamber	27/64 Core Drill		E	$48 38	2	$96 76	E	$49 77	2		$99 54	$2 78	
		Floating Holder		E	$254 00	1	$254 00	E	$254 00	1	Stores	$254 00	$0 00	
		Collet		E	$15 00	2	$30 00	E	$10 83	2	M015868	$21 66	($8 34)	
	Rough Ream Chamber	Rough Reamer	C-K-10450	E	$168 00	2	$336 00	E	$168 00	6		$1,008 00	$672 00	
		Floating Holder		E	$254 00	1	$254 00	E	$254 00	1	Stores	$254 00	$0 00	
		Collet		E	$15 00	2	$30 00	E	$10 83	2	M015868	$21 66	($8 34)	
	Finish Ream Chamber	Finish Reamer	C-K-10451	E	$168 00	2	$336 00	E	$168 00	6		$1,008 00	$672 00	
		Floating Holder		E	$254 00	1	$254 00	E	$254 00	1	Stores	$254 00	$0 00	
		Collet		E	$15.00	2	$30 00	E	$10.83	2	M015868	$21 66	($8 34)	
	T-Slot Cut .925 Undercut	Special T-Slot Cutter	B-K-10447	E	$39 85	2	$79 70	E	$100 00	3		$300 00	$220 30	Actual Tool is Carbide Tipped & TiN Coated
		Collet		E	$30 00	2	$60 00	E	$24 65	2	M015862	$49 30	($10 70)	
		Side Mill/Drill Unit		E	$800 00	1	$800 00					$0 00	($800 00)	
	Mill Locking Lug profile	1/4 Diameter 6-flute Endmill		E	$15 61	2	$31 22		$30 00	3		$90 00	$58 78	
		Collet		E	$30 00	2	$60 00	E	$24 65	2	M015862	$49 30	($10 70)	
		Side Mill/Drill Unit		E	$800 00	1	$800 00					$0 00	($800 00)	
	Spot Drill Takedown Screw Holes	#3 Carbide TiN coated center drill		E	$18 20	2	$36 40	E	$18 20	2	Stores	$36 40	$0 00	
		Collet		E	$30 00	2	$60 00	E	$24 65	2	M015862	$49 30	($10 70)	
		Side Mill/Drill Unit		E	$800 00	1	$800 00					$0.00	($800 00)	
	Endmill 2 Takedown Screw Holes, Mill recoil lug Slot	.213 Special Endmill	A-K-10448	E	$33 95	2	$67 90	E	$45 00	3		$135 00	$67 10	Coated tool to increase tool life
		Collet		E	$30 00	2	$60 00	E	$24 65	2	M015862	$49 30	($10 70)	
		End Mill/Drill Unit		E	$1,360 00	1	$1,360 00					$0 00	($1,360 00)	
	Tap 2 Takedown Screw Holes	1/4-28 Tap		E	$8 73	2	$17 46	E	$12 68	2		$25 36	$7.90	
		Collet		E	$30 00	2	$60 00	E	$24 65	1	M015862	$24 65	($35 35)	
		End Mill/Drill Unit		E	$1,380 00	1	$1,380 00					$0 00	($1,360 00)	
						Capital Sub-Total	$253,350 00			Capital Sub-Total		$265,364 25	$12,014 25	
						Expense Sub-Total	$11,554 00			Expense Sub-Total		$6,833 23	($4,720 77)	

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Op #	Operation Description	Tooling, Gages, Fixture, Machines, etc	Drawing Number	Capital or Expense (est)	Estimated Cost per Unit	Estimated Number Req'd	Estimated Total Cost	Capital or Expense (act)	Actual Cost per Unit	Actual Number Req'd	P O Number	Actual Total Cost	Delta (Actual - Estimated)	Comments
80	Cut off & Crown Muzzle	Kitagawa Chuck		C	$15,000 00		$15,000 00	C	$5,155 00	1	M016749	$5,155 00	($9,845 00)	BL-208 Long Stroke Chuck - same as Ilion uses for centerfire barrels - price is for *everything*
		Kitagawa S1552 Cylinder		C			$0 00	C	$3,350 00	1	M016749	$3,350 00	$3,350 00	Required for Chuck
		Threaded Draw Nut		E			$0 00	E	$250 00	1		$250 00	$250 00	Required for Chuck
		Length Gage		E	$270 00	1	$270 00	E	$350 00	1		$350 00	$80 00	
		Barrel Locator		E		1	$0 00	E	$1,049 00	1	M016935	$1,049 00	$1,049 00	Could have used existing locator but concerns about barrel wobble caused addition
		Cutoff Toolholder		E	$90 75	2	$181 50	E				$0 00	($181 50)	Use toolholder on machine
		Cutoff Insert		E	$10 16	2	$20 32	E	$10 16	1	Stores	$10 16	($10 16)	
		Cutoff Insert Holder		E	$23 57	2	$47 14	E				$0 00	($47 14)	Use toolholder on machine
		Profile Toolholder		E	$66 00	2	$132 00	E	$10 16	1	Stores	$10 16	($121 84)	
		Profile insert		E	$10 80	2	$21 60	E				$0 00	($21 60)	Use toolholder on machine
		C'Sink Tool		E	$20 00	2	$40 00	E	$10 16	1	Stores	$10 16	($29 84)	
		Floating Holder		E	$254 00	2	$508 00	E				$0 00	($508 00)	Use toolholder on machine
		Chamfer Gage		E	$220 00	1	$220 00	E				$0 00	($220 00)	Chamfer too difficult to gage - not going to use
						Capital Sub-Total	$15,000 00				Capital Sub-Total	$8,505 00	($6,495 00)	
						Expense Sub-Total	$1,440 56				Expense Sub-Total	$1,679 48	$238 92	
90	Proseco Wash Barrels						$0 00					$0 00	$0 00	Add/use heat treat baskets
						Capital Sub-Total	$0 00				Capital Sub-Total	$0 00	$0 00	
						Expense Sub-Total	$0 00				Expense Sub-Total	$0 00	$0 00	
100	Induction Harden Barrel Hub End	Welduction Induction Hardening Machine		C	$166,000 00	1	$166,000 00	C	$153,500 00	1	M017471	$153,500 00	($12,500 00)	
		Rockwell 200 Hardness tester		C	$12,000 00	1	$12,000 00	C	$13,600 00	1	M016619	$13,600 00	$1,600 00	
		Vari-Rest Arm for Rockwell Tester		E			$0 00	E	$890 00	1	M016581	$890 00	$890 00	
		Houghton QuenchCool 600 Polymer Quench Media		E			$0 00	E	$15 00	55		$825 00	$825 00	Quench Media for hardening machine
						Capital Sub-Total	$178,000 00				Capital Sub-Total	$167,300 00	($10,700 00)	
						Expense Sub-Total	$0 00				Expense Sub-Total	$1,715 00	$1,715 00	
110	Wash/Pickle Barrels to remove Scale						$0 00					$0 00	$0 00	Add/use color racks
						Capital Sub-Total	$0 00				Capital Sub-Total	$0 00	$0 00	
						Expense Sub-Total	$0 00				Expense Sub-Total	$0 00	$0 00	

120	Non-Destructive Test Barrels for Cracks	Eddy Current Tester		C	$75,000 00	1	$75,000 00	C	$79,000 00	1		$79,000 00	$4,000 00	Machine is a Resonant Inspection machine made by Quasar International Eddy current or Magnaflux won't pick up internal cracks
		Stamping Fixture		E			$0 00	E	$2,500 00	1		$2,500 00	$2,500 00	
		Magnaflux Stamp		E			$0 00	E	$200 00	1		$200 00	$200 00	
					Capital Sub-Total		$75,000 00			Capital Sub-Total		$79,000 00	$4,000 00	
					Expense Sub-Total		$0 00			Expense Sub-Total		$2,700 00	$2,700 00	
130	Sight Hole	Sight Hole Fixture	E-K-10452	C	$7,640 00	1	$7,640 00	C	$3,750 00	1		$3,750 00	($3,890 00)	
		Sight Hole Position Gage		C	$6,875 00	1	$6,875 00	C	$10,000 00	1		$10,000 00	$3,125 00	
	Spot Drill	ToolHolder		E	$140 41	3	$421 23	E	$140 41	1	Stores	$140 41	($280 82)	
		Spot Drill		E	$9 50	2	$19 00	E	$9 50	1	Stores	$9 50	($9 50)	
		Collet		E	$14 58	3	$43 74	E	$14 58	1	Stores	$14 58	($29 16)	
	Drill Sight Hole	ToolHolder		E	$140 41	3	$421 23	E	$140 41	1	Stores	$140 41	($280 82)	
		#30 Drill		E	$0 66	2	$1 32	E	$0 66	2	Stores	$1 32	$0 00	
		Collet		E	$26 20	3	$78 60	E	$26 20	1	Stores	$26 20	($52 40)	
	Tap Sight Hole	ToolHolder		E	$567 86	3	$1,703 58	E	$567 86	1	Stores	$567 86	($1,135 72)	
		#6-48 tap		E	$14 25	2	$28 50	E	$14 25	2	Stores	$28 50	$0 00	
		Tap Adapter		E	$40 05	3	$120 15	E	$40 05	1	Stores	$40 05	($80 10)	
		Thread Gage	BK-9013	E	$225 90	2	$451 80	E	$46 00	1	M016755	$46 00	($405 80)	Thread Depth now equal on all four holes
		Depth Gage	C-K-10465	E	$225 90	1	$225 90	E	$125 00	1		$125 00	($100 90)	
					Capital Sub-Total		$14,515 00			Capital Sub-Total		$13,750 00	($765 00)	
					Expense Sub-Total		$3,515 05			Expense Sub-Total		$1,139 83	($2,375 22)	
140	Centerless Polish	Polishing Belt		E	$9 43	1	$9 43	E	$9 43	1	Stores	$9 43	$0 00	
		Barrel Holders w/ Norbide Nose		E	$350 00	2	$700 00	E	$40 00	2		$80 00	($620 00)	Maintenance made a Handle - Norbide nose not necessary
		Length Gage for Polish Runout		E			$0 00	E	$100 00	1		$100 00	$100 00	
					Capital Sub-Total		$0 00			Capital Sub-Total		$0 00	$0 00	
					Expense Sub-Total		$709 43			Expense Sub-Total		$189 43	($520 00)	
150	Roll Mark	Fixture		C	$3,730 00	1	$3,730 00	E	$1,219 00	1	M018056	$1,219 00	($2,511 00)	
		Position Gage		E	$480 00	1	$480 00		$112 00	1		$112 00	($368 00)	
		Marking Roll		E	$380 00	2	$760 00	E	$366 00			$732 00	($28 00)	
					Capital Sub-Total		$3,730 00			Capital Sub-Total		$0 00	($3,730 00)	
					Expense Sub-Total		$1,240 00			Expense Sub-Total		$1,951 00	$711 00	
160	Press receiver on to Barrel	Press Fixture		C	$5,000 00	1	$5,000 00	C	$6,800 00	1		$6,800 00	$1,800 00	Accumulation of all components needed to build fixture in-house
		Master Bolt		C	$2,500 00	1	$2,500 00					$0 00	($2,500 00)	
		Locator Ring		E	$750 00	1	$750 00					$0 00	($750 00)	
					Capital Sub-Total		$7,500 00			Capital Sub-Total		$6,800 00	($700 00)	
					Expense Sub-Total		$750 00			Expense Sub-Total		$0 00	($750.00)	

Op #	Operation Description	Tooling, Gages, Fixture, Machines, etc	Drawing Number	Capital or Expense (est)	Estimated Cost per Unit	Estimated Number Req'd	Estimated Total Cost	Capital or Expense (act)	Actual Cost per Unit	Actual Number Req'd	P O Number	Actual Total Cost	Delta (Actual - Estimated)	Comments
170	Check for Runout & Straighten if necessary	Bench Centers		C	$4,530 00	1	$4,530 00	C				$0 00	($4,530 00)	
		Hydraulic Straightening Press		C	$5,000 00	1	$5,000 00	C				$0 00	($5,000 00)	
		Locator Arbor		E	$500 00	1	$500 00	E				$0 00	($500 00)	
		Dial Indicator		E	$100 00	2	$200 00	E				$0 00	($200 00)	
						Capital Sub-Total	$9,530 00				Capital Sub-Total	$0 00	($9,530 00)	
						Expense Sub-Total	$700 00				Expense Sub-Total	$0 00	($700 00)	
180	Angularity Straighten	Adapter for 597 Fixture		C	$1,500 00	1	$1,500 00	E	$1,500 00	1		$1,500 00	$0 00	
		Angularity Straighten Pins		E	$228 60	1	$228 60	E	$228 60	6		$1,371 60	$1,143 00	
						Capital Sub-Total	$1,500 00				Capital Sub-Total	$0 00	($1,500 00)	
						Expense Sub-Total	$228 60				Expense Sub-Total	$2,871 60	$2,643 00	
190	Glass Bead	Bottom Holder for		E	$25 00	12	$300 00	E	$25 00	12		$300 00	$0 00	
						Capital Sub-Total	$0 00				Capital Sub-Total	$0 00	$0 00	
						Expense Sub-Total	$300 00				Expense Sub-Total	$300 00	$0 00	
200	Black Oxide	Racks		E	$1,492 00	6	$8,952 00	E	$800 00	6		$4,800 00	($4,152 00)	
		New Heaters		E			$0 00	E	$537 00	4		$2,148 00	$2,148 00	
						Capital Sub-Total	$0 00				Capital Sub-Total	$0 00	$0 00	
						Expense Sub-Total	$8,952 00				Expense Sub-Total	$6,948 00	($2,004 00)	

REMINGTON ARMS COMPANY, INC. 06/15/00
FIREARMS - MAYFIELD
710 Capital White Paper vs Actual
C:\data\DC\Mayfield\New Products\[710 Capital & Start up Costs.xls]Capital Spend Out

Barrel	White Paper	Vendor	PO #	Amt	(Under)/ Over	Anticipated Additional Spending	Anticipated (Under)/ Over
cones	9,960				(9,960)		(9,960)
gages & fixtures	73,100	Brookfield	M016586	33,595	(39,505)		(39,505)
		Western Gauge	M016617				
		Universal Machine	M018323				
baskets	6,900	Lohn & Associates	M016939	2,475	(4,425)		(4,425)
machine	222,880	Mathew Machinery	M017457	362,987	140,107		140,107
		Technical Equip	M017574				
		Giddings & Lewis	M016377				
		Micro Centric	M016555				
		Brookfield Machine	M016929				
chuck	15,000				(15,000)		(15,000)
machine	75,000				(75,000)		(75,000)
machine	166,000	Welduction	M017471	153,500	(12,500)		(12,500)
machine	12,000	Wilson	M016619	13,800	1,800		1,800
racks	6,000				(6,000)		(6,000)
Total	586,840			566,356	(20,484)	-	(20,484)
Bolt Head							
fix & gage	42,500				(42,500)		(42,500)
Superabrasive Grind Lugs	43,800				(43,800)		(43,800)
CNC Machine	174,784	Technical Equip Sale	M017574	115,000	(59,784)		(59,784)
Total	261,084			115,000	(146,084)	-	(146,084)
Bolt Body							
gage & Fixture	4,500	Regal Industries	M016449	6,016	1,516		1,516
machine	90,000	Cyberteck	M017490	59,675	(30,325)		(30,325)
tanks	9,500				(9,500)		(9,500)
Total	104,000			65,690	(38,310)	-	(38,310)
Receiver							
fix & gage	2,500				(2,500)		(2,500)
machine	513,831				(513,831)		(513,831)
Total	516,331			-	(516,331)	-	(516,331)
Range							
100yd range	290,000				(290,000)	500,000	210,000
snails	30,000	Savage Range	M016804 & M016084	29,600	(400)		(400)
other	10,000	Parris/McIntosh	M016486/169-5	16,644	6,644		6,644
Total	330,000			46,244	(283,756)	500,000	216,244
Purchased Parts							
Receiver Insert	48,000				(48,000)		(48,000)
Side Plate	10,000	Square Stamping	M017478	7,500	(2,500)		(2,500)
Safety Arm	23,880	Square Stamping	M017491	22,800	(1,080)		(1,080)
Bolt Stop	6,820	Sterling Sintered	M017486	6,400	(420)		(420)
Recoil Bracket	2,225	Square Stamping	M017477	550	(1,675)		(1,675)
Bolt Handle Blank	12,800	NA Precision	M017484, MO17532 & MO17553	16,415	3,615		3,615
Bolt Plug	38,088	Kellems & Coe	M017443	38,000	(88)		(88)
Bolt Plug Insert		Anderson Screw	M017479	2,250	2,250		2,250
Firing pin head	23,000	Megamet	M017470	16,000	(7,000)		(7,000)
Mag Latch	33,480	Par 4 Plastics	M017465	31,795	(1,685)		(1,685)
Magazine Box	28,000	Brainin	M017530	83,000	55,000		55,000
Magazine Follower	33,300	Par 4 Plastics	M017466	30,267	(3,033)		(3,033)
Magazine Bottom	47,880	Par 4 Plastics	M017466	43,519	(4,361)		(4,361)
Magazine Spring		Valco/Valley	M017497	16,050	16,050		16,050
Stock	150,300	Par 4 Plastics	M017435	156,052	5,752		5,752
			MO17559				
PPI	41,500	Regal Industries	M017492	52,400	10,900		10,900
Lock Tumbler		Megamet	M017480	19,993	19,993		19,993
Trigger		Sterling Sintered	M017487	1,435	1,435		1,435
Assembly Press		Matthew Machinery	M016749	8,509	8,509		8,509
Total	499,273			552,934	53,661	-	53,661
Other							
Orbital Riveter	-	Orbitform	M018075	11,100	11,100		11,100
Press to attach Barrel/Receiver	-	In House	N/A	5,811	5,811		5,811
Installation	61,000	Falconite	M018451	1,487	(59,513)		(59,513)
Total	61,000			18,398	(42,602)	-	(42,602)
Total Capital	2,358,528			1,364,623	(993,905)	500,000	(493,905)

04/17/2000 Stock Status by Category 1

Material	Material description	MRP	Sloc	Unrestricted	Stock in tfr	Restr.-use	In qual. insp.	Blocked	Stock in transi
F104131	700 VS FRONT GUARD SCREW	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F15161	700 FRONT GUARD SCREW BUSHING	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F15400	700 TRIG SPRING	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F15481	700 TRIG STOP SCREW	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F15666	700 SEAR SAFETY CAM PL	MA7	RM20	4,000.000	0.000	0.000	0.000	0.000	0.000
F17043	700 SAFETY PIVOT PIN	MA7	RM20	1,000.000	0.000	0.000	0.000	0.000	0.000
F17044	700 SAFETY SNAP WASHER	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F17047	SP10 MAGAZINE FOLLOWER PLUNGER SPRING	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F17047	700 SEAR SPRING	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F17053	700 TRIG SCREW FRONT	MA7	RM20	3,500.000	0.000	0.000	0.000	0.000	0.000
F19461	700 TRIG CONNECTOR	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F201217	BOLT PLUG TUMBLER SPRING - CF	MA7	RM20	5,000.000	0.000	0.000	0.000	0.000	0.000
F201224	LOCK PLUNGER - CF	MA7	RM20	1,000.000	0.000	0.000	0.000	0.000	0.000
F300327	710 RECEIVER INSERT	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300328	710 PIN, SIDE PLATE	MA7	RM20	240.000	0.000	0.000	0.000	0.000	0.000
F300329	710 BOLT HANDLE PIN	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300330	710 Pin, Bolt Assembly	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300336	710 FIRING PIN HEAD	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300338	710 BOLT HEAD	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300339	710 Bolt Body	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300340	710 Receiver	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300342	710 Ejector	MA7	RM20	120.000	0.000	0.000	0.000	0.000	0.000
F300343	710 SAFETY SPRING	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300345	710 BOLT STOP	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300347	710 THREADED INSERT, RECEIVER INSERT	MA7	RM20	0.000	0.000	0.000	5,000.000	0.000	0.000
F300351	710 PIN, PIVOT, TRIGGER HOUSING	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300352	710 PIN, SAFETY PIVOT	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300360	710 BOLT HANDLE BLANK	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300361	710 Recoil Bracket	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300362	710 Magazine Latch	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300363	710 MAGAZINE BOX	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300364	710 MAGAZINE FOLLOWER	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300365	710 MAGAZINE BOTTOM	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300367	710 SPRING, EJECTOR	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300368	710 BOLT PLUG	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300371	710 PIN, MAGAZINE LATCH	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300398	710 Spring, Magazine Latch	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300399	710 SPRING, FIRING PIN	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300405	710 Magazine Spring	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300407	710 SPRING, SAFETY DETENT	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300418	710 TUMBLER	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300420	710 Tumbler Blank	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300422	710 SPRING RETAINER	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300425	710 REAR TAKEDOWN SCREW	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F300427	710 SPRING RETAINER	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F305315	710 BARREL 30-06 SPRG	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F305395	710 MAGAZINE BOX ASSEMBLY	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F91128	700 TRIG ENGAGEMENT SCREW	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F92796	700 BUTT PLATE FRAME	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F92797	700 BUTT PLATE INSERT	MA7	RM20	0.000	0.000	0.000	0.000	0.000	0.000
F93712	700 EXTRACTOR REG (7400)	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F94555	700 EJECTOR PIN (SPIROL)	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F98008	700 RECOIL PAD SCREW	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F98008	MCMASTER #90252A115	MA7	RM20	2,000.000	0.000	0.000	0.000	0.000	0.000
F300370	710 BOLT HANDLE	MA7	WIP	0.000	0.000	0.000	0.000	0.000	0.000
F300403	710 BOLT BODY ASSEMBLY	MA7	WIP	0.000	0.000	0.000	0.000	0.000	0.000
F300404	710 FIRING PIN ASSEMBLY	MA7	WIP	0.000	0.000	0.000	0.000	0.000	0.000
F305390	710 Bolt Head Assembly	MA7	WIP	0.000	0.000	0.000	0.000	0.000	0.000

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PO	Type	Vendor	Name				PGp	Order date
Item	Material		Short text					Mat. group
D I A	Plnt	SLoc	Order qty.	Un	Net Price	Curr.		per Un
		SL del. date	Scheduled qty.	Un				
M017470	ZZ	106504	MEGAMET INDUSTRIES				M01	01/14/2000
00010			METAL INJECTION MOLD FOR 710 / C-300336				TOOLING	
F	MAY		1.000	EA	16,000.00	USD	1	EA
		D 03/16/2000	1.000	EA				
	Still to be delivered		0.500	EA	8,000.00	USD	50.00	%
	Still to be invoiced		0.500	EA	8,000.00	USD	50.00	%
M017480	ZZ	106504	MEGAMET INDUSTRIES				M01	01/20/2000
00010			TOOLING MOLD / 710 LOCK TUMBLER B-300420				TOOLING	
F	MAY		1.000	EA	20,000.00	USD	1	EA
		D 03/29/2000	1.000	EA				
	Still to be delivered		0.000	EA	0.00	USD	0.00	%
	Still to be invoiced		0.333	EA	6,660.00	USD	33.30	%

PO	Type	Vendor	Name				PGp	Order date
Item	Material		Short text					Mat. group
D I A	Plnt	SLoc	Order qty.	Un	Net Price	Curr.		per Un
		SL del. date	Scheduled qty.	Un				
M017467	ZZ	106500	BRAININ DEER PARK DIE & STAMPING				M01	01/13/2000
00010			PROTOTYPE TOOL TO MFG. E300363-9 MAG BOX				TOOLING	
F	MAY		1.000	EA	12,500.00	USD		1 EA
		D 03/09/2000	1.000	EA				
	Still to be delivered		0.340	EA	4,250.00	USD	34.00	%
	Still to be invoiced		0.340	EA	4,250.00	USD	34.00	%
M017468	ZZ	106500	BRAININ DEER PARK DIE & STAMPING				M01	01/13/2000
00010			PROTOYPE PARTS OF E300363 REV.9 MAG BOX				TOOLING	
F	MAY		500.000	EA	13.17	USD		1 EA
		D 03/13/2000	500.000	EA				
	Still to be delivered		500.000	EA	6,585.00	USD	100.00	%
	Still to be invoiced		0.000	EA	0.00	USD	0.00	%
M017530	ZZ	106500	BRAININ DEER PARK DIE & STAMPING				M01	03/06/2000
00010			Design & build Progressive Die E-300363				TOOLING	
F	MAY		1.000	EA	83,000.00	USD		1 EA
		D 06/09/2000	1.000	EA				
	Still to be delivered		0.666	EA	55,278.00	USD	66.60	%
	Still to be invoiced		0.666	EA	55,278.00	USD	66.60	%

PO Item D I A	Type Vendor Material Plnt SLoc SL del. date	Name Short text Order qty. Scheduled qty.	 UM Un	 Net Price	PGp Order date Curr. Mat. group per Un
M017497	ZZ 106543	VALCO/ VALLEY TOOL AND DIE INC			M01 02/04/2000
00010		TOOL MOLD (TO PRODUCE TO PRINT C-300405)			TOOLING
F	MAY	1.000	EA	16,055.00	USD 1 EA
	D 04/27/2000	1.000	EA		
	Still to be delivered	0.000	EA	0.00	USD 0.00 %
	Still to be invoiced	0.333	EA	5,346.32	USD 33.30 %
M017498	ZZ 106543	VALCO/ VALLEY TOOL AND DIE INC			M01 02/04/2000
00010		PROTOTYPE MAGAZINE SPRING C-300405 / 710			MISC
F	MAY	1,000.000	EA	2.50	USD 1 EA
	D 03/02/2000	1,000.000	EA		
	Still to be delivered	0.000	EA	0.00	USD 0.00 %
	Still to be invoiced	0.000	EA	0.00	USD 0.00 %
00020		FREIGHT			MISC
K	MAY	1.000	EA	11.50	USD 1 EA
	D 03/02/2000	1.000	EA		
	Still to be delivered	0.000	EA	0.00	USD 0.00 %
	Still to be invoiced	0.000	EA	0.00	USD 0.00 %

PO / Item / Material / D I A / Plnt / SLoc / SL del. date	Type / Vendor	Name / Short text / Order qty. / Scheduled qty.	Un / Un	Net Price	PGp / Curr.	Order date / Mat. group / per Un
M016378	ZZ 106467	QUICK TEK			M09	12/14/1999
00010		FIX AND PROGRAM CHARGE C-300335 REV 2		460.00	USD	TOOLING 1 EA
K MAY		1.000	EA			
D 12/14/1999		1.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		1.000	EA	460.00	USD	100.00 %
00020		FIX AND PROGRAM CHARGE C-300334 REV A				TOOLING
K MAY		1.000	EA	390.00	USD	1 EA
D 12/14/1999		1.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		1.000	EA	390.00	USD	100.00 %
M016616	ZZ 106467	QUICK TEK			M09	01/28/2000
00010		BOLT PLUG INSERT B-300346 REV D DRAWING				RAW
F MAY		300.000	EA	9.80	USD	1 EA
D 02/15/2000		300.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
00020		FREIGHT				RAW
K MAY		1.000	EA	4.50	USD	1 EA
D 02/15/2000		1.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017441	ZZ 106467	QUICK TEK			M01	12/14/1999
00010 F300334		PIN, FIRING 710				RAW
L MAY RM20		20,150.000	EA	790.00	USD	1,000 EA
D 01/20/2000		150.000	EA			
D 04/17/2000		20,000.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
00020 F300335		TIP, FIRING PIN 710				RAW
L MAY RM20		20,150.000	EA	510.00	USD	1,000 EA
D 01/20/2000		150.000	EA			
D 04/17/2000		20,000.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017448	ZZ 106467	QUICK TEK			M01	12/20/1999
00010		PROTOTYPE SAMPLES OF F300334 FIRING PIN				SAMPLES
F MAY RM20		150.000	EA	5.90	USD	1 EA
D 01/25/2000		150.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
00020		PROTOTYPES SAMPLES OF F300335 PIN TIP				SAMPLES
F MAY RM20		150.000	EA	7.95	USD	1 EA
D 01/25/2000		150.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
00030		PROTOTYPES SAMPLES/MEXP-0001 BOLT HD BLK				SAMPLES
F MAY RM20		150.000	EA	4.60	USD	1 EA
D 01/25/2000		150.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
00040		FREIGHT, INVOICE 2421				SAMPLES
K MAY RM20		1.000	EA	9.63	USD	1 EA
D 01/25/2000		1.000	EA			
Still to be delivered		0.000	EA	0.00	USD	0.00 %
Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017485	ZZ 106467	QUICK TEK			M01	01/25/2000
00010		PROTOTYPE 710 BOLT HEAD DRILLED/MILLED				931
F MAY		40.000	EA	22.60	USD	1 EA

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PO	Type	Vendor	Name				PGp	Order date
Item	Material		Short text					Mat. group
D I A	Plnt	SLoc	Order qty.	Un	Net Price	Curr.		per Un
		SL del. date	Scheduled qty.	Un				
		D 02/10/2000	40.000	EA				
	Still to be delivered		0.000	EA	0.00	USD	0.00	%
	Still to be invoiced		35.000	EA	791.00	USD	100.00	%
M017581	ZZ	106467	QUICK TEK				M01	04/13/2000
00010	F300334		710 PIN, FIRING				RAW	
	MAY	RM20	500.000	EA	.74	USD	1	EA
		D 05/02/2000	500.000	EA				
	Still to be delivered		500.000	EA	2,870.00	USD	100.00	%
	Still to be invoiced		500.000	EA	2,870.00	USD	100.00	%
00020	F300335		710 TIP, FIRING PIN				RAW	
	MAY	RM20	500.000	EA	6.69	USD	1	EA
		D 05/02/2000	500.000	EA				
	Still to be delivered		500.000	EA	3,345.00	USD	100.00	%
	Still to be invoiced		500.000	EA	3,345.00	USD	100.00	%

PO	Type	Vendor	Name			PGp	Order date
Item	Material		Short text				Mat. group
D I A	Plnt	SLoc	Order qty.	Un	Net Price	Curr.	per Un
		SL del. date	Scheduled qty.	Un			
M015738	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	08/25/1999
00010			EJECTOR #C-300067: COST TO ALTER TOOLING			TOOLING	
Z	MAY		1.000	EA	2,500.00	USD	1 EA
		D 09/17/1999	1.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M016903	ZZ	1881473	SQUARE STAMPING MFG CORP			M09	03/07/2000
00010			BLANK DIE FOR MAGNUM HOLD OPEN C-300380			TOOLING	
F	MAY		1.000	EA	5,450.00	USD	1 EA
		D 04/10/2000	1.000	EA	PReq 1000425207	00010	
	Still to be delivered		1.000	EA	5,450.00	USD	100.00 %
	Still to be invoiced		1.000	EA	5,450.00	USD	100.00 %
00020			FORM TOOL FOR C-300378 AND C-300380			TOOLING	
F	MAY		1.000	EA	2,000.00	USD	1 EA
		D 04/10/2000	1.000	EA	PReq 1000425207	00020	
	Still to be delivered		1.000	EA	2,000.00	USD	100.00 %
	Still to be invoiced		1.000	EA	2,000.00	USD	100.00 %
M017243	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	03/05/1999
00010	F300086		LINK LEFT BLANK			RAW	
	MAY	RM20	35,000.000	EA	28.19	USD	1,000 EA
		D 03/30/1999	14,000.000	EA	PReq 1000095771	00010	
		D 04/06/1999	7,000.000	EA			
		D 05/03/1999	7,000.000	EA			
		D 06/07/1999	7,000.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017244	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	03/05/1999
00010	F300087		LINK RIGHT BLANK			RAW	
	MAY	RM20	35,000.000	EA	25.10	USD	1,000 EA
		D 03/15/1999	14,000.000	EA	PReq 1000095774	00010	
		D 04/06/1999	7,000.000	EA			
		D 05/03/1999	7,000.000	EA			
		D 06/07/1999	7,000.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017245	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	03/05/1999
00010	F300091		HOLD OPEN BLANK			RAW	
	MAY	RM20	21,000.000	EA	113.44	USD	1,000 EA
		D 04/14/1999	7,000.000	EA	PReq 1000095817	00010	
		D 05/06/1999	7,000.000	EA			
		D 06/07/1999	7,000.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017259	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	03/30/1999
00010	F305015		BARREL EXTENSION BLANK (CS)			RAW	
	MAY	RM20	14,000.000	EA	0.84	USD	1 EA
		D 06/08/1999	14,000.000	EA	PReq 1000099647	00010	
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017302	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	05/27/1999
00010	F300104		Hold Open Blank (Win-Mag)			RAW	
	MAY	RM20	8,000.000	EA	113.44	USD	1,000 EA
		D 07/01/1999	2,000.000	EA	PReq 1000108682	00010	
		D 08/05/1999	2,000.000	EA			
		D 09/07/1999	2,000.000	EA			
		D 10/06/1999	2,000.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017317	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	06/16/1999

PO	Type	Vendor	Name				PGp	Order date
Item	Material		Short text					Mat. group
D I A	Plnt	SLoc	Order qty.	UM	Net Price	Curr.		per Un
		SL del. date	Scheduled qty.	Un				
00010	F330029		Bolt Handle spring Blank		22.17	USD	RAW	1,000 EA
	MAY	RM20	20,000.000	EA				
		D 09/09/1999	20,000.000	EA	PReq 1000111761		00010	
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
M017325	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	06/23/1999
00010	F300087		LINK RIGHT BLANK				RAW	
	MAY	RM20	28,000.000	EA	25.10	USD		1,000 EA
		D 08/03/1999	14,000.000	EA	PReq 1000112687		00010	
		D 11/01/1999	14,000.000	EA				
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
M017332	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	07/14/1999
00010	F300030		EXTRACTOR BLANK				RAW	
	MAY	RM20	20,000.000	EA	11.05	USD		1,000 EA
		D 08/23/1999	20,000.000	EA	PReq 1000116137		00010	
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
M017333	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	07/14/1999
00010	F300086		LINK LEFT BLANK				RAW	
	MAY	RM20	20,000.000	EA	28.10	USD		1,000 EA
		D 08/23/1999	20,000.000	EA	PReq 1000116146		00010	
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
00020	F300087		LINK RIGHT BLANK				RAW	
L	MAY	RM20	15,000.000	EA	25.10	USD		1,000 EA
		D 08/23/1999	15,000.000	EA	PReq 1000116147		00010	
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
M017334	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	07/14/1999
00010	F305015		BARREL EXTENSION BLANK (CS)				RAW	
	MAY	RM20	21,000.000	EA	0.84	USD		1 EA
		D 08/16/1999	21,000.000	EA	PReq 1000116167		00010	
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
M017357	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	08/03/1999
00010	F300109		Ejector Blank (Win-Mag)				RAW	
	MAY	RM20	10,000.000	EA	88.59	USD		1,000 EA
		D 09/13/1999	10,000.000	EA	PReq 1000119926		00010	
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
M017358	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	08/12/1999
00010	F300091		HOLD OPEN BLANK				RAW	
	MAY	RM20	5,000.000	EA	113.44	USD		1,000 EA
		D 09/21/1999	5,000.000	EA	PReq 1000120413		00010	
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
M017360	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	08/25/1999
00010	F300081		EJECTOR BLANK				RAW	
	MAY	RM20	20,000.000	EA	88.59	USD		1,000 EA
		D 10/05/1999	10,000.000	EA	PReq 1000119989		00010	
		D 11/15/1999	10,000.000	EA				
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %
00020			FREIGHT, INVOICE 18080				RAW	
K	MAY	RM20	1.000	EA	4.50	USD		1 EA
		D 10/05/1999	1.000	EA				
	Still to be delivered		0.000	EA	0.00	USD		0.00 %
	Still to be invoiced		0.000	EA	0.00	USD		0.00 %

PO / Item / D I A	Type	Vendor / Material / Plnt	SLoc / SL del. date	Name / Short text	Order qty. / Scheduled qty.	Un	Net Price	Curr.	PGp	Order date / Mat. group	per Un
M017376	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	09/13/1999	
00010	F300104			Hold Open Blank (Win-Mag)						RAW	
	MAY	RM20			5,000.000	EA	113.44	USD		1,000	EA
		D	10/25/1999		5,000.000	EA	PReq 1000155158	00010			
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				0.000	EA	0.00	USD		0.00	%
M017400	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	10/22/1999	
00010	F300091			597 HOLD OPEN BLANK			(LONG RIFLE)			RAW	
	MAY	RM20			15,000.000	EA	113.44	USD		1,000	EA
		D	12/15/1999		10,000.000	EA	PReq 1000120413	00010			
		D	01/18/2000		5,000.000	EA					
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				0.000	EA	0.00	USD		0.00	%
M017413	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	11/02/1999	
00010	F300087			LINK RIGHT BLANK						RAW	
	MAY	RM20			20,000.000	EA	25.10	USD		1,000	EA
		D	12/06/1999		5,000.000	EA	PReq 1000224143	00010			
		D	01/13/2000		10,000.000	EA					
		D	02/07/2000		5,000.000	EA					
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				0.000	EA	0.00	USD		0.00	%
M017418	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	11/03/1999	
00010	F305015			BARREL EXTENSION BLANK (CS)						RAW	
	MAY	RM20			10,000.000	EA	0.84	USD		1	EA
		D	01/10/2000		5,000.000	EA	PReq 1000227147	00010			
		D	02/02/2000		5,000.000	EA					
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				0.000	EA	0.00	USD		0.00	%
M017420	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	11/04/1999	
00010	F330029			Bolt Handle Spring Blank						RAW	
	MAY	RM20			20,000.000	EA	22.17	USD		1,000	EA
		D	12/20/1999		20,000.000	EA	PReq 1000228399	00010			
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				0.000	EA	0.00	USD		0.00	%
M017431	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	11/16/1999	
00010	F300104			Hold Open Blank (Win-Mag)						RAW	
	MAY	RM20			10,000.000	EA	113.44	USD		1,000	EA
		D	12/01/1999		5,000.000	EA	PReq 1000243851	00010			
		D	01/12/2000		5,000.000	EA					
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				0.000	EA	0.00	USD		0.00	%
M017455	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	12/21/1999	
00010	F300086			LINK LEFT BLANK						RAW	
	MAY	RM20			15,000.000	EA	28.19	USD		1,000	EA
		D	01/31/2000		15,000.000	EA	PReq 1000288411	00010			
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				0.000	EA	0.00	USD		0.00	%
M017460	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	12/23/1999	
00010	F305015			BARREL EXTENSION BLANK (CS)						RAW	
	MAY	RM20			10,000.000	EA	0.84	USD		1	EA
		D	03/10/2000		5,000.000	EA	PReq 1000291658	00010			
		D	04/04/2000		5,000.000	EA					
	Still to be delivered				0.000	EA	0.00	USD		0.00	%
	Still to be invoiced				3,000.000	EA	2,520.00	USD		27.84	%
M017473	ZZ	1881473		SQUARE STAMPING MFG CORP					M01	01/18/2000	
00010	F300442			597 SS BBL EXTENSION BLANK MATERIAL						11RF	
	MAY	RM20			4,360	LB	4.55	USD		1	LB
		D	02/10/2000		4,360	LB					
	Still to be delivered				0	LB	0.00	USD		0.00	%

PO / Item / D I A	Type	Vendor / Material / Plnt SLoc / SL del. date	Name / Short text / Order qty. / Scheduled qty.	Un / Un	Net Price	PGp Curr.	Order date / Mat. group / per Un
	Still to be invoiced		3,270	LB	14,678.50	USD	75.00 %
M017477	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	01/19/2000
00010			PRODUCTION TOOL FOR B-300361 RECOIL BRKT				TOOLING
F	MAY		1.000	EA	550.00	USD	1 EA
	D	03/15/2000	1.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017478	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	01/20/2000
00010			TOOL FOR 710 PART# C-300333 SIDE PLATE				TOOLING
F	MAY		1.000	EA	7,500.00	USD	1 EA
	D	03/29/2000	1.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017489	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	01/26/2000
00010	F300087		LINK RIGHT BLANK				RAW
	MAY	RM20	10,000.000	EA	25.10	USD	1,000 EA
	D	03/15/2000	5,000.000	EA	PReq 1000329904	00040	
	D	03/29/2000	5,000.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		0.000	EA	0.00	USD	0.00 %
M017491	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	01/26/2000
00010			MFGR. STAMPING DIE FOR 710 SAFETY				TOOLING
F	MAY		1.000	EA	19,900.00	USD	1 EA
	D	04/11/2000	1.000	EA			
	Still to be delivered		1.000	EA	19,900.00	USD	100.00 %
	Still to be invoiced		1.000	EA	19,900.00	USD	100.00 %
00020			ADDITIONAL TOOL CHARGE FOR CHANGE OF DIE				TOOLING
F	MAY		1.000	EA	2,900.00	USD	1 EA
	D	04/11/2000	1.000	EA			
	Still to be delivered		1.000	EA	2,900.00	USD	100.00 %
	Still to be invoiced		1.000	EA	2,900.00	USD	100.00 %
M017515	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	02/17/2000
00010	F300109		Ejector Blank (Win-Mag)				RAW
	MAY	RM20	5,000.000	EA	88.59	USD	1,000 EA
	D	04/18/2000	5,000.000	EA	PReq 1000391384	00010	
	Still to be delivered		5,000.000	EA	442.95	USD	100.00 %
	Still to be invoiced		5,000.000	EA	442.95	USD	100.00 %
M017522	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	02/21/2000
00010	F300030		EXTRACTOR BLANK				RAW
	MAY	RM20	20,000.000	EA	11.95	USD	1,000 EA
	D	03/27/2000	10,000.000	EA	PReq 1000398321	00010	
	D	04/19/2000	10,000.000	EA			
	Still to be delivered		0.000	EA	0.00	USD	0.00 %
	Still to be invoiced		10,000.000	EA	119.50	USD	50.00 %
M017523	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	02/21/2000
00010	F300086		LINK LEFT BLANK				RAW
	MAY	RM20	10,000.000	EA	28.19	USD	1,000 EA
	D	04/27/2000	5,000.000	EA	PReq 1000398324	00010	
	D	05/22/2000	5,000.000	EA			
	Still to be delivered		1,500.000	EA	42.29	USD	15.00 %
	Still to be invoiced		10,000.000	EA	281.90	USD	100.00 %
M017525	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	02/21/2000
00010	F305015		BARREL EXTENSION BLANK (CS)				RAW
	MAY	RM20	10,000.000	EA	0.84	USD	1 EA
	D	05/08/2000	5,000.000	EA	PReq 1000398369	00010	
	D	06/07/2000	5,000.000	EA			
	Still to be delivered		4,000.000	EA	3,360.00	USD	40.00 %
	Still to be invoiced		10,000.000	EA	8,400.00	USD	100.00 %
M017557	ZZ	1881473	SQUARE STAMPING MFG CORP			M01	03/24/2000

PO	Type	Vendor	Name				PGp	Order date
Item	Material		Short text					Mat. group
D I A	Plnt	SLoc	Order qty.	Un	Net Price	Curr.		per Un
		SL del. date	Scheduled qty.	Un				
00010	F330029		Bolt Handle Spring Blank				RAW	
	MAY	RM20	20,000.000	EA	22.17	USD	1,000	EA
		D 05/08/2000	20,000.000	EA	PReq 1000466494	00010		
	Still to be delivered		20,000.000	EA	443.40	USD	100.00	%
	Still to be invoiced		20,000.000	EA	443.40	USD	100.00	%
M017564	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	03/30/2000
00010	F300081		EJECTOR BLANK				RAW	
	MAY	RM20	20,000.000	EA	88.59	USD	1,000	EA
		D 05/12/2000	10,000.000	EA	PReq 1000469281	00010		
		D 07/07/2000	10,000.000	EA				
	Still to be delivered		20,000.000	EA	1,771.80	USD	100.00	%
	Still to be invoiced		20,000.000	EA	1,771.80	USD	100.00	%
M017569	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	04/04/2000
00010	F300030		EXTRACTOR BLANK				RAW	
	MAY	RM20	30,000.000	EA	11.85	USD	1,000	EA
		D 05/08/2000	10,000.000	EA	PReq 1000471806	00010		
		D 07/19/2000	10,000.000	EA				
		D 09/28/2000	10,000.000	EA				
	Still to be delivered		16,800.000	EA	200.76	USD	56.00	%
	Still to be invoiced		30,000.000	EA	358.50	USD	100.00	%
M017582	ZZ	1881473	SQUARE STAMPING MFG CORP				M01	04/13/2000
00010	F300091		597 HOLD OPEN BLANK				RAW	
	MAY	RM20	10,000.000	EA	113.44	USD	1,000	EA
		D 05/15/2000	10,000.000	EA	PReq 1000471807	00010		
	Still to be delivered		10,000.000	EA	1,134.40	USD	100.00	%
	Still to be invoiced		10,000.000	EA	1,134.40	USD	100.00	%

PO / Item / D I A	Type	Vendor / Material / Plnt SLoc / SL del. date	Name / Short text / Order qty. / Scheduled qty.	Un / Un	Net Price	Curr.	PGp / Mat. group	Order date / per Un
M017195	ZZ	105652	PAR 4 PLASTICS, INC.				M01	01/06/1999
00010			Design and build two-cavity mold					TOOLING
F	MAY		1.000	EA	22,200.00	USD		1 EA
	D	03/05/1999	1.000	EA				
Still to be delivered			0.000	EA	0.00	USD		0.00 %
Still to be invoiced			0.000	EA	0.00	USD		0.00 %
M017435	ZZ	105652	PAR 4 PLASTICS, INC.				M01	12/13/1999
00010			1 CAVITY PRODUCTION MOLD FOR 710 STOCK					TOOLING
F	MAY		1.000	EA	145,300.00	USD		1 EA
	D	03/29/2000	1.000	EA				
Still to be delivered			0.000	EA	0.00	USD		0.00 %
Still to be invoiced			0.333	EA	48,384.90	USD		33.30 %
M017465	ZZ	105652	PAR 4 PLASTICS, INC.				M01	01/11/2000
00010			2 CAVITY PRODUCTION MOLD / 710 MAG LATCH					TOOLING
F	MAY		1.000	EA	31,800.00	USD		1 EA
	D	04/24/2000	1.000	EA				
Still to be delivered			0.000	EA	0.00	USD		0.00 %
Still to be invoiced			0.333	EA	10,591.40	USD		33.30 %
M017466	ZZ	105652	PAR 4 PLASTICS, INC.				M01	01/12/2000
00010			2+2 Family Mold- 710 Follower/Box Bottom					TOOLING
F	MAY		1.000	EA	73,786.00	USD		1 EA
	D	04/17/2000	1.000	EA				
Still to be delivered			0.340	EA	25,087.24	USD		34.00 %
Still to be invoiced			0.340	EA	25,087.24	USD		34.00 %
M017559	ZZ	105652	PAR 4 PLASTICS, INC.				M01	03/27/2000
00010			710 STOCK DRILLING FIXTURE					RAW
F	MAY		1.000	EA	7,500.00	USD		1 EA
	D	04/20/2000	1.000	EA				
Still to be delivered			0.000	EA	0.00	USD		0.00 %
Still to be invoiced			0.000	EA	0.00	USD		0.00 %

COST SUMMARY

COST SUMMARY FOR PLANT PREPARATION AND
INSTALLATION OF NEW MACHINERY FOR MODEL 710

REMINGTON ARMS
22 RIFFLE TRAIL
HICKORY KY,42051
856-4200

COST SUMMARY TABLE OF CONTENTS

REASONS FOR CHOOSING OKUMA

1) OPERATOR, MAINTANANCE, AND PROGRAMING FAMILIARTY.
2) OKUMA COMES STANDARD WITH MORE OPTIONS AT LOWER COST.
3) FIRST NAME BASIS WITH SERVICE DEPARTMENT AND PARTS DEPARTMENT AT GOSIGER.
4) ALREADY STOCK MANY SPARE PARTS FOR OKUMA IN CRIB.
5) OKUMA IS VERTUALY MAINTENANCE FREE.
6) DOWN TIME IS AT A MINIMUM.

COST TO MOVE ONE OKUMA MX45

COST FOR RIGGERS AND THEIR EQUIPMENT FOR ONE HALF DAY	$476.00
COST FOR THE RENTAL OF A GENI BOOM FOR ONE DAY	$525.00
COST FOR THE RENTAL OF A SCISSOR LIFT FOR ONE DAY	$350.00*
COST FOR EMPLOYEE LABOR	TWO MEN (24 Hrs)
COST FOR MISC. ELECTRICAL AND PLUMBING SUPPLIES	$250.00
TOTAL	**$1601.00****

*COST N/A IF MOVE IS LESS THAN 30 FT.

**THREE POSSIBLE MACHINE MOVES TO DATE (COST X THREE)

RIGGERS AND EQUIPMENT COST FOR MODEL 710 PROJECT

MACHINE	CONTRACTED LABOR	FORK LIFT	SKATES	EMPLOYEE LABOR	SUBTOTAL
OKUMA LT15MY	$288.00	$140.00	$40.00	N/A	$468.00
OKUMA LB300	$288.00	$140.00	$40.00	N/A	$468.00
OKUMA CROWN-V	$288.00	$140.00	$40.00	N/A	$468.00
OKUMA CROWN-V	$288.00	$140.00	$40.00	N/A	$468.00
TACO BRAZE	N/A	N/A	N/A	TWO MEN 4 HOURS	N/A
CHILLER (TACO)	N/A	N/A	N/A	TWO MEN 4 HOURS	N/A
INDUCTION UNIT	N/A	N/A	N/A	TWO MEN 4 HOURS	N/A
CHILLER (INDUCT.)	N/A	N/A	N/A	TWO MEN 4 HOURS	N/A
G&L D-8 CMM	N/A	N/A	N/A	TWO MEN 4 HOURS	N/A
EDDY CURRENT TESTER	(INFORMATION NOT AVAILABLE AT THIS TIME)				N/A
TOTAL COST	$1,152.00	$560.00	$160.00	TWO MEN 20 HOURS	$1,872.00

COST FOR MACHINE INSTALLATION

MACHINE	LT 15 MY	LB 300	CROWN-V	CROWN-V	TACO BRAZE	CHILLER	INDUC. UNIT	CHILLER	D-8 CMM
ELECTRICAL									
CONDUIT	$102.00	$102.00	$102.00	$102.00	$68.40	$68.40	$68.40	$68.40	$68.40
TRANSFORMER	$1,310.00	$720.00	$720.00	$720.00	N/A	N/A	N/A	N/A	N/A
DISCONECTS	$970.00	$315.00	$315.00	$315.00	$275.00	$435.00	$250.00	$435.00	$25.00
FUSES	$125.20	$48.00	$48.00	$48.00	$13.50	$30.75	$13.50	$30.75	N/A
WIRE	$297.00	$105.60	$105.60	$105.60	$63.84	$24.96	$24.96	$24.96	$24.96
FITTINGS	$250.00	$250.00	$250.00	$250.00	$175.00	$175.00	$175.00	$175.00	$175.00
PLUMBING									
PIPE	$134.40	$134.40	$134.40	$134.40	$134.40	N/A	N/A	N/A	$134.40
REGULATOR	$133.82	$133.82	$133.82	$133.82	$133.82	N/A	N/A	N/A	$133.82
VALVES	$45.00	$45.00	$45.00	$45.00	$45.00	N/A	N/A	N/A	$45.00
FITTINGS	$50.00	$50.00	$50.00	$50.00	$50.00	N/A	N/A	N/A	$50.00
EQUIPMENT									
GENI BOOM	$156.60	$156.60	$156.60	$156.60	$156.60	$156.60	$156.60	$156.60	$156.60
SCISSIOR LIFT	$77.80	$77.80	$77.80	$77.80	$77.80	$77.80	$77.80	$77.80	$77.80
SUB TOTAL	$3,651.82	$2,138.22	$2,138.22	$2,138.22	$1,193.36	$968.51	$766.26	$968.51	$890.98
							TOTAL COST		$13,963.12

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Risk Page.

- Risks + BBL - MATERIAL
  - RIFLING - LOW MUST ABOVE IT
  - CHAMBER - TOOLLIFE & CYCLE TIMES
  - H-T - SCALE
  - PRESS ASSY - BULGING MACH. NG REGESION - EXTRACTION SYSTEM.
  - BBL GROUP. NG.

+ RECEIVER
  - MACHINE - RUN OFF JUST LIKE BBL
  - MATERIAL - NICK IT SPLIT & CONCENTRICITY
  - SURFACE FINISH OF TUBING.

+ BOLT
  - RUN TIME ASSUMES 2/RUN
  - REPLATING

+ RECEIVER INSERT
  - STRENGTH OF SIDEPLATE & SCREW RETENTION
  - WARP
  - HIGH SCRAP.

+ MAGAZINE BOX.

+ BOLT HANDLE
  → EARLY FOC

+BOLT PLUG.

CAPACITY CONSTRAINTS ABOVE ~#35,000
- FURNACE
- LT IS RECEIVER
  OR OFFLOAD MAG BOX LOT.

GOOD TO HAVE A - GRINDING LATH
OR RIFLER

M/710 MTG 9/1/99

GERRY, MEL, STANLEY, JASON, SCOTT
DANNY, BRIAN, TOMMY, MERT, RON, CHUCK, JIMMY, JOHN
MARC, JOE.

BARREL

- - BAR STOCK MAKE LENGTH OF BAR STOCK 13' FOR MAGNUMS
12' NON MAGNUMS

THIS LEAVES 3" CROP CUT.

⇒ 60 DAYS - SAMPLES TO MIKE OF 4137 STEEL FOR 83 NEXT DAY.
- 1 SET 597, 1 SET 710.

⇒ - PUT CROP ENDS IN COST & FIND OUT SCRAP RECOVERY

- GUNDRILL & RIFLE

- STRESS RELIEVE - 13 HRS WHY SO LONG.

⇒ ↳ IN LINE STRESS RELIEVE - RABBIA.

⇒ 60-90 DAYS - OKUMA MAKE A BARREL VALIDATE TIMES
- TAKE RUN 1 DAYS WORTH.
- RABBIA - IN IS ON RUN-OFF
- ORDER ALL TOOLING.
- ORDER OF EVENTS TRIAL THEN P.O.

- SCRAP.

- GRIND OP DUE TO H-T OF HOA
↳ GET TO NEXT RUN-OFF

⇒ NEXT 90 DAYS - GET MATERIAL & MAKE SAMPLES OF NOT RECEIVERS BUT SHORT TUBES & TURNED OD STOCK. TO SIMULATE BARREL & RECEIVER

↳ MGTT - MATERIAL
↳ SMOOTH - MAKE & PRESS.
↳ DESIGN BY SEPTS

83

- LOCK TITE AT BOLT ASSEMBLY
- SMED - LOOK AT CONCEPT FOR CHANGEOVERS
- LENGTH OF BOLT HEAD. WHY?
⇒ RABBIA BOLT HEAD LENGTH.
- DOUBLED TOOLING BETWEEN SIGHT HOLE & LB300.

⇒ RABBIT SEND DOWN BLKS FOR COLOR
of WHAT IS NEW BSC TRUCKS

* LAYOUT FOR ENTIRE PROCESS.

+ BOLT HEAD
- 10 BOLT HEAD BLANKS
10 BOLT HANDLES ON -A- LOAD

- CROSS HOLE .250 ON -B- LOAD

⇒ - MAKE STRAIGHT MAG BOX CUT
- CUT ON THE BACK - SCOPE CLEARANCE OR TRANSITION

DAT TESTING.

- ILION 2.7¢/KWH MAYFIELD .035/KWH BASE
  DEREGULATION - OF ELECTRIC 50/50% SPLIT OF PEAK TO
⇒ OTHER BUSINESS
  - PUBLIC FILINGS OF NEW BUSINESSES

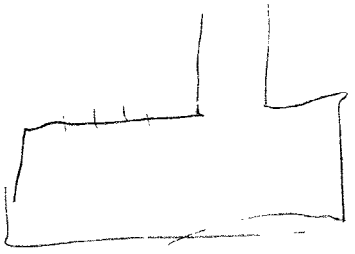
WKY RURAL ELECTRIC
↳ HOW TO PROVIDE SOURCE.

⇒ - WHAT TYPE of LEAD TIME FOR TRANSFORMERS

→ OKUMA CT IS - ON ILION FLOOR

⇒ HANNET CONSTRUCTION → SUPPOSED TO BUILD E TOWN
⇒ GRECCO - SHOULD WE USE THEM.
⇒ DOES THIS HELP THE LITIGATION.

- LOCAL CODES AROUND THE RANGE



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KEY

⇒ MEET - JOE JELSAK = Box & Container Cost
1 Box for c/547 & m/710

- PUT ALL LETTERING ON THE EDGE OF THE Box. Remington - FIREARMS SAFETY DEPENDS ON IT.

- BULK SHIP DOCUMENT ENVELOP.

2 TYPES

PAGE 1 - SCHEDULE OF ILION ITEMS TO BE REDUCED Mtn/Pin/TRIGGER CONNECTOR
ILION VS MAYFIELD ENGINEERING ENGINEER & QUALIFICATION
PAGE 2
ILION VS MAYFIELD ON SCREWS ETC.
PAGE 3
PAGE IS LIST OF ADD ONS ME THEY
- NEED NEW HORNS - EXPENSIVE TO REPAIR
⇒ MAKE NEW PRINTS · FOR SIDE PLATE MAY NEED TWO

⇒ TRIGGER - DO NOT PUT FINGER GROOVES SMOOTH TRIGGER

- METAL ON THE BOX - MAGAZINE BOX DESIGN.

- LARRY KIP ON MAGAZINE BOX - CATCHESTER -

⇒ F

=> M/700 EXTRACTOR - H&P PART
WHO WILL QUOTE IT OUTSIDE 400 TON PRESS
TO GET LITTLE MORE

FRONT MIDDLE REAR BUSHINGS

KEVEL - STOCK ASSEMBLY
- SWIVEL STUDS
- REAR SIGHT ASSEMBLY

=> STEEL SERVICE CENTERS

IS WORDING CLEAR ON NET VS DELIVERED ON RFQ

↳ WHAT IS WORDING ON BLANK QUOTE VS RELEASES.

RISKS

#1 710 FAILS DAT/HAP
#2 PRODUCTION TIMING OF 710

UPSIDE - PROCESS OPPORTUNITIES FOR 2000
FROM MY SHEET
- PURCHASING
STAFFING

- COST DIFFERENCES BREAK-STAMP -
- STATES PROPERTY TAX

Remington Arms Company
710 Production Model
Mayfield Plant

30-Aug-99

	69,000 597s 0 710s	51,300 597s 20,000 710s	58,400 597s 20,000 710s	58,400 597s 30,000 710s
Total Units Produced to the Warehouse	69,000	71,300	78,400	88,400
Total Standard Hours Earned	71,162	71,279	78,602	87,787
Sales Value of Units Warehoused	$10,065,381	$11,883,392	$12,919,105	$15,119,105
Standard Cost of Goods Warehoused				
Direct Material Costs	3,703,154	3,604,201	3,985,250	4,410,743
Direct Labor Costs	697,358	700,541	772,298	863,333
Variable Overhead Costs	2,182,089	2,265,885	2,351,372	2,499,110
Fixed Overhead Costs	948,241	1,260,535	1,282,228	1,321,584
Total Overhead	3,130,330	3,526,420	3,633,600	3,820,694
Total Standard Cost of Production	7,530,842	7,831,161	8,391,147	9,094,769
Standard Cost of Production per Gun	109.14	109.83	107.03	102.88
Standard Mfg. Contribution Margin	$ 2,534,539	$ 4,052,230	$ 4,527,957	$ 6,024,336
Standard Mfg. Contribution Margin per Gun	$ 36.73	$ 56.83	$ 57.75	$ 68.15
	25.2%	34.1%	35.0%	39.8%
Assumptions				
Head Count	37.9	37.9	41.8	46.7
NSP				
597 (2000 budgeted Mix)	145.88	145.88	145.88	145.88
710	N/A	220.00	220.00	220.00
Material Cost				
597 (2000 budgeted Mix)	53.67	53.67	53.67	53.67
710	N/A	42.55	42.55	42.55
Labor				
597 (2000 budgeted Mix)	10.11	10.11	10.11	10.11
710	N/A	9.10	9.10	9.10
Overhead Rate	448.9%	503.4%	470.5%	442.6%
Overhead Costs				
597	45.37	50.88	47.55	44.73
710	N/A	45.83	42.83	40.29
Total Costs				
597	109.14	114.65	111.33	108.50
710	N/A	97.48	94.48	91.94
Margin				
597	36.73	31.22	34.55	37.37
710	N/A	122.52	125.52	128.06
Capital	N/A	2,358,528	2,358,528	2,358,528
Startup Costs	N/A	417,135	417,135	417,135
Working Capital (excluding A/R)	N/A	323,957	323,957	461,707

REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD 08/30/99

C:\data\DC\Mayfield\New Products\[M710 estimate rev4.xls]m710 est Mayfield run times

PART DESCRIPTION	Part #	710 Costing Model Material $	Run Rate (hrs/pc)	Labor $	Fixed O.H. $	Var O.H. $	Total O.H. $	Total
Document Envelope Assembly	1721	$ 0.09		$ -	$ -	$ -	$ -	$ 0.09
Document Envelope	1649	0.08		-	-	-	-	0.08
Users manual	3391	0.15		-	-	-	-	0.15
Product Owners Card	1426	0.03		-	-	-	-	0.03
Remington Authorized Gunsmith	3413	0.07		-	-	-	-	0.07
Safety Booklet	3499	0.10		-	-	-	-	0.10
Oval Label	3491	0.01		-	-	-	-	0.01
Carton Assembly	1444	2.05		-	-	-	-	2.05
Box and Envelope Label (710)	993002	0.04		-	-	-	-	0.04
Shelf Talker		0.14		-	-	-	-	0.14
Barrel Assembly Complete	305410		*0.0790*	0.71	1.27	2.29	3.56	4.27
Barrel Assembly	3305400			-	-	-	-	-
Barrel	305315	4.80	0.3866	4.09	7.36	13.23	20.59	29.48
Receiver	300340	1.76	0.0055	0.06	0.10	0.19	0.29	2.11
Receiver Insert Assembly Complete	????		*0.0530*	0.47	0.85	1.53	2.39	2.86
Receiver Insert Assembly	????		*0.0050*	0.04	0.08	0.14	0.23	0.27
Receiver Insert	300327	0.62		-	-	-	-	0.62
Threaded Insert	300347	0.04		-	-	-	-	0.04
Side Plate	300333	0.09	*0.0010*	0.01	0.02	0.03	0.05	0.15
Side Plate Pin (2)	300328	0.12	0.0010	0.01	0.02	0.03	0.05	0.18
Sear Safety Cam	15666	0.94		-	-	-	-	0.94
Pivot Pin (3)	300351	0.18		-	-	-	-	0.18
Sear Spring	17047	0.02		-	-	-	-	0.02
Trigger	15280	1.53		-	-	-	-	1.53
Trigger Connector	19461	1.03		-	-	-	-	1.03
Trigger Screw Front	17053	0.10		-	-	-	-	0.10
Trigger Engagement Screw	91128	0.03		-	-	-	-	0.03
Trigger Spring	15400	0.03		-	-	-	-	0.03
Trigger Stop Screw	15481	0.06		-	-	-	-	0.06
Safety	300408	0.31		-	-	-	-	0.31
Safety Pivot Pin	300352	0.06		-	-	-	-	0.06
Safety Spring	300343	0.05		-	-	-	-	0.05
Safety Button		0.41	0.0050	0.05	0.10	0.17	0.27	0.73
Safety Plunger		0.07		-	-	-	-	0.07
Safety Key/Cap/Bushing		0.69		-	-	-	-	0.69
Bolt Stop	300345	0.19	0.0010	0.01	0.02	0.03	0.05	0.25
Receiver Plug Screws (4)	17034	0.12		-	-	-	-	0.12
Recoil Bracket	300361	0.19	0.0010	0.01	0.02	0.03	0.05	0.25
Bolt Assembly Complete	????			-	-	-	-	-
Bolt Body Assembly	????		0.0275	0.29	0.52	0.94	1.47	1.76
Bolt Body	300339	0.74	0.0032	0.03	0.06	0.11	0.17	0.94
Bolt Handle	300370		0.0120	0.13	0.23	0.41	0.64	0.77
Bolt Handle Blank	300360	1.63		-	-	-	-	1.63
Bolt Handle Pin	300329	0.06		-	-	-	-	0.06
Bolt Head Assembly	305390		*0.0580*	0.52	0.93	1.68	2.61	3.13
Bolt Head	300338	1.75	0.0809	0.86	1.54	2.77	4.31	6.91
Extractor	93712	0.77		-	-	-	-	0.77

REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD

08/30/99

C:\data\DC\Mayfield\New Products\[M710 estimate rev4.xls]m710 est Mayfield run times

PART DESCRIPTION	Part #	710 Costing Model Material $	Run Rate (hrs/pc)	Labor $	Fixed O.H. $	Var O.H. $	Total O.H. $	Total
Ejector	300342	0.16	0.0010	0.01	0.02	0.03	0.05	0.22
Ejector Spring	????	0.03		-	-	-	-	0.03
Ejector Pin	94555	0.01		-	-	-	-	0.01
Bolt Assembly Pin	300330	0.10	0.0010	0.01	0.02	0.03	0.05	0.16
Firing Pin Assembly	????		*0.0070*	0.06	0.11	0.20	0.32	0.38
Bolt Plug	300368	0.25		-	-	-	-	0.25
Bolt Plug Insert	300346	0.29		-	-	-	-	0.29
Firing Pin	300334	0.27	0.0010	0.01	0.02	0.03	0.05	0.33
Firing Pin Tip	300335	1.60	0.0015	0.02	0.03	0.05	0.08	1.70
Firing Pin Head	300336	1.50	0.0020	0.02	0.04	0.07	0.11	1.63
Firing Pin Spring	????	0.14		-	-	-	-	0.14
Front Sight	94084	0.82		-	-	-	-	0.82
Front Sight Ramp	94657	1.13	0.0020	0.02	0.04	0.07	0.11	1.26
Front Sight Ramp Screws (2)	28505	0.09		-	-	-	-	0.09
Rear Sight Assembly	103146			-	-	-	-	-
Elevation Screw	90906	0.02		-	-	-	-	0.02
Rear Sight Aperture	94333	0.14	0.0010	0.01	0.02	0.03	0.05	0.20
Rear Sight Base	103531	0.97	0.0010	0.01	0.02	0.03	0.05	1.03
Rear Sight Slide	94335	0.47	0.0050	0.05	0.10	0.17	0.27	0.79
Windage Screw	90904	0.02		-	-	-	-	0.02
Rear Sight Base Screw (2)	28505	0.09		-	-	-	-	0.09
Stock Assembly Complete	????		*0.0160*	$ 0.14	0.26	0.46	0.72	0.86
Stock Assembly	????			-	-	-	-	-
Stock	????	5.38		-	-	-	-	5.38
Front Screw Bushing	15161	0.13		-	-	-	-	0.13
Middle Screw Bushing	????	0.05		-	-	-	-	0.05
Rear Screw Bushing	????	0.05		-	-	-	-	0.05
Grip Cap	97971	0.18		-	-	-	-	0.18
Recoil Pad	97973	1.63		-	-	-	-	1.63
Recoil Pad Screw (2)	98008	0.05		-	-	-	-	0.05
Magazine Latch	300362	0.25		-	-	-	-	0.25
Magazine Latch Spring	????	0.02		-	-	-	-	0.02
Magazine Latch Pin	300371	0.04	0.0010	0.01	0.02	0.03	0.05	0.10
Sling Swivel Stud (2)	300096	0.14		-	-	-	-	0.14
Takedown Screw (2)	????	0.16		-	-	-	-	0.16
Rear Takedown Screw	????	0.08		-	-	-	-	0.08
Magazine Assembly	????		*0.0083*	0.07	0.13	0.24	0.37	0.45
Magazine Box	300363	2.79	0.0010	0.01	0.02	0.03	0.04	2.84
Magazine Follower	300364	0.26		-	-	-	-	0.26
Magazine Bottom	300365	0.26		-	-	-	-	0.26
Magazine Spring	17028	0.42		-	-	-	-	0.42
Freight on Parts		0.25						0.25
Value Added Cost of: Proof/Gallery/Inspect/Pack		1.15	*0.1500*	1.34	2.42	4.34	6.76	9.25
Total Cost		**$ 42.55**	**0.9186**	**$ 9.10**	**$ 16.38**	**$ 29.45**	**$ 45.83**	**$ 97.48**

REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD

710 Operating Model: Overhead Summary

	Based on 58,400 597 Before 7,250 710 add on	Add 10,600 597		Add 20,000 710s Reduce 597 7100		Add 20,000 710s		Add 30,000 710s		
Overhead Costs					Total 51,300 597		Total 58,400 597s		Total 58,400 597s	
Staffing Costs	Budgeted Overhead	Adj	Total 69,000 597s	Adj	20,000 710s	Adj	20,000 710s	Adj	30,000 710s	Assumptions
7110500 Salaries - Exempt	484,994		484,994		484,994		484,994		484,994	
7130002 Indirect Labor	257,439		257,439		257,439		257,439		257,439	
7130005 Overtime Premium	14,678		14,678		14,678		14,678		14,678	
Employee Benefits	621,408	62,136	683,544	63,982	685,390	105,601	727,009	158,401	779,810	58% Wage 25% Salary
7450501 Training	14,400		14,400		14,400		14,400		14,400	
7455010 Tuition Refund	11,200		11,200		11,200		11,200		11,200	
7510500 Employee Recreation Expense	8,000		8,000		8,000		8,000		8,000	
7550500 Travel Expense	18,090		18,090		18,090		18,090		18,090	
7580500 Entertainment Expense	2,010		2,010		2,010		2,010		2,010	
7660500 Subscriptions & Publications	1,600		1,600		1,600		1,600		1,600	
8880500 Memberships	1,630		1,630		1,630		1,630		1,630	
Total Staffing	1,435,450	62,136	1,497,585	63,982	1,499,432	105,601	1,541,051	158,401	1,593,851	
Materials and Supplies										
7650500 Operating Supplies	24,268	4,405	28,673	5,881	30,149	8,471	32,739	12,706	36,975	Variable Cost by # guns Produced
7840500 Safety Costs	6,728		6,728		6,728		6,728		6,728	
8230150 Prototype Work	18,720		18,720	4,680	23,400	4,680	23,400	4,680	23,400	25% increase related to 710
8710002 Variable Tools	17,656		17,656	6,909	24,565	6,909	24,565	10,363	28,019	Increase proportional to 597
8710120 Essential Materials	303,826	81,120	384,946	100,934	404,760	138,000	441,826	207,000	510,826	$5 20/597 + $8 90/710
8710122 Tool/Gauge/Fixtures	10,003		10,003	2,899	12,902	2,899	12,902	4,349	14,352	
8710505 Vendor Rework	6,835		6,835	1,981	8,816	1,981	8,816	2,972	9,806	Increase proportional to 597
7670500 Maintenance Other	53,574		53,574	10,715	64,289	10,715	64,289	10,715	64,289	Based on # of Machines 20% increase
8710550 Maintenance Material Consumption	63,341		63,341	18,360	81,701	18,360	81,701	27,540	90,881	Propotional increase
8710560 Maintenance Material Non Inventory	41,102		41,102	11,914	53,016	11,914	53,016	17,870	58,972	Proportional increase
Total Materials and Supplies	546,052	85,525	631,577	164,272	710,325	203,928	749,981	298,195	844,248	
Facilities and Utilities										
7720500 Contract Services - Not Maint	20,105		20,105		20,105	1,000	21,105	2,250	22,355	Uniforms for new hires
7720503 Contract Services - Maint	40,408		40,408		40,408	-	40,408	-	40,408	
7810500 Equipment Rental & Lease	2,520		2,520		2,520		2,520		2,520	
8710132 Waste Disposal	22,195		22,195		22,195	6,124	28,319	9,186	31,381	
Total Facilities and Utilities	85,229		85,229	-	85,229	7,124	92,353	11,436	96,665	
Other										
7820500 Non Capital Equipment	16,439		16,439	3,288	19,727	3,288	19,727	3,288	19,727	20% increase due to Machine increase
8820502 Postage	3,389		3,389		3,389		3,389		3,389	
8870500 Contributions & Donations	2,198		2,198		2,198		2,198		2,198	
8840500 Environmental fees	250		250		250		250		250	
8980500 Miscellaneous Expenses	3,600		3,600		3,600		3,600		3,600	
Kreda Credits	(53,894)	(4,285)	(58,179)	(4,370)	(58,264)	(7,283)	(61,176)	(10,924)	(64,818)	4% of total payroll
Total Other	(28,017)	(4,285)	(32,303)	(1,082)	(29,100)	(3,995)	(32,012)	(7,836)	(35,854)	
Fixed Costs										
7910500 Telephone	21,648		21,648		21,648		21,648		21,648	
8060500 Water Utilities	7,800		7,800	2,759	10,559	2,759	10,559	4,138	11,938	Budget $1,000 increase for 7,250 710. Rate treated as variable
8090500 Electrical Utilities	178,433	7,255	185,688	47,363	225,797	69,057	247,490	103,585	282,018	16% increase in usage and 45% increase in peak treated as variable
8130500 Depreciation	705,905		705,905	259,530	965,435	259,530	965,435	259,530	965,435	Increase Capital to produce 710
8440500 Property Taxes	27,200		27,200	9,897	37,097	9,897	37,097	13,345	40,545	$3,000 related to increased fixed assets balance related to increase inventories
Total Fixed	940,986	7,255	948,241	319,549	1,260,535	341,242	1,282,228	380,598	1,321,584	
Totals	$ 2,979,700	$150,630	$3,130,330	$ 546,721	$3,526,420	$ 653,900	$ 3,633,600	$840,994	$ 3,820,894	
Direct Labor Payments	$ 590,227	$107,130	$ 697,358	$ 110,313	$ 700,541	$ 182,070	$ 772,298	$273,106	$ 863,333	
Overhead Rates										
Variable Costs			312 9%		323 4%		304 5%		289.5%	
Fixed Costs			136 0%		179 9%		166 0%		153 1%	
Total			448 9%		503 4%		470 6%		442 6%	
Overhead Increase/(Decrease) to 597			N/A		$ 5 51		$ 2 18		$ (0 64)	
Overhead 710			-		916,516		856,627		1,208,633	
597 Overhead Based on 2000 Budget			3,130,330		2,327,332		2,649,439		2,649,439	
Overhead Impact of 710			-		282,572		127,535		(37,378)	
			3,130,330		3,526,420		3,633,600		3,820,694	
			-		-		-		-	

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REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD

08/30/99

C:\data\DC\Mayfield\New Products\[M710 estimate rev4.xls]Start Up Costs

	8/31/99	9/30/99	10/31/99	11/30/99	12/31/99	Total 1999	1/31/00	2/29/00	3/31/00	4/30/00	5/31/00	6/30/00	7/31/00	Total 2000	Project Total
Direct Labor	1,183.96	3,188.64	3,188.64	4,555.20	3,871.92	15,988.36			7,109.76	8,809.92	10,200.96	6,800.64		32,921.28	48,909.64
From Overhead															-
Setters	198.45	-	-	-	-	198.45	3,625.60	8,565.48	5,349.80	1,767.76		3,070.32	3,535.52	25,914.48	26,112.93
Maintenance	-	-	-	-	-	-	2,582.40	5,084.10	5,717.34	4,198.24	3,148.68	4,253.48	2,099.12	27,083.36	27,083.36
EBs	801.79	1,849.41	1,849.41	2,642.02	2,245.71	9,388.35	3,600.64	7,916.76	10,542.60	8,570.03	7,742.79	8,192.18	3,268.09	49,833.09	59,221.44
Other Costs															-
Material for Receiver/Bolt Body		10,500.00	10,500.00	10,500.00	10,500.00	42,000.00									42,000.00
Material for 1,000 Learning															-
Guns ($43.86/ea)									21,930.00	21,930.00				43,860.00	43,860.00
Material for 60 T&P															-
Guns ($43.86/ea)										1,315.80	1,315.80			2,631.60	2,631.60
Material for 30 DAT															-
Guns ($43.86/ea)												1,315.80		1,315.80	1,315.80
15,000 rns of Ammo									600.00	1,200.00	600.00	600.00		3,000.00	3,000.00
Disassembly & Rearrange									6,000.00					6,000.00	6,000.00
Tooling & Inspection		16,250.00	16,250.00	16,250.00	16,250.00	65,000.00									65,000.00
Prototype Parts							8,000.00	8,000.00	8,000.00	8,000.00				32,000.00	32,000.00
Material Handling Purchases											19,333.33	19,333.33	19,333.33	58,000.00	58,000.00
Miscellaneous							286	286	286	286	286	286	286	2,000.00	2,000.00
1999 startup Costs	2,184.20	31,788.05	31,788.05	33,947.22	32,867.63	132,575.15	18,094.35	29,852.05	65,535.22	56,077.47	42,627.28	43,851.46	28,521.78	284,559.61	417,134.76

REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD

08/30/99

C:\data\DC\Mayfield\New Products\[M710 estimate rev4.xls]Head Count

	69,000 597s 0 710s	51,300 597s 20,000 710s	58,400 597s 20,000 710s	58,400 597s 30,000 710s
Guns Produced	69,000	71,300	78,400	88,400
Guns Per Day	285	295	324	365
Hours Earned	71,162	71,279	78,602	87,787
Hours Per Head Count (242*8 hrs)	1,936	1,936	1,936	1,936
Head count Required with no time off or OT	36.8	36.8	40.6	45.3
Vacation and Floating Holidays (3/242=1.23%)	0.5	0.5	0.5	0.6
Sick and Other 1.8%	0.7	0.7	0.7	0.8
Add 3% inefficiency	1.1	1.1	1.2	1.4
Less 3% OT	(1.1)	(1.1)	(1.2)	(1.4)
Required Head Count	37.9	37.9	41.8	46.7
Actual Head Count	37.5	37.5	37.5	37.5
Over/(Under) Staffing	(0.4)	(0.4)	(4.3)	(9.2)

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REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD

08/30/99

C:\data\DC\Mayfield\New Products\[M710 estimate rev4.xls]710 capital by operation

In House Capital

Part Name	Operation	Equipment	Capital Required			Useful Lif	Depreciation
Barrel	Cut off		$0				
	Drill	cones	$9,960	Dec-99		10	996
	Ream		$0			10	-
	Rifle	gages	$9,800	Feb-00		10	980
	Wash & Stress Relieve	baskets	$6,900	Feb-00		10	690
	Turn	gages	$10,100	Feb-00		10	1,010
	Face & Chamber	gages	$33,300	Apr-00		10	3,330
	Face & Chamber	machine	**$222,880**	Mar-00		10	22,288
	Cut off and Crown	chuck	$15,000	Jan-00		10	1,500
	wash and eddy current test	machine	$75,000	Mar-00		10	7,500
	Induction Harden	machine	**$166,000**	Mar-00		10	16,600
	Inspect Hardness	machine	$12,000	Mar-00		10	1,200
	Drill and tap sight	fix & gages	$7,600	Feb-00		10	760
	Roll mark	fix & gages	$6,300	Apr-00		10	630
	Angularity Straighten	fix & gages	$3,500	Feb-00		10	350
	Centerless Polish		$0			10	
	Glass Bead Blast	fixtures	$2,500	Jan-00		10	250
	Color	racks	$6,000	Jan-00		10	600
Bolt Head	Inspect Purchased Part Blank	gage	$2,500	Feb-00		10	250
	Superabrasive Grind Lugs	fix & gage	$43,800	Feb-00		10	4,380
	CNC Machine Bolt Face Complete	fix & gage	**$174,784**	Mar-00		10	17,478
	CNC Machine Cam Cuts, Ejector Retaining Pin Hole	fix & gage	$15,000	Mar-00		10	1,500
	CNC Machine Bolt Head Retaining Pin Hole	fix & gage	$15,000	Mar-00		10	1,500
	Punch Form Extractor Rotation Notch	fix & gage	$10,000	Jan-00		10	1,000
	Vendor Heat Treat		$0			10	-
	Inspect for Hardness		$0			10	-
	Black Oxide		$0			10	-
Bolt Body	Inspect Purchased Part Blank	gage	$2,000	Jan-00		10	200
	Machine Cam Cuts	machine	$0	Feb-00		10	-
	Assemble Braze Bolt	machine	$90,000	Mar-00		10	9,000
	Deplate	tanks	$9,500	Jan-00		10	950
	Eddy Current Test		$0			10	-
	Glass Bead Blast	fix	$2,500	Jan-00		10	250
	Black Oxide		$0			10	-
Receiver	Inspect Purchased Part Blank	gage	$2,500	Jan-00		10	250
	Machine A-load	machine & CM	**$513,831**	Feb-00		10	51,383
	Machine B-load		$0	Feb-00		10	-
	Vibratory tumble deburr		$0			10	-
Barrel Assembly	Press Receiver to Barrel	fixture	$0	Dec-99	Ilion Equip	10	-

REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD 08/30/99

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	Inspect for straightness	gage	$3,500	Dec-99		10	350
Final Assembly	Gallery	100yd range	**$100,000**	Dec-99		25	4,000
		snails	$30,000	Jul-00		25	1,200
		HVAC	$25,000	Jun-00		10	2,500
		other	$10,000	Mar-00		25	400
						25	-
			$100,000	Mar-00		25	4,000
			$65,000	Jul-00		25	2,600
			$1,801,755				

Purchased Parts

Part #	Part Name	Capital	Tool	Vendor				Payments	
300327	Receiver Insert	48,000	Mold	Hanson	Jun-99	5	9,600		
300333	Side Plate	10,000	Stamping Die		Dec-99	5	2,000	Mar-00	Apr-00
300334	Safety Arm	23,880	Stamping Die	NH Stamping	Dec-99	5	4,776	Mar-00	Apr-00
300345	Bolt Stop	6,820	PM	Sterling	Dec-99	5	1,364	Mar-00	Apr-00
300361	Recoil Bracket	2,225	Stamping Die	NH Stamping	Dec-99	5	445	Mar-00	Apr-00
300360	Bolt Handle Blank	12,800	Invest Cast Die	Fansteel	Dec-99	5	2,560	Mar-00	Apr-00
300366	Bolt H. Braze Shim	0	Use Paste	Lucas Milhaupt	Dec-99	5	-	Mar-00	Apr-00
300368	Bolt Plug	38,088	Mold	Par 4	Dec-99	5	7,618	Mar-00	Apr-00
300336	Firing pin head	23,000	MIM Mold	Mogamet	Dec-99	5	4,600	Mar-00	Apr-00
300362	Mag Latch	33,480	Mold	Par 4	Dec-99	5	6,696	Mar-00	Apr-00
300363	Magazine Box	28,000	Mold	Morrisey	Dec-99	5	5,600	Mar-00	Apr-00
300364	Magazine Follower	33,300	Mold	Par 4	Dec-99	5	6,660	Mar-00	Apr-00
300365	Magazine Bottom	47,880	Mold	Par 4	Dec-99	5	9,576	Mar-00	Apr-00
	Stock	150,300	Mold	Par 4	Dec-99	5	30,060	Mar-00	Apr-00
	Styrofoam Bed	0	Die	Tuscorora		5	-	Mar-00	
	PPI	38000							
		$495,773							
	Total	**$2,297,528**					253,430		
	Installation	$61,000				10	6,100		
		$2,358,528					259,530		

REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD 08/30/99

C:\data\DC\Mayfield\New Products\[M710 estimate rev4.xls]Rev 3 vs 4

PART DESCRIPTION	(Decrease)/Increase Material	Run Time
Carton Assembly	0.21	
Barrel Assembly Complete		(0.0095)
Barrel	**(0.12)**	**0.1395**
Receiver	**(3.24)**	**(0.0645)**
Receiver Insert Assembly		(0.0048)
Trigger	**0.98**	
Safety	(0.01)	(0.0015)
Safety Pivot Pin	(0.07)	
Safety Button	0.41	0.0050
Safety Plunger	0.07	
Safety Key/Cap/Bushing	**0.69**	
Snap Washer	(0.02)	
Bolt Stop	(0.09)	
Recoil Bracket	(0.01)	
Bolt Body	**(1.76)**	**(0.0128)**
Bolt Handle Blank	0.13	
Bolt Handle Pin	(0.01)	
Bolt Handle Brazing Shim	(0.05)	
Bolt Head Assembly		0.0428
Bolt Head	**0.15**	**(0.0115)**
Bolt Assembly Pin	(0.12)	
Bolt Plug	**(0.69)**	
Firing Pin Assembly		**(0.0086)**
Firing Pin	(0.03)	
Firing Pin Tip	0.32	
Firing Pin Head	**1.17**	
Front Sight	**0.51**	
Front Sight Ramp	0.28	
Rear Sight Slide		0.0015
Stock	**(0.62)**	
Middle Screw Bushing	(0.08)	
Rear Screw Bushing	(0.08)	
Magazine Latch	0.05	
Magazine Latch Pin	0.03	
Takedown Screw	0.08	
Rear Takedown Screw	0.04	
Magazine Box Assembly		(0.0026)
Magazine Follower	(0.03)	
Magazine Bottom	(0.03)	
Blank Part	(0.02)	
Black Oxide		**0.0103**

Bold = Material change +/- 0.50
&/or time change +/- .005

Final Assembly		**0.0050**
	(1.96)	0.0883

REMINGTON ARMS COMPANY, INC.
FIREARMS - MAYFIELD 08/30/99

C:\data\DC\Mayfield\New Products\[M710 estimate rev4.xls]Working Capital

Units of 710	20,000	30,000
Stores Theses are primarily specialty Cutters Assume 3 months in Inventory	34,500	51,750
Raw Material 597 Raw material approaching 6 turns 2 months in Inventory	141,831	212,747
Work In Process 597 WIP approaching 18 turns .75 Months in Inventory	110,285	155,044
Finished Goods Sale better than 597 1 Month in Inventory	162,464	229,851
Total Inventory	449,081	649,392
Increase in A/P 45 Days of Raw Material & Cutters	125,123	187,685
Increase in Working Capital	323,957	461,707

710 Barrel Run-Rate Summary-R3

No.	Operation	Estimated Run-Rate for Capacity/Constraint Planning(hr./part)	Comments	Estimated Run-Rate for Cost Planning(hr./part)	Comments
1	Cut to Length	0.004167		0.000000	Grouped with Gundrill
2	Gundrill Bore	0.0534		0.053353	Constraint Operation in Cell - assumes one Machine running 710
3	Ream Bore	0.045649		0.045649	Constraint Operation in Cell - assumes one Machine running 710
4	Rifle Bore	0.026333		0.000000	Grouped with Reamer
5	**Wash & Stress Relieve**	0.073167	597 rate / .443 (177 M/710 bbls in a load vs 400 M/597 bbls). **CONSTRAINT OPERATION FOR BARREL**	0.000413	Material Handling Time only divided by 177
6	Turn O.D. & Inspect for Runout	0.027713		0.027713	Constraint Operation in Cell - assumes both Machines running 710
7	Cut-off & Crown Muzzle End	0.011667	a/u 597 rate	0.000000	Grouped with Turn O.D.
8	Face, Chamber, Machine Hub End, Drill & Tap Takedown Screw Holes, Mill Recoil Lug Slot & 100% Inspect Chamber Finish	0.061459	LB-300 MY Turning Center	0.061459	LB-300 MY Turning Center
9	Drill & Tap Sight Screw Holes	0.020197	Modify current 597 BBL Assy Fixture	0.000000	Grouped with Chamber Operation
10	Proseco Wash Barrels	0.000190	Material Handling Time Only divided by 177	0.000190	Material Handling Time Only divided by 177
11	Induction Heat Treat Hub	0.006000	a/u Ilion's rate	0.006000	a/u Ilion's rate
12	Alkaline Wash/Pickle Barrel	0.000556	2 minute cycle time divided by 25 bbls per rack	0.000556	2 minute cycle time divided by 25 bbls per rack
13	Eddy Current Test Barrel	0.015500	a/u Ilion's rate for Magnaflux	0.015500	a/u Ilion's rate for Magnaflux
14	Centerless Polish Barrel	0.004167	a/u 597 rate	0.004167	a/u 597 rate
15	Press Receiver onto Barrel	0.023370	a/u Ilion's rate	0.023370	a/u Ilion's rate; Constraint Operation in Cell
16	Inspect for Runout & Straighten if Necessary	0.012000	a/u Ilion's rate	0.000000	Grouped with Assembly Operation
17	Roll Mark	0.003000	a/u 597 rate	0.003000	a/u 597 rate
18	Angularity Straighten Muzzle & Inspect Bore	0.006667	a/u 597 rate	0.006667	a/u 597 rate
19	Centerless or Spin Polish (repair)	0.004167	a/u 597 rate	0..000	repair only
20	Glass Bead	0.005556	a/u 597 rate	0.005556	a/u 597 rate
21	Black Oxide	0.004167	a/u 597 rate, Material Handling Time Only	0.004167	a/u 597 rate, Material Handling Time Only
	Totals	0.408042		**0.257758**	

General Assumptions:

- 25" barrel length
- 4140 Re-sulfurized, cold drawn steel used
- All calculated run-rates based on std. reference information contained in ***Machining Data Handbook, 3rd Edition***, for Material Group 4 (resulfurized medium carbon alloy steel, Bhn 200-250)
- All run-rates listed above are based on 100% efficiency

Unknowns/Variables:

- Exact grouping of DeHoff cell
- Exact grouping of turn/chamber cell
- How much hand deburring will be needed at barrel chamber (machine deburring tool included in chamber run-rate)
- How much (if any) polishing will be required after barrel is assembled to receiver
- How much straightening will be required after barrel is assembled to receiver
- Is assembly equipment used by Ilion sufficient to perform task?
- Will induction H.T. leave scale that can' be removed by alkaline wash/pickling?
- Efficiency will be less than 100%
- How much time will eddy current testing be vs magnaflux?
- Exact material to be used for barrel

As a result of these unknowns, the number used for the budgetary analysis is 150% of the total run-rate given above, or .38664 hr.

The difference between budgetary run-rate & 100% efficient run-rate listed above is .1288 hrs, or app. $2.15

No.	Operation	Estimated Run-Rate for Capacity/Constraint Planning(hr./part)	Comments	Estimated Run-Rate for Cost Planning(hr./part)	Comments
1	CNC Machine Bolt Face Complete	0.01981	"A" pallet load on CNC Mill	0.01981	VMC (Okuma Crown-V) with pallet changer & Rotary indexer
2	Superabrasive Grind Lugs	0.01887	Edgetek	0.01887	Edgetek
3	CNC Machine Bolt Head Retaining Pin Hole	0.00756	"B" pallet load on CNC Mill	0.00756	VMC (Okuma Crown-V) with pallet changer & Rotary indexer
4	CNC Machine Cam Cuts, Ejector Retaining Pin Hole, Deburr	0.01724	Twin Head Rotary Indexer mounted adjacent to pallets on CNC mill	0.01724	Twin Head Rotary Indexer mounted adjacent to pallets on VMC
5	Punch Form Extractor Rotation Notch	0.00638	a/u Ilion Rate	0.00638	a/u Ilion Rate
6	Vendor Heat Treat & Inspect for Hardness	0.00000		0.00000	
7	Black Oxide	0.00133	Material Handling Time	0.00133	Material Handling Time
	Totals	0.07119		**0.07119**	

General Assumptions:

- Bolt head blank includes rear firing pin hole, front firing pin hole, & rough C'bore
- Bolt handle run rate not included in the "A" pallet loading; bolt handle run-rate listed on separate sheet.
- All calculated run-rates based on std. reference information contained in ***Machining Data Handbook, 3rd Edition***, for Material Group 4 (resulfurized medium carbon alloy steel, Bhn 200-250)
- All run-rates listed above are based on 100% efficiency

Unknowns/Variables:

- Fixturing difficult due to lack of good datum surfaces; plan to use ejector pin hole for locating most difficult cuts. Fixture loading might be tedious as a result.
- Some cuts are difficult to access & measure; plan to use receiver CMM with rotary head & tip changer to measure difficult cuts
- Number of features included in blank not known; an additional loading and/or different method of cutting cam relief cuts on lugs might be required.
- Run-rates listed above assume single loadings for each part; palletized fixtures could reduce the run-rates to load/unload times if sufficient # of pieces can be fit onto each pallet.
- Efficiency will be less than 100%

As a result of these unknowns, the number used for the budgetary analysis is 114% of the total run-rate given above, or .0809

The difference between budgetary run-rate & 100% efficient run-rate listed above is .0097 hrs, or app. $0.10

710 Bolt Handle Summary

No.	Operation	Estimated Run-Rate for Capacity/Constraint Planning(hr./part)	Comments	Estimated Run-Rate for Cost Planning(hr./part)	Comments
1	CNC Machine Bolt Handle Complete	0.00913	"A" pallet load on CNC Mill	0.00913	"A" pallet load on CNC Mill
2	Tumble	0.00100	Material Handling Time	0.00100	Material Handling Time
	Totals	0.01013		**0.01013**	

General Assumptions:

- Bolt Handle Blank is investment cast part and comes in already bent
- Bolt head run rate not included in the "A" pallet loading; bolt head run-rate listed on separate sheet
- All calculated run-rates based on std. reference information contained in ***Machining Data Handbook, 3rd Edition***, for Material Group 2 (low carbon steel, Bhn 125-175)
- All run-rates listed above are based on 100% efficiency

Unknowns/Variables:

- Fixturing difficult due to lack of good datum surfaces; Mike Keeney looking at alternate design. Fixture loading might be tedious with current design.
- Run-rates listed above assume single loadings for each part; palletized fixtures could reduce the run-rates to load/unload times if sufficient # of pieces can be fit onto each pallet.
- Will parting lines be sufficiently smoothed by tumbling?
- Efficiency will be less than 100%

As a result of these unknowns, the number used for the budgetary analysis is 118% of the total run-rate given above, or .012

The difference between budgetary run-rate & 100% efficient run-rate listed above is .00187 hrs, or app. $0.02

No.	Operation	Estimated Run-Rate for Capacity/Constraint Planning(hr./part)	Comments	Estimated Run-Rate for Cost Planning(hr./part)	Comments
1	CNC Machine Complete	0 08372	Actual machine run time	0 00397	5 minute bar load time divided by 21 pcs per bar (12 ft bar stock)
2	Vibratory Deburr	0 00153	Material Handling Time	0.00153	Material Handling Time
	Totals	0.08525		**0.00550**	

General Assumptions:

- Receiver comes in as 12' tube stock, finish O.D. & undersized I.D.
- Bolt body run rate not included; bolt body run-rate listed on separate sheet
- All calculated run-rates based on std reference information contained in ***Machining Data Handbook, 3rd Edition***, for Material Group 2 (low carbon steel, Bhn 125-175)
- All run-rates listed above are based on 100% efficiency

Unknowns/Variables:

- Straightness required of tube stock in order to work in bar feeder - how much will specifying a particular spec increase price?
- Size of remnant piece off each bar (scrap)
- Will vibratory deburring be sufficient to deburr part (a/u 597 vibratory bowl)?
- Will tube stock O.D. have sufficient finish to avoid polishing prior to assembly?
- What will machine up-time be? Machine critical to success of 710.

No difference between budgetary number & total given above. Run-rate is load/unload time only for both operations.

710 Bolt Body Run-Rate Summary

No.	Operation		Estimated Run-Rate for Capacity/Constraint Planning(hr./part)	Comments		Estimated Run-Rate for Cost Planning(hr./part)	Comments
1	Machine Complete from Bar Stock		0 03265	Machining Time		0 00321	5 minute bar load time divided by 26 pcs. Per bar (12 ft. bar stock)
2	Wash		0 00100	Material Handling Time		0 00100	Material Handling Time
3	Assemble & Braze Bolt Handle to Bolt Body		0.01160	a/u Ilion Rate		0 01160	a/u Ilion Rate
4	Deplate & Wash		0.00100			0.00100	
5	Eddy Current Test		0.00641	a/u Ilion Rate for Magnaflux		0.00641	a/u Ilion Rate for Magnaflux
6	Glass Bead Bolt Body		0 00556	a/u 597 Rate		0.00556	a/u 597 Rate
7	Black Oxide		0 00200	Material Handling Time		0 00200	Material Handling Time
	Totals		0.06021			**0.03077**	

General Assumptions:

- Bolt Body comes in as 12' tube stock, finish O.D. & finish I.D.
- All calculated run-rates based on std. reference information contained in ***Machining Data Handbook, 3rd Edition*** for Material Group 2 (low carbon steel, Bhn 125-175)
- All run-rates listed above are based on 100% efficiency

Unknowns/Variables:

- Straightness required of tube stock in order to work in bar feeder - how much will specifying a particular spec increase price?
- Size of remnant piece off each bar (scrap)
- Will tube stock O.D. have sufficient finish to avoid polishing?
- What will machine up-time be? Machine critical to success of 710
- Will concentricity between O.D. & I.D. actually be .01 or less?
- Will it be necessary to eddy current test bolt body after braze?

No difference between budgetary number & total given above. Run-rate is load/unload time only for both operations.

Component	Constraint Opertaion	Constraint Machine	Constraint Run Rate per Operation	Constraint Run Rate per Machine	Capacity @ 80% Efficiency	% of Total Time needed to run each part	% of Capacity to Make 20,000 guns per Year	% of Capacity to Make 40,000 guns per Year	% of Capacity to Make 60,000 guns per Year
Barrel	Stress Relieve	Furnace	0.07317	0.07317	55,107	100%	36%	73%	109%
Receiver	Machine Complete	LT-15 Turning Center	0.08372	0.11637	34,648	72%	58%	115%	173%
Bolt Body	Machine Complete	LT-15 Turning Center	0.03265	0.11637	34,648	28%	58%	115%	173%
Bolt Head	Machine Face	VMC w/ Pallet Changer	0.01981	0.05552	72,628	36%	28%	55%	83%
Bolt Handle	Machine Complete	VMC w/ Pallet Changer	0.01090	0.05552	72,628	20%	28%	55%	83%
Bolt Head	Machine .250 Hole	VMC w/ Pallet Changer	0.00756	0.05552	72,628	14%	28%	55%	83%
Bolt Head	Machine Cam Cuts, etc	VMC w/ Pallet Changer	0.01724	0.05552	72,628	31%	28%	55%	83%

Assumes:

1 Turning Center to turn both receiver blanks and bolt body blanks
2. VMC runs both parts on a single pallet; total run rate is sum of the Bolt Head & Bolt Handle
3. Equal numbers of bolt heads & bolt handles are machined at same time
4. Capacity Constraints based on the following:
   * *80% of theoretical machine run rate (parts per hour)* X 21 hr/day X 240 days per year

710 Receiver Run-Rate Summary

No.	Operation	Estimated Run-Rate (min./part)		Estimated Run-Rate (hr./part)	Comments
1	Inspect Purchased Part Blank	0.25		0.00417	
2	CNC Machine Complete	2.77		0.04624	
	Totals	3.02		0.05041	

Assumptions:

Purchase Part Blank consists of:
* 1.046 I.D.
* 1.227 C'Bore
* .320 Datum C Fire Control Slot
* Bolt Handle Cam / Clearance Cut
* Top Tang Cut
* Bolt Stop Face, Drill Point, and .279 Hole

All Other Machining done in-house

CNC Machine Complete

Operation	Cutter Used	Cutter Dia.	Cut Depth/length (in.)	SFM	IPR	RPM	IPM	Cut Time (min.)	Rapid Traverse Time (min.)	Tool Change Time (min.)	Total Time per Operation (min.)
Rough Mill Magazine Box Slot	3/4 Carbide End Mill	0.7500	2.500	210	0.0120	1,070	12.83	0.195	0.03125	0.1	0.326
Spot Face for .265 Clearance Hole	15/64 Carbide End Mill, 3 flute	0.2344	0.188	210	0.0060	3,422	20.53	0.009	0.01667	0	0.026
Finish Mill Magazine Box Slot	15/64 Carbide End Mill, 3 flute	0.2344	8.000	210	0.0060	3,422	20.53	0.390	0.03125	0.1	0.521
Center Drill for .265 Clearance Hole	3/8 NC Spot Drill	0.3750	0.188	100	0.0050	1,019	5.09	0.037	0 03125	0	0.068
Center Drill for Scope Screw Holes	3/8 NC Spot Drill	0.3750	0.281	100	0.0050	1,019	5.09	0.055	0.03125	0.1	0.186
Drill .265 Clearance Hole	17/64 Drill	0.2656	0.218	100	0.0050	1,438	7.19	0.030	0.03125	0.1	0.162
Rough Mill Ejection Port	1/2 Carbide End Mill	0.5000	3.380	210	0.0120	1,604	19.25	0.176	0.03125	0.1	0.307
Finish Mill Ejection Port	1/2 Carbide End Mill	0.5000	6.750	210	0.0060	1,604	9.63	0.701	0.01667	0	0.718
Mill Ejection Port Mouth	Special 3/4 End Mill w/ .625 Spherical Nose	0.7500	3.250	210	0.0120	1,070	12.83	0.253	0.03125	0.1	0.384
Tap Drill for Scope Screw Holes	#30 Drill	0 1285	0.672	60	0.0050	1,784	8.92	0.098	0.03125	0.1	0.229
Tap #6-48 Scope Screw Holes	#6/48 NS-2 Tap	0 1380	1.700	70	0.0208	1,938	40.36	0.042	0.03125	0.1	0.173
									Total Time per Part (min.)		2.774
									Total Time per Part (hr.)		0.0462

NOTES:

* Cutter order optimized to eliminate excessive tool changes

Part Name	Receiver	**Operation Name**	Machine Complete
Part Number	300340	**Operation Number**	

Capital Required

Machine or Fixture	Dollars		Expected Delivery
Okuma LT-15 MY Twin Spindle/Twin Turret Turning Center	$ 389,200.00		12 wks ARO
Manual Touch Setter for LT-15MY	$ 22,203.00		
LNS THB 42-LC Bar Feeder (Single Bar)	$ 16,570.00		
Okuma Part Catcher for RH Turret	$ 11,385.00		
Side Chip Conveyor	$ 10,530.00		
Barfeeder Modification	$ 2,673.00		
Barfeeder Interface	$ 2,420.00		
Extra Memory (2100 ft.)	$ 3,710.00		
Signal Tower	$ 1,400.00		
Tool Life Management	$ 1,740.00		
G&L Discovery CMM	$ 52,000.00		
TOTAL CAPITAL	$ 513,831.00		

M/710 Capital

In House Capital

Part Name	Operation	Equipment	Capital Required	Material	Ext Process	Run Time	Variable Tools	Pre-Op Start Up	
Barrel	Cut off		$0	$4.92			0.008	0	
	Drill	cones	$9,960				0.111	1,500	Dec-99
	Ream		$0				0.180	2,492	
	Rifle	gages	$9,800				0.096	576	Feb-00
	Wash&Stress Relieve	baskets	$6,900			0.0012	0.000	0	Feb-00
	Turn	gages	$10,100			0.0277	0 111	5,161	Feb-00
	Face&Chamber	gages	$33,300			0.0000	0.000	0	Apr-00
	Face&Chamber	machine	$222,880			0 0585	4.069	9,388	Mar-00
	Cut off and Crown	chuck	$15,000				0.120	690	Jan-00
	wash and eddy current test	machine	$75,000				0.000	0	Mar-00
	Induction Harden	machine	$166,000				0 050	3,200	Mar-00
	Inspect Hardness	machine	$12,000				0.000	285	Mar-00
	Drill and tap sight	fix & gages	$7,600			0.0313	0.161	5,588	Feb-00
	Roll mark	fix & gages	$6,300						
	Angularity Straighten	fix & gages	$3,500						
	Centerless Polish	0	$0				0.186	400	
	Glass Bead Blast	fixtures	$2,500					2,500	
	Color	racks	$6,000				0.760	2,000	Apr-00
	TOTAL		586,840.000	4.920	0 000	0.119	5.152		

Bolt Head	Inspect Purchased Part Blank	gage	$2,500					800	Feb-00
	Superabrasive Grind Lugs	fix & gage	$43,800			0.0189	0.394	3,315	Feb-00
	CNC Machine Bolt Face Complete	fix & gage	$174,784			0.0198	0.266	1,782	Mar-00
	CNC Machine Cam Cuts, Ejector Retaining Pin Hole	fix & gage	$15,000			0.0070	0.036	1,000	Mar-00
	CNC Machine Bolt Head Retaining Pin Hole	fix & gage	$15,000			0.0172	0.252	1,471	Mar-00
	Punch Form Extractor Rotation Notch	fix & gage	$10,000			0.0064	0.025	1,500	Jan-00
	Vendor Heat Treat		$0		$0.15				
	Inspect for Hardness		$0						
	Black Oxide		$0			0.0013		800	
	Total		261,084.000	0.000	0 150	0.071	0.973		

Bolt Body	Inspect Purchased Part Blank	gage	$2,000	$0.74					Jan-00
	Machine Cam Cuts	machine	$0			0.0360	0.199	6,761	Feb-00
	Assemble Braze Bolt	machine	$90,000			0.0083	0.050	15,000	Mar-00
	Deplate	tanks	$9,500			0.0010	0.000	0	Jan-00
	Eddy Current Test		$0			0 0083	0.000	0	
	Glass Bead Blast	fix	$2,500						Jan-00
	Black Oxide		$0			0 0013	0.000	0	
	Total		$104,000	$1	$0	0.0549	$0	$21,761	

Receiver	Inspect Purchased Part Blank	gage	$2,500	$1 76					Jan-00
	Machine A&B load		$513,831			0.0083	0.941	12,480	Feb-00
									Feb-00
	Vibratory tumble deburr		$0			0.0050			
	Total		$516,331	$2	$0	0.0133	$1	$12,480	

Barrel Assembly	Press Receiver to Barrel	fixture	$0			0.0273	0.150	750	Dec-99	Ilion Equip
	Inspect for straightness	gage	$3,500			0.0120	0.005	700	Dec-99	
	Total		$3,500	$0	$0	0.0393	$0	$1,450		

Final Assembly	Gallery	100yd range	$100,000						Dec-99
		snails	$30,000						Jul-00
		HVAC	$25,000						Jun-00
		other	$10,000						Mar-00
			$100,000						Mar-00
			$65,000						Jul-00
Bolt Head						0.0000			
Bolt Body						0.0566			
Firing Pin						0.0000			
Trigger Plate	comparator $8000					0.0355			
Gun Build						0.0355		4,000	
Pack						0.0472			
	Total		$330,000 370,000	$0	$0	0.1748	$0	$4,000	
	TOTALS Mayfield		**$1,801,755**	**$7**	**$0**	**0.4716**	**$7.47**	**$39,691**	

HTD Auto SS 2500 Heading Plugs

Purchased Parts

Part #	Part Name	Tool	Capital	Material	Ext Process	Run Time	Variable Tools	Pre-op Start Up	Vendor	Payments		
300327	Receiver Insert	Mold	48,000	$0.62					Hanson	Jun-99		
300333	Side Plate	Stamping Di	*10,000*	$0.09		0 0010				Dec-99	Mar-00	Apr-00
300334	Safety Arm	Stamping Di	23,880	$0.31	$0.03	0 0010		2,000	NH Stamping	Dec-99	Mar-00	Apr-00
300345	Bolt Stop	PM	6,820	$0.19	$0.03	0.0010			Sterling	Dec-99	Mar-00	Apr-00
300361	Recoil Bracket	Stamping Di	550	$0.19		0.0010			square stamping	Dec-99	Mar-00	Apr-00
300360	Bolt Handle Blank	Invest Cast Die	12,800	$1.63		0.0083		250	Fansteel	Dec-99	Mar-00	Apr-00
300366	Bolt H. Braze Shim	Use Paste	*0*	$0.00		0 0000		300	Lucas Milhaupt	Dec-99	Mar-00	Apr-00
300368	Bolt Plug	Mold	38,088	$0.25		0.0000			Par 4	Dec-99	Mar-00	Apr-00
300336	Firing pin head	MIM Mold	23,000	$1.45	$0.05	0.0010		1,000	Megamet	Dec-99	Mar-00	Apr-00
300362	Mag Latch	Mold	33,480	$0.25		0.0000			Par 4	Dec-99	Mar-00	Apr-00
	Mag Box Assy	0	0			0.0055						
300363	Magazine Box	Mold	*28,000*	$2.79		0.0000		3,000	Morrisey	Dec-99	Mar-00	Apr-00
300364	Magazine Follower	Mold	33,300	$0 26		0.0000		300	Par 4	Dec-99	Mar-00	Apr-00
300365	Magazine Bottom	Mold	47,880	$0.26		0 0000		300	Par 4	Dec-99	Mar-00	Apr-00
	Stock	Mold	150,300	$5.38		0.0000		600	Par 4	Dec-99	Mar-00	Apr-00
	Styrofoam Bed	Die	0			0 0000			Tuscorora		Mar-00	
			$456,098									
	Bolt body material							12,400				
	Receiver Material							29,400				
	set-up charges							3,515				
	Total		**$2,257,853**	**$35.93**	**$0.26**	**1.4336**	**$22.41**	**$216,586.00**				
300366	Obsolete											

Possible Capital Additions

18900	Styrofoam bed die
8000	Comparator
10000	Mag box Delta side plate delta if
12000	fine blanked

Three sided Carts for 710 barrels after cutoff (4 carts)

Material	Quantity		Cost		Total
Swivel Castors 4"	8	$	11.49	$	91.92
Rigid Castors 4"	8	$	9.86	$	78.88
2" x 3/16" Angle Iron (90 ft needed) sold in 20 ft	7	$	14.00	$	98.00
11/2" x 3/16" Flat Steel(15 ft needed) sold in 20ft	1	$	7.65	$	7.65
Paint	40	$	0.99	$	39.60
Labor (cost per hour)	15	$	50.00	$	750.00
		Total sent out		$	**1,066.05**
		Total in house		$	**316.05**

Castors -Grainger- p.2134 Stk# 1G197 & 1G200
Steel quoted by Joey at Barclay Metal
Labor estimated at $50.00 for outside vendor

MAKE SMALL LOT CARTS FOR RABBIA SEND DOWN RACKS

Heat Treat Baskets

Vendor	Material	Quantity	Cost	Total
Barry Irvan (270)345-2730	Inkonel	2	$ 4,000.00	$ **8,000.00**
Universal Machine	Inkonel	2	$ 3,885.00	$ **7,770.00**
(270)856-3790	316 SS	2	$ 2,368.00	$ **4,736.00**
Lohn & Associates (440)729-7390	~~316~~ SS 330 SS	2	$ 2,354.00	$ **4,708.00**

Coloring Racks

Price quoted by ARC. (815)754-6660 Brahm Greve

Material	Quantity		Price		Total
Racks to carry 50 barrels for passivation and black oxide	1/2	$	2,487.00	$	4,974.00
	3/5	$	1,865.00		
	6/9	$	1,492.00		
Racks to carry 100 bolts and 100 bolt heads	1/2	$	2,380.00	$	4,760.00
	3/5	$	1,785.00		
	6/9	$	1,428.00		
Price for 2 racks for barrels and 2 racks for bolt and bolt heads			**TOTAL**	**$**	**9,734.00**

Bead Blaster

Barrel Bottom

Manuf. McMaster-Carr

Material

1 1/2" Delrin Rod

Stock #	Pg. #	Quantity	Cost	Total
8572K25	2882	2	$ 7.98	$ 15.96
			Total	**$ 15.96**

Each Rod has a 5feet max.

Quoted by Universal Machine

24	$ 21.00	**$**	**504.00**

Tables

Material Description	Page #	Stock #	Quantity		Cost		Total
2" Square Tubing 3/16" wall			340	$	3.12	$	1,060.80
4" Flat Steel 1/4" thick			26	$	32.06	$	833.56
48" x 24" Plastic Laminated Top	1148	5169T51	8	$	72.98	$	583.84
60" x 36" Laminated Hard Maple Top	1148	4882T16	4	$	182.53	$	730.12
24" x 36" 1/4" Steel Plate Top			1	$	25.00	$	25.00
All Priced by McMaster-Carr except Steel Plate Top					**Total**	$	**3,233.32**

2" Square Tubing 3/16" wall			340	$	1.80	$	612.00
4" Flat Steel 1/4" thick			26	$	0.95	$	24.70
48" x 24" Plastic Laminated Top	1148	5169T51	8	$	72.98	$	583.84
60" x 36" Laminated Hard Maple Top	1148	4882T16	4	$	182.53	$	730.12
24" x 36" 1/4" Steel Plate Top			1	$	25.00	$	25.00
Metal Priced By Barclay Metal and Tops Priced by McMaster-Carr					**Total**	$	**1,975.66**

Workbenches from McMaster-Carr	1142	9961T34	16	$	626.13	$	10,018.08
					Total	$	**10,018.08**

Bolt Holders

Material	Quantity	Cost	Total
1" x 4" lumber (sold in 10ft. Sticks)	11	$ 3.00	$ 33.00
1/4" plywood (sold in 4'x8' Sheets)	1	$ 13.00	$ 13.00
Wood glue	1	$ 5.00	$ 5.00
Outside Vendor (per hour)	10	$ 50.00	$ 500.00
		Total sent out	**$ 551.00**
		Total in-house	**$ 51.00**

All lumber quoted by Myers Lumber, 247-6800

Plastic totes

Material	Size	Stock #	Quantity	Cost	Total
Small Tall Totes	9 3/16"x6 9/16"x5 1/2"	TB91060	24	$ 8.60	$ 206.40
Small Dividers Long		DL91060	96	$ 1.30	$ 124.80
Small Dividers Short		DS91060	96	$ 1.20	$ 115.20
Small Tote Tops		CO91060	96	$ 3.70	$ 355.20
Large Totes	20 5/8"x15 5/8"x7 1/2"	TB93080	4	$ 24.30	$ 97.20
Large Dividers Long		DL93080	96	$ 3.00	$ 288.00
Large Dividers Short		DS9080	96	$ 2.40	$ 230.40
				Total	**$ 1,417.20**

Small totes will be used for sending Bolt Heads out to vendor for Heat Treat.
Large totes will be used for storing recievers after being machined.

Summary

Description		High Price		Low Price
Carts for cutoff	$	1,066.05	$	316.05
Heat Treat Baskets	$	8,000.00	$	4,708.08
Coloring Racks	$	9,734.00	$	9,734.00
Bead Blaster	$	504.00	$	15.96
Work Benches	$	10,018.08	$	1,975.66
Plastic Totes	$	1,417.20	$	1,417.20
Bolt Holders	$	551.00	$	51.00
Total	**$**	**31,290.33**	**Total**	**$ 18,217.95**

TOTAL IS INCREMENTAL

↳ ENOUGH BOLT BOX IS ONE BOX.

↳ DON'T BUY TOTES. TOTES

Remington Arms Co.
Mayfield KY
By: S. Truax

100 Meter Range

100 Meter Range Project-Mayfield 1999

				Capital						
Mayfield		E'Town								
265,000				Jays Construction			Range Construction Estimate			
		445,714		Osborne			Range Construction Estimate			
6,000							Excavation needed for range			
1,000		464					Soil Test			
15,000		13,143		Donaldson Co inc.			Torrit Filter & Installation			
16,000		28,000					HAVC			
8,000		12,000					Electric			
1,500		6,500					Plumbing			
2,000		1,521					Security System			
3,000		2,600					Electronic Locking System			
28,600		30,210		Savage Range Sys			Bullet Traps for Proof &Test			
10,000				Ilion (Bob Joy)			Proof Jack	(New Design 9/30)		
6,000							Conveyor for lead disposal			
		26,642					Other E'Town Expenses			
362,100		566,794		Total						

				Mayfield Cost						
1,000							Storage Racks			
2,000							Shooting Benches			
1,500							Work Benches			
1,000							Hand Tools, Totes, & Misc			
2,000							Target Roll Holders (2)			
7,500	Total									

COST PER MONTH AT $.065 PER KWH

MACHINE	KWH AT FULL LOAD	COST AT FULL LOAD AT $.065 PER KWH	KWH AT NORMAL LOAD	COST AT NORMAL LOAD AT $.065 PER KWH
OKUMA LT15MY	14691.6	$954.95	4848.23	$315.13
OKUMA LB300MY	9180	$596.70	3029.4	$196.91
G&L CORDAX CMM D-8	734.4	$47.74	242.35	$15.75
OKUMA 4018	7623.07	$495.50	2515.61	$163.51
OKUMA 4018	7623.07	$495.50	2515.61	$163.51
HEAT TREAT	10164.09	$660.67	3354.15	$218.02
INDUCTION UNIT	8968.32	$582.94	2959.54	$192.37
CHILLER	2541.02	$165.17	838.54	$54.51
CHILLER	2541.02	$165.17	838.54	$54.51
EDDY CURRENT TESTER	INFORMATION NOT AVAILABLE AT THIS TIME			
TOTALS	64066.39	$4,164.34	21141.97	$1,374.22

SUMMARY OF ADDED ELECTRIC USE FOR 710 PROJECT

AVERAGE OF EXISTING KW USAGES 248400KW

ESTIMATED INCREASED USAGE PER MONTH 21142 KW

THIS YIELDS AN INCREASE OF APPROXIMATELY 8.5% MORE POWER THAN IS CURRENTLY BEING USED

POWER CONSUMPTION

	KILO-VOLT AMPS	AMPS
TOTAL POWER AVAILABLE	2500	3000
AVERAGE POWER CONSUMPTION TO DATE	764	919
TOTAL REMAINING POWER	1736	2081

M/700 Costs - 8/27/99									
PART DESCRIPTION	Part #	Material $	Run Rate (hrs/pc)	Labor a/o	endor H $	Var O.H. $	Total O.H. $	Piece Price	COMMENTS/ASSUMPTIONS
Lock Detent		$ 0.08							
Lock Spring		$ 0.01							
Lock Key and Cap		$0.69							
Firing Pin	300334	$ 0.27	0.0010	o					
Firing Pin Tip	300335	$ 1.50	0.0015	o	$ 0.10				
Firing Pin Head	300336	$ 1.45	0.0020	o	$ 0.05				Parmatech MIM part
Firing Pin Spring	300399	$ 0.14							Ilion 700 cost
Front Sight	94084	$ 0.82		o					Higher due to Ilion part, not outsourced
Front Sight Ramp	94657	$ 1.13	0.0020						Ilion 700 cost
Front Sight Ramp Screws (2)	28505	$ 0.09		o					m597
Rear Sight Assembly	103146			n/a					level for drawings only
Elevation Screw	90906	$ 0.02							m597
Rear Sight Aperture	94333	$ 0.14	0.0010	o					m597
Rear Sight Base	103531	$ 0.97	0.0010	o					m597
Rear Sight Slide	94335	$ 0.47	0.0050	o					m597
Windage Screw	90904	$ 0.02							597
Rear Sight Base Screw (2)	28505	$ 0.09							597 #
Stock Assembly Complete	**????**			n/a					level for drawings only
Stock Assembly	????		0.0160	a					Not in any assumptions: This is for assy of butt plate+50%
Stock	????	$ 5.38							Par 4
Front Screw Bushing	15161	$ 0.13							
Middle Screw Bushing	????	$ 0.05							
Rear Screw Bushing	????	$ 0.05							
Grip Cap	97971	$ 0.18							
Recoil Pad	97973	$ 1.63							
Recoil Pad Screw (2)	98008	$ 0.05							
Magazine Latch	300362	$ 0.25							Based on similar parts
Magazine Latch Spring	300398	$ 0.02							
Magazine Latch Pin	300371	$ 0.04	0.0010	o					

M/700 Costs - 8/27/99									
PART DESCRIPTION	Part #	Material $	Run Rate (hrs/pc)	Labor a/o	endor H $	Var O.H. $	Total O.H. $	Piece Price	COMMENTS/ASSUMPTIONS
Sling Swivel Stud (2)	300096	$ 0.14							M/597 Price
Takedown Screw (2)	????	$ 0.16							
Rear Takedown Screw	????	$ 0.08							
Magazine Assembly	305395		0.0083						30 sec to assemble in house
Magazine Box	300363	$ 2.79	0.0010						Ilion quote;no quotes to date m700 $2.02
Magazine Follower	300364	$ 0.26							PAR 4
Magazine Bottom	300365	$ 0.26							PAR 4
Magazine Spring	300405	$ 0.42							M/700 spring price;no quotes
Gallery;inspect;pack		1.15	0.1500						Estimate of 6 min + 50%,.25 for ammo
Total Cost		**$ 41.43**	**0.9186**		**$ 0.30**				
			51.7505						
			$ 0.30						
			41.4313						
			93.4818						

M/700 Costs - 8/27/99									
PART DESCRIPTION	Part #	Material $	Run Rate (hrs/pc)	Labor a/o	endor H $	Var O.H. $	Total O.H. $	Piece Price	COMMENTS/ASSUMPTIONS
Document Envelope Assembly	1748	$ 0.09							M/597 document envelope
Document Envelope	1649	$ 0.08							and box assembly
Users manual	3391	$ 0.15							
Product Owners Card	1426	$ 0.03							
Remington Authorized Gunsmith	3413	$ 0.07							
Safety Booklet	3499	$ 0.10							
Remington Museum Flyer	3475	$ -							
Oval Label	3491	$ 0.01							
Document Envelope Assembly total									
Carton Assembly Complete	330031	$ 2.05							Ilion Carton to avoid $19000 Capital
Carton	1640								
Styrofoam bed	300185								
Box and Envelope Label (710)	993002								
Barrel Assembly Complete	305410		0.0790	a					final assy estimate
Barrel Assembly	305400			o					drawing level
Barrel	305315	$4.80	0.3866	o					150% of .2577 run time,8.38lbs/bbl
Receiver	300340	$1.76	0.0055	o					Assume tubing on LT15 operator of .004 for a 4 min cycle
Receiver Insert Assembly Complete	300401		0.0530	a					150% of estimated 2.13min.
Receiver Insert Assembly	300400		0.0050	a					
Receiver Insert	300327	$0.62							Ilion quote
Threaded Insert	300347	$0.04							
Side Plate	300333	$0.09	0.0010	o					
Side Plate Pin (2)	300328	$0.12	0.0010	o					
Sear Safety Cam	15666	$ 0.94							Ilion PMPD, key features on this make it not easily moved.
Pivot Pin (3)	300351	$ 0.18							
Sear Spring	17047	$ 0.02							Ilion 700

M/710 Capital

In House Capital

Part Name	Operation	Equipment	Capital Required	
Barrel	Cut off		$0	
	Drill	cones	$9,960	Dec-99
	Ream		$0	
	Rifle	gages	$9,800	Feb-00
	Wash&Stress Relieve	baskets	$6,900	Feb-00
	Turn	gages	$10,100	Feb-00
	Face&Chamber	gages	$33,300	Apr-00
	Face&Chamber	machine	$222,880	Mar-00
	Cut off and Crown	chuck	$15,000	Jan-00
	wash and eddy current test	machine	$75,000	Mar-00
	Induction Harden	machine	$166,000	Mar-00
	Inspect Hardness	machine	$12,000	Mar-00
	Drill and tap sight	fix & gages	$7,600	Feb-00
	Roll mark	fix & gages	$6,300	Apr-00
	Angularity Straighten	fix & gages	$3,500	Feb-00
	Centerless Polish		$0	
	Glass Bead Blast	fixtures	$2,500	Jan-00
	Color	racks	$6,000	Jan-00

Bolt Head	Inspect Purchased Part Blank	gage	$2,500	Feb-00
	Superabrasive Grind Lugs	fix & gage	$43,800	Feb-00
	CNC Machine Bolt Face Complete	fix & gage	$174,784	Mar-00
	CNC Machine Cam Cuts, Ejector Retaining Pin Hole	fix & gage	$15,000	Mar-00
	CNC Machine Bolt Head Retaining Pin Hole	fix & gage	$15,000	Mar-00
	Punch Form Extractor Rotation Notch	fix & gage	$10,000	Jan-00
	Vendor Heat Treat		$0	
	Inspect for Hardness		$0	
	Black Oxide		$0	

Bolt Body	Inspect Purchased Part Blank	gage	$2,000	Jan-00
	Machine Cam Cuts	machine	$0	Feb-00
	Assemble Braze Bolt	machine	$90,000	Mar-00
	Deplate	tanks	$9,500	Jan-00
	Eddy Current Test		$0	
	Glass Bead Blast	fix	$2,500	Jan-00
	Black Oxide		$0	

M/700 Costs - 8/27/99									
PART DESCRIPTION	Part #	Material $	Run Rate (hrs/pc)	Labor a/o	endor H $	Var O.H. $	Total O.H. $	Piece Price	COMMENTS/ASSUMPTIONS
Trigger	15280	$ 1.53							Ilion 700, quoting issues
Trigger Connector	19461	$ 1.03							Ilion 700
Trigger Screw Front	17053	$ 0.10							Ilion 700
Trigger Engagement Screw	91128	$ 0.03							Ilion 700
Trigger Spring	15400	$ 0.03							Ilion 700
Trigger Stop Screw	15481	$ 0.06							Ilion 700
Safety	300408	$ 0.31		o					May increase with additional bend $0.07
Safety Pivot Pin	300352	$ 0.06		o					
Safety Spring	300407	$ 0.05							new part
Bolt Stop	300345	$ 0.19	0.0010	o					Assume outside PMPd base on a similar size parts quoted for the m99 and 597.
Receiver Plug Screws (4)	17034	$ 0.12							M597
Recoil Bracket	300361	$ 0.19	0.0010	o					Square Stamping
Bolt Body Assembly	300403		0.0275	o					Ilion run times due to experience. High -not grouped.
Bolt Body	300339	$ 0.74	0.0032	o					5 min bar change
Bolt Handle	300370		0.0120	o					load unload time at machining
Bolt Handle Blank	300360	$ 1.63		o					Investment cast using the m597 bolt @$1.80 and bolt handle at $.80 as a guide.
Bolt Handle Pin	300329	$ 0.06		o					
Bolt Head Assembly	305390		0.0580	a					150% would be .0875
Bolt Head	300338	$ 1.60	0.0809	o	$ 0.45				Assumed Ilion quoted blank cost. Run time assumes full cut time could drop to .034 depending on machine
Extractor	93712	$ 0.77		o					
Ejector	300342	$ 0.16	0.0010	o					
Ejector Spring	300367	$ 0.03		o					597 $0.02
Ejector Pin	94555	$ 0.01		o					
Bolt Assembly Pin	300330	$ 0.10	0.0010	o					Second loading raises price from a normal pin.
Firing Pin Assembly	300404		0.0070	a					Added , not in estimates
Bolt Plug	300368	$ 0.25							Par 4
Bolt Plug Insert	300346	$ 0.29							Higher S risk, unquoted part
Lock Tumbler			0.0050	o					

New Parts

Part #	Part Name	Material $	Ilion Quotes or *Estimates*
300327	Receiver Insert	0.62	
300333	Side Plate		0 09
300334	Safety Arm	0 31	
300345	Bolt Stop	0 19	
300361	Recoil Bracket	0.193	
300360	Bolt Handle Blank	1 63	
300366	Bolt H Braze Shim	0	
300368	Bolt Plug	0 25	
300336	Firing pin head	1 45	
300362	Mag Latch	0.25	
300363	Magazine Box		2.79
300364	Magazine Follower	0 259	
300365	Magazine Bottom	0 256	
	Stock	5.38	
300347	Threaded Insert	0 04	
300328	Side Plate Pin (2)	0 12	
300351	Pivot Pins (3)	0 18	
300352	Safety Pivot Pin	0 06	
300407	Safety Spring		0 03
300329	Bolt Handle Pin	0 06	
300342	Ejector		0 16
300330	Bolt Assy Pin	0 1	
300346	Bolt Plug Insert		0.29
300346	Tumbler		0 41
	lock plunger		0 05
	lock spring		0 01
	key		
300334	Firing Pin	0 27	
300335	Firing Pin Tip	1 5	
	Firing Pin Spring		0 14
	Middle Screw Bushing		0 05
	Rear Screw Bushing		0 05
300405	Mag Latch Spring		0.02
300371	Mag Latch Pin	0 04	
300096	Sling Swivel Stud (2)		0 14
	Take Down Screw R		0 08
	Take Down Screw M		0.08
	Take Down Screw F		0 08
300335	Bolt Head Blank		1 6
	Barrel Blank	4 92	
	Receiver Blank	1.76	
	Bolt Body	0 74	
	Carton Assy (Ilion)	2 05	

Total Material $ New known to date	22 628
% of Total anticipated	53.73%

Total Material $ Estimated or from M700 costing	6.07
% of Total anticipated	14.41%

Total Add Use Parts	13.42
Add Use is	31.86%

% of total material cost know by quote	85.59%

Add Use from M700

Part #	Part Name	Material $	Quotes from Mayfield
1444	Carton Assy	2 05	
15666	Sear Safety Cam	0.94	
17047	Sear Spring	0 02	
15280	Trigger	1 53	
19461	Trigger Connector	1.48	
17053	Trigger Front Screw	0.11	0 032
91128	Engagement Screw	0 03	
15400	Trigger Spring	0.03	
15481	Trigger Stop Screw	0 06	0.032
17044	Snap Washer	0 09	
17034	Receiver Plug Screws	0 13	
93712	Extractor	0 78	
94555	Ejector Pin	0 01	
94084	Front sight	0 82	
94657	front Sight Ramp	1.13	
28505	Front Sight Ramp Screws	0 09	
90906	Elevation Screw	0 02	
94333	Rear Sight Aperature	0.14	0 105
103531	Rear Sight Base	0 97	
94335	Rear Sight Slide	0.47	
90904	Windage Screw	0 02	
28505	Rear Sight Base Scre	0.09	
15161	Front Screw Bushing	0.13	
97971	Grip Cap	0.18	
97973	Recoil Pad	1 63	
98008	Recoil Pad Screws	0.05	0 012
17028	Magazine Spring	0.42	
	Total Add Use Parts	13.42	
	Add Use is	31.86%	% of total

= major concerns

MaTT

PURCHASED PARTS CAPITAL LIST **TOP 5**

Part #	Part Name	Capital	Tool	Supplier
	Stock	150,000	Mold	Par 4
300364 & 300364	Bottom / Follower Family	78,786	Mold	Par 4
300327	Receiver Insert	48,000	Mold	Hanson
300368	Bolt Plug	36,000	Mold	Kellum Coe
300362	Mag Latch	33,480	Mold	Par 4
300363	Mag Box	Not Available		?

PURCHASED PARTS PIECE PRICE **TOP 5**

Part #	Part Name		Piece Price	Supplier
300340	Receiver	complete	20.26	Crosol
		partial	3.50	Kenmar
	Stock		5.27	Hanson
300339	Bolt Body		2.35	G.S. Precision
300370	Bolt Handle		1.63	Fansteel
103530	Sight Base		1.60	Megamet

Revised 08-31-99

QUOTES ON MODEL 710

PM PARTS:

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP
C-300345	BOLT STOP	STERLING SINTERED	07/19/99	08/15/99	20M=$219.20/M;**40M= $190.60/M**; 120M=$184.60/M	**$6,820.00**
		ILION			$.57/EA	
C-91852	SAFETY BUTTON	STERLING SINTERED	07/19/99	08/15/99	20M=$108.30/M; **40M=$95.80/M**; 120M=$85.90	**$4,700.00**
		ILION			$.12/EA	
C-15373	SIGHT	STERLING SINTERED	07/19/99	08/15/99		
		ILION			$.82/EA	
C-15280	TRIGGER	STERLING SINTERED	07/19/99	08/15/99		
		ILION			$1.53/EA	
C-15666	SEAR SAFETY CAM	STERLING SINTERED	07/19/99	08/15/99	20M=$759.50/M; **40M= $683.45/M**; 120M=$625.80/M	**$11,300.00**
		ILION			$.94/EA	
C-93906	APERTURE	STERLING SINTERED	07/19/99	08/15/99	20M=$155.65/M; **40M= $124.65/M**; 120M=$105.90/M	**$5,210.00**
		ILION			$.33/EA	

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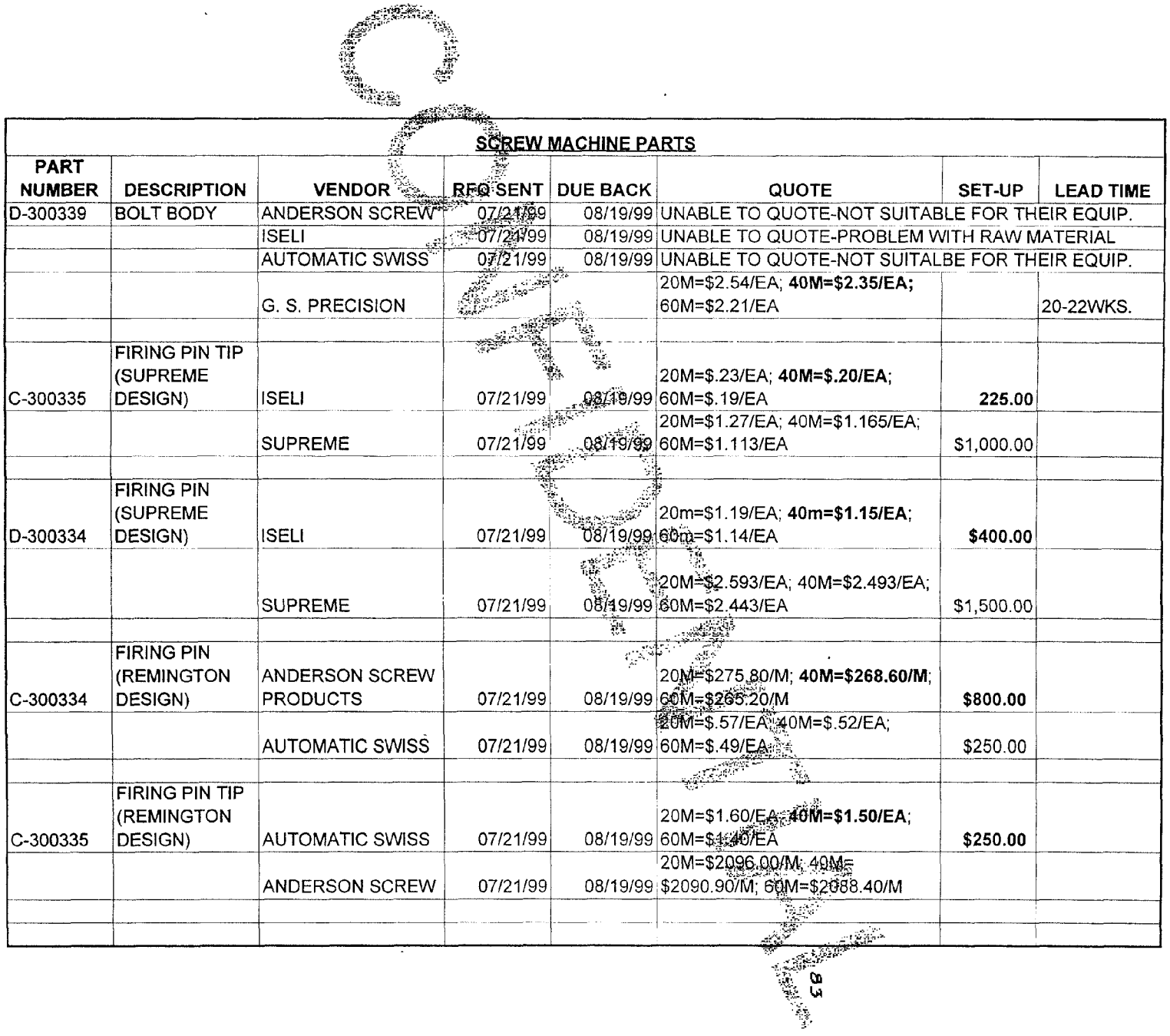
MIM PARTS							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
C-300336	FIRING PIN HEAD	PARMATECH	07/19/99	08/15/99	20M=NO QUOTE; 40M=$2.19/EA; 60M=$1.91/EA	$25,000= TOOLING COST $4,000= FIXTURES	MOLD DELIVERY =12-14 WKS; SAMPLES 4-6 WKS LATER
		MEGAMET	07/19/99	08/15/99	20M=$1.50/EA; **40M=$1.45/EA**; 60M=$1.35/EA	**$15,000=MOLD; $7,500=FURNACE** FIXTURE	
C-93907	REAR SLIDE	PARMATECH	07/19/99	08/15/99	80M=$1.37/EA; 100M=$1.19/EA; 200M=$1.13/EA	$38,000= TOOLING COST $4,000= FIXTURES	MOLD DELIVERY 12-14 WEEKS; SAMPLES 4-6 WEEKS LATER
		MEGAMET	07/19/99	08/15/99	80M=$1.20/EA; **100M=$1.15/EA**; 200M=$1.10/EA	**$15,000=MOLD; $2,500=FURNACE** FIXTURE	
C-103530	BASE	PARMATECH	07/19/99	08/15/99	80M=$1.84/EA; 100M=$1.60/EA 200M=$1.53/EA	$29,000= TOOLING COST; $8,000= FIXTURES	MOLD DELIVERY 12-14 WEEKS; SAMPLES 4-6 WEEKS LATER
		MEGAMET	07/19/99	08/15/99	80M=$1.65/EA; **100M=$1.60/EA;** 200M=$1.50/EA	**$15,000-MOLD; $2,500=FURNACE** FIXTURE	

SCREW MACHINE							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
C-300334-C300335 (ONE-PIECE)	FIRING PIN AND FIRING PIN TIP	ANDERSON SCREW			20M=$2709.60/M; **40M=$2699.70/M**; 60M=$2697.60/M		
		AUTOMATIC SWISS			NO QUOTE-SIGNIFICANTLY MORE EXPENSIVE		
B-300330	ASSEMBLY PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.15/EA; **40M=$.12/EA**; 60M=$.10/EA	**$450.00**	6 WKS.
		SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.226/EA; 40M= $.184/EA; 60M=$.177/EA	$380.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.26/EA; 40M=$.24/EA; 60M=$.235/EA	$350.00	
A-300329	BOLT HANDLE PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.10/EA; **40M=$.08/EA**; 60M=$.06/EA	**$450.00**	6 WKS.
		SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.122/EA; 40M= $.106/EA; 60M=$.101/EA	$150.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.13/EA; 40M=$.12/EA; 60M=$.11/EA	$200.00	
B-300351	PIVOT PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.09/EA; 40M=$.07/EA; 60M=$.06/EA	$450.00	6 WKS.
		SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.10/EA; **40M= $.075/EA**; 60M=$.068/EA	**$150.00**	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.25/EA; 40M=$.22/EA; 60M=$.21/EA	$225.00	

SCREW MACHINE							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
B-300352	SAFETY PIVOT PIN	AUTOMATIC SWISS	08/19/99	ASAP	NO QUOTE-CAN'T MEET TOLERANCE		
		SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.206/EA; 40M= $.163/EA; 60M=$.157/EA	$275.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.14/EA; **40M=$.11/EA**; 60M=$.10/EA	**$225.00**	
A-300348	SLIDE PLATE PIN	SWISS PRECISION MACH	08/19/99	ASAP	60M=$.093/EA; 120M= $.086/EA.; 180M=$.085/EA	$275.00	6-8 WKS.
		ISELI	08/19/99	ASAP	60M=$.08/EA; **120M= $.07/EA**; 180M=$.06/EA	**$225.00**	
A-300342	EJECTOR	SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.189/EA; 40M= $.153/EA; 60M=$.148/EA	$325.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.11/EA; **40M=$.08/EA**; 60M=$.07/EA	**$400.00**	
B300371	LATCH PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.08/EA; 40M=$.06/EA; 60M=$.04/EA	$250.00	6 WKS.
		SWISS PRECISION MACH..	08/19/99	ASAP	20M=$.102/EA; 40M= $.076/EA;.60M=$.071/EA	$150.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.07/EA; **40M=$.05/EA**; 60M=$.04/EA	**$225.00**	
C-EXP-0283	DETENT BUSHING	ISELI	08/20/99	ASAP	NO QUOTE-DUE TO RAW MATERIAL		



SCREW MACHINE PARTS							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
D-300339	BOLT BODY	ANDERSON SCREW	07/21/99	08/19/99	UNABLE TO QUOTE-NOT SUITABLE FOR THEIR EQUIP.		
		ISELI	07/21/99	08/19/99	UNABLE TO QUOTE-PROBLEM WITH RAW MATERIAL		
		AUTOMATIC SWISS	07/21/99	08/19/99	UNABLE TO QUOTE-NOT SUITALBE FOR THEIR EQUIP.		
		G. S. PRECISION			20M=$2.54/EA; **40M=$2.35/EA;** 60M=$2.21/EA		20-22WKS.
C-300335	FIRING PIN TIP (SUPREME DESIGN)	ISELI	07/21/99	08/19/99	20M=$.23/EA; **40M=$.20/EA;** 60M=$.19/EA	**225.00**	
		SUPREME	07/21/99	08/19/99	20M=$1.27/EA; 40M=$1.165/EA; 60M=$1.113/EA	$1,000.00	
D-300334	FIRING PIN (SUPREME DESIGN)	ISELI	07/21/99	08/19/99	20m=$1.19/EA; **40m=$1.15/EA;** 60m=$1.14/EA	**$400.00**	
		SUPREME	07/21/99	08/19/99	20M=$2.593/EA; 40M=$2.493/EA; 60M=$2.443/EA	$1,500.00	
C-300334	FIRING PIN (REMINGTON DESIGN)	ANDERSON SCREW PRODUCTS	07/21/99	08/19/99	20M=$275.80/M; **40M=$268.60/M;** 60M=$265.20/M	**$800.00**	
		AUTOMATIC SWISS	07/21/99	08/19/99	20M=$.57/EA; 40M=$.52/EA; 60M=$.49/EA	$250.00	
C-300335	FIRING PIN TIP (REMINGTON DESIGN)	AUTOMATIC SWISS	07/21/99	08/19/99	20M=$1.60/EA; **40M=$1.50/EA;** 60M=$1.40/EA	**$250.00**	
		ANDERSON SCREW	07/21/99	08/19/99	20M=$2096.00/M; 40M= $2090.90/M; 60M=$2088.40/M		

SCREW MACHINE							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
B-300346	BOLT PLUG INSERT	SWISS PRECISION MACH	08/19/99	ASAP	20M=$.808/EA; **40M =$.784/EA**; 60M=$.767/EA***	**$775.00**	6-8 WKS.
		ISELI	08/19/99	ASAP	NO QUOTE-EQUPIMENT NOT ADEQUATE		
B-90904	WINDAGE SCREW	SWISS PRECISION MACH			25M=$.193/EA; **50M= $.171/EA**; 100M=$.15/EA****	**$400.00**	6-8 WKS
***QUOTED WITH .031 RADII IN CORNERS, INSTEAD OF THE .020 INDICATED ON THE PRINT							
****QUOTED WITH A CASE DEPTH FOR CARBURIZATION @ .010-.015.							

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STAMPINGS

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
E-300363	MAGAZINE BOX	TABER BUSHNELL, INC.	07/22/99	08/19/99	NO QUOTE-NOT IN CAPABILITIES		
		NEW HAMPSHIRE STAMPING CO., INC.	07/22/99	08/19/99	NO QUOTE		
		MORRISSEY, INC.	08/06/99	08/26/99	NO QUOTE-NOT SUIT. FOR VENDOR		
D-300344	SAFETY	TABER BUSHNELL, INC.	07/22/99	08/19/99	NO QUOTE-NOT IN CAPABILITIES		
		NEW HAMPSHIRE STAMPING CO., INC.	07/22/99	08/19/99	20M=$316.00/M; 40M=$310.00/M; 60M=$308.00/M	$23,880.00	14-15 WKS
		SQUARE STAMPING			**40M=$299.37/M**	**$11,400.00**	8 WKS.
		SQUARE STAMPING			10M=$127.48/M; 20M=$122.94/M; 40M=$120.67/M; 60M=$119.92/M. MADE FROM C1008 STEEL, .187" =/- .003 THICK		
B-300361	RECOIL BRACKET	SQUARE STAMPING	08/19/99	ASAP	10M=$193.59/M; 20M=$189.05/M; **40M=$186.78/M**; 60M=$186.03/M	**$550.00**	8 WKS.
		TABER BUSHNELL	08/19/99	ASAP	NO QUOTE-NOT IN CAPABILITIES		
		NEW HAMPSHIRE STAMPING CO., INC.	08/19/99	ASAP	20M=$244.00/M; 40M=$240.00/M; 60M=$238.00/M	$2,225.00	5 WKS

	STAMPINGS (CONTINUED)						
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
C-300343	SAFETY SPRING	SQUARE STAMPING			10M=$75.79; 20M=$71.25/M; 40M=$68.99/M; 60M=$68.23/M.FROM C-1075 STEEL		8 WKS.
		SQUARE STAMPING			10M=$80.97/M; 20M=$76.44/M; 40M=$74.17/M; 60M=$73.41/M. FROM C-1095 STEEL		8 WKS.
		SQUARE STAMPING			10M=$110.80/M; 20M=$106.27/M; **40M=$104.00/M**; 60M=$103.24/M	**$8,950.00**	8 WKS.

PLASTICS							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**EAD TIM**
D-300365	BOX BOTTOM	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$.256/EA; **40M= $.241/EA;** 60M=$.226/EA; 100M=$.205/EA	**$47,880.00**	15 WKS
		KELLUM AND COE	07/23/99	08/19/99	20M=$.287/EA; 40M= $.282/EA; 60M=$.278/EA	$41,000.00	
		COMPLEX TOOLING	07/23/99	08/19/99			
		HI-TECH MOLD	07/23/99	08/19/99	$.55/EA (60M EST. YRLY)	$22,500.00	8-10 WKS
D-300364	FOLLOWER	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$.259/EA; **40M= $.217/EA**; 60M=$.207/EA; 100M=$.193/EA	**$33,300.00**	14 WKS
		KELLUM AND COE	07/23/99	08/19/99	20M=$.247/EA; 40M= $.242/EA; 60M=$.238/EA	$27,500.00	
		COMPLEX TOOLING	07/23/99	08/19/99			
		HI-TECH MOLD	07/23/99	08/19/99	$.56/EA (60M PER YR)	$15,300.00	8-10 WKS
D-300365& D-300364 FAMILY MOLD	MAGAZINE BOX BTM AND FOLLOWER	PAR 4 PLASTIC			#300364: FOLLOWER=**$.093/EA**; #300365: MAG BOX BTM=**$.105/EA**	**$78,786.00**	18 WKS
C-200257	BOLT PLUG	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$.249/EA; 40M= $.239/EA; 60M=$.215/EA	$38,088.00	12 WKS.
		KELLUM AND COE	07/23/99	08/19/99	20M=$.215/EA; **40M= $.213/EA**; 60M=.211/EA	**$36,000.00**	
		COMPLEX TOOLING	07/23/99	08/19/99			
		HI-TECH MOLD	07/23/99	08/19/99	$.61/EA (EST. 60M YRLY)	$19,800.00	8-10 WKS

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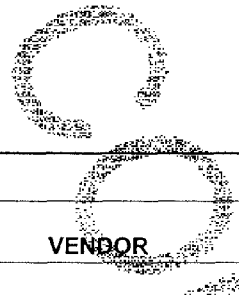
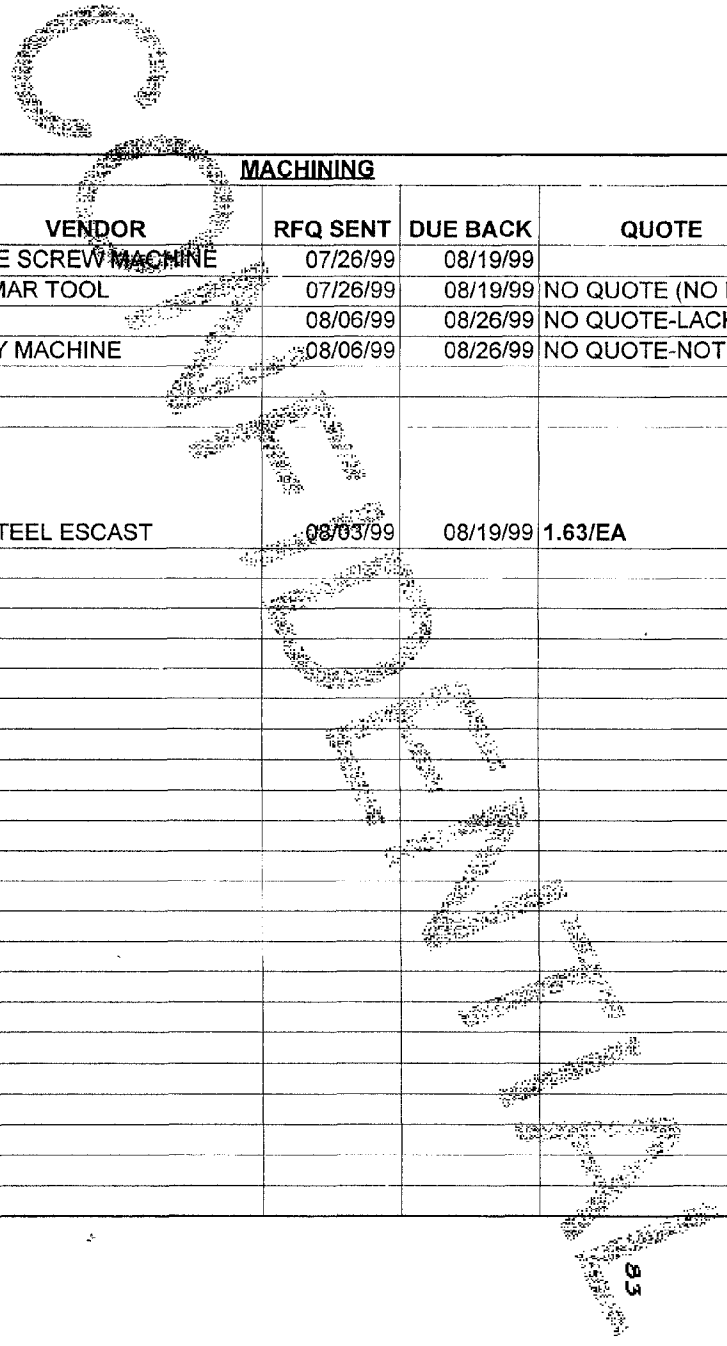
PLASTICS (CONTINUED)							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
C-300362	LATCH	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$.245/EA; **40M=$.231/EA**; 60M=$.212/EA	**$33,480.00**	14 WKS
		KELLUM AND COE	07/23/99	08/19/99	20M=$.191/EA; 40M=$.186/EA; 60M=$.182/EA	$39,000.00	
		COMPLEX TOOLING	07/23/99	08/19/99			
		HI-TECH MOLD	07/23/99	08/19/99	$.58/EA (EST 60M YRLY)	$18,000.00	8-10 WKS
	STOCK	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$5.38/EA; **40M=$5.27/EA**; 60M=$5.17/EA	**$150,300.00**	21 WKS.
		COMPLEX TOOLING	07/23/99	08/19/99			
		THE HANSON GROUP			$11.02/EA=20% GF POLY; $11.37/EA=20% POLY USING IQC TECH.	$105,500.00	
		HI-TECH MOLD AND TOOL			$18.06/EA (EST. 60M YRLY)	$249,600.00	24-27 WKS.



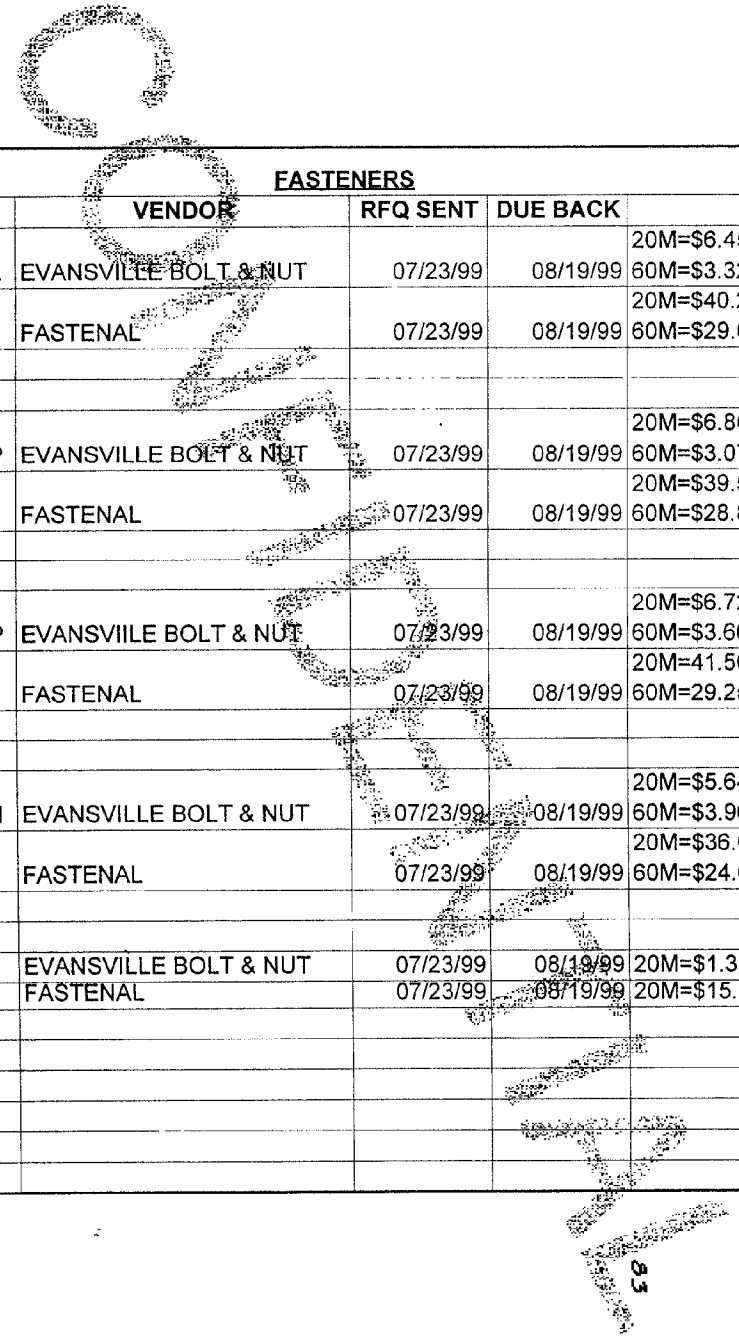
MACHINING

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
E-300340	RECEIVER	CROSROL (C0MPLETE)	07/26/99	08/19/99	20M=$21.75/EA; **40M=$20.26/EA;** 60M=$19.51/EA****	COM-PLETE TO PRINT	
		NOLTE SCREW MACHINE	07/26/99	08/19/99			
		KEN MAR TOOL	07/26/99	08/19/99	20M=$3.70/EA; **40M=$3.55/EA;** 60M=$3.30/EA	PINK	
		KEN MAR TOOL	07/26/99	08/19/99	20M=$3.50EA; **40M=$3.35/EA;** 60M=$3.10/EA	YELLOW	
		TCR	08/06/99	08/26/99	NO QUOTE-LACK PROPER EQUIPMENT		
		BETTY MACHINE	08/05/99	08/26/99	NO QUOTE--NOT EQUIPPED TO MAKE		
D-300339	BOLT BODY	NOLTE SCREW MACHINE	07/26/99	08/19/99			
		KEN MAR TOOL	07/26/99	08/19/99	20M=$2.20/EA; **40M=$2.10/EA;** 60M=$2.05/EA	PINK	
		KEN MAR TOOL	07/26/99	08/19/99	20M=$2.05/EA; **40M=$1.95/EA;** 60M=$1.90/EA	YELLOW	
		TCR	08/06/99	08/26/99	NO QUOTE-LACK PROPER EQUIPMENT		
		BETTY MACHINE	08/06/99	08/26/99	NO QUOTE--NOT EQUIPPED TO MAKE		

****PRICES QUOTED INCLUDE ALL TOOLS, FIXTURES, GAUGES, PROGRAMS, AND SET UP



MACHINING							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
E-300338	**BOLT HEAD**	NOLTE SCREW MACHINE	07/26/99	08/19/99			
		KEN MAR TOOL	07/26/99	08/19/99	NO QUOTE (NO REASON CITED)		
		TCR	08/06/99	08/26/99	NO QUOTE-LACK PROPER EQUIPMENT		
		BETTY MACHINE	08/06/99	08/26/99	NO QUOTE-NOT EQUPPED TO MAKE		
C-300370	BOLT HANDL	FANSTEEL ESCAST	08/03/99	08/19/99	**1.63/EA**	**$12,575.00**	11 WKS= SAMP. 8WKS= PROD



FASTENERS						
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**
B91128	SCREW, TRIG. ENG.	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$6.45/C; 40M=$4.18/C; 60M=$3.32/C	
		FASTENAL	07/23/99	08/19/99	20M=$40.25/M; **40M=$32.65/M** 60M=$29.05/M	
B17053	SCREW, TRIG STOP	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$6.80/C; 40M=$3.78/C; 60M=$3.07/C	
		FASTENAL	07/23/99	08/19/99	20M=$39.50/M; **40M=$32.40/M** 60M=$28.80/M	
A-15481	SCREW, TRIG STOP	EVANSVIILE BOLT & NUT	07/23/99	08/19/99	20M=$6.72/C; 40M=$4.45/C; 60M=$3.66/C	
		FASTENAL	07/23/99	08/19/99	20M=41.50/M;**40M=$32.40/M** 60M=29.25/M	
A-90906	SCREW ELEVATION	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$5.64/C; 40M=$4.95/100; 60M=$3.96/C	
		FASTENAL	07/23/99	08/19/99	20M=$36.00/M;**40M=$27.00/M** 60M=$24.00/M	
A-94555	PIN, SPIROL	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$1.35/C; **60M=$1.12/C**	
		FASTENAL	07/23/99	08/19/99	20M=$15.00/M;40M=$13.88/M	

FASTENERS AND PACKAGING							
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
A-90908	**RECOIL PAD (CONSISTS OF THE FOLLOWING PARTICLE BOARD SCREWS:**						
A98008	PARTICLE BOARD SCREW	FASTENAL			$12.08/M		
		EVANSVILLE BOLT AND NUT			**$.85/C**		
A99989	PARTICLE BOARD SCREW	FASTENAL			$8.06/M		
		EVANSVILLE BOLT AND NUT			**$.60/C**		
A200197	PARTICLE BOARD SCREW	FASTENAL			$11.08/M		
		EVANSVILLE BOLT AND NUT			**$.74/C**		
	STYROFOAM BED	TUSCARORA	08/03/99	08/15/99	**$.87/EA**	**$18,900.00**	
	CARTON	ORPACK	08/17/99	08/22/99	20M=$450.20/M; **40M=$444.35/M;** 60M=$442.75/M		
		SEMO BOX	08/17/99	08/22/99			

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COLD FINISHED ROUND BAR STOCK						
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**LEAD TIME**
	ANNEAL-COLD DRAWN 241 MAX BHN	REPUBLIC STEEL			**$57.50/CWT**	**14-16 WEEKS**
	QUENCH AND TEMPER COLD DRAWN STRESS RELEIVED TURNED AND POLISHED	REPUBLIC STEEL			COLD DRAWN=$64.00/CWT TURNED AND POLISHED=$69.00/CWT	20-22 WKS
	TUBING BOLT	FEDERAL STEEL	08/03/99	08/15/99	10M FT=$1.2400/FT	14-18 WKS.
	TUBING RECEIVER	FEDERAL STEEL	08/03/99	08/15/99	10M FT=$2.9400/FT	5-6 WKS.

SPRINGS						
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**
A-300367	EJECTOR SPRING	INDUSTRIAL SPRING	08/19/99	ASAP	20M=$31.00/M; 40M= $25.80/M; 60M=$22.10/M	
		P.J. SPRING	08/19/99	ASAP	20M=$19.80/M; 40M=$11.40/M; 60M=$9 40/M	4-6 WKS
		MIDSTATE SPRING	08/19/99	ASAP	20M=$.0152/EA; **40M= $.0108/EA**; 60M=$.0093/EA	
A-300398	LATCH SPRING	INDUSTRIAL SPRING	08/19/99	ASAP	20M=$25.70/M; 40M= $19.40/M; 60M=$16.40/M	
		P.J. SPRING	08/19/99	ASAP	20M=$26.20/M; **40M= $18.20/M**; 60M=$15.80/M	4-6 WKS
		MIDSTATE SPRING	08/19/99	ASAP	20M=$.0279/M; 40M= $.0201/EA; 60M=$.0179/EA	
A-300399	FIRING PIN SPRING	INDUSTRIAL SPRING	08/19/99	ASAP	20M=$108.00/M; 40M= $102.00/M; 60M=$97.00/M	
		P.J. SPRING	08/19/99	ASAP	20M=$103.00/M; 40M= $87.50/M; 60M=$83.10/M	4-6 WKS
		MIDSTATE SPRING	08/19/99	ASAP	20M=$.1008/EA; **40M= $.0870/EA;** 60M=$.0824/EA	

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COST DISCREPANCIES BETWEEN LIST AND QUOTES

Carton Assembly 1444

Ilion box is $2.05 New carton cost with styrofoam bed and box is $1.32 Tooling for the styrofoam bed would be $18,900.00. Difference of .73 cents. 30,000 times .73 = $21,900.00 this would pay for the tool in a year with an additional savings of $3000.00. Also, there is a possibility of ammortizing the tooling charges for the first six months, as we did with the 597 box.

Receiver 300340

Cost shown is $1.76 indicating raw material only. If for any reason we could not make this part in house, or we choose to forego the capitol expense, the lowest outside quote is $20.00 for one complete to print, or around $3.50 with machining to still be done to some degree.

Sear Safety Cam 15666 (Add Use)

Current cost is $.94 from Ilion. An option, is to invest $11,300.00 in tooling costs from another supplier and lower the piece price to $.68 each. Tooling cost would be recovered in approximately 18 months. 30,000 times the $.26 cent difference is $7800.00 per year.

Pin, Pivot 300351

List shows $.18 cents each, lowest quote is $.07 cents each

Pin, Safety Pivot 300352 → sear

List shows $.06 cents each, lowest quote is $.11 cents each

Trigger 15280 (Add Use)
Front Sight 94084 (Add Use)

Both of these parts have the Ilion cost shown. An alternate sources quotes are not back yet, however, we may have an opportunity like the Sear Safety Cam to save in piece price up to 28% after tooling cost.

Screw, Front Trigger 17053 (Add Use)

Provided by Ilion cost is $.11 cents each, with Mayfield supplier cost is $.03 cents each.

Screw, Trigger Stop 15481 (Add Use)

Provided by Ilion cost is $.06 cents each, with Mayfield supplier cost is $.03 cents each.

Bolt Body 300339

Cost on list (.74) is based on Mayfield investing in the capitol equipment to mfgr in house. Should we have to or choose to go to an outside source, machining cost could jump to around $2.00 each partially machined.

Pin, Bolt Handle 300329
List shows $.06 cents each. Lowest quote is $.08 cents each 40M is $.08 60M is $.06

Bolt Head 300338
No quotes are back from the first request. A second request to four different suppliers are still out. Due back anytime.

Ejector 300342
List cost shows $.16 cents each, lowest quote is $.08 cents each.

Spring, Ejector 300367
List cost shows $.03 cents each, lowest quote is $.01 cent each.

Pin, Bolt Assy. 300330
List cost shows $.10 cents each, lowest quote is $.12 cents each. 40M - 12¢ 60M - 10¢

Firing Pin and Tip (one piece design) 300334 & 300335
This cost is not on your list. This design is quoted at $2.70 each.
Matt to explain differences of drawings.

Bolt Plug Insert 300346
List cost shows $.29 cents each, lowest quote is $.78 cents each. NO DATA AT TIME OF ESTIMATE

Bolt Plug 300368
List cost shows $.25 cents each, lowest quote is $.21 cents each.

Firing Pin Head 300336
List cost shows $1.50 each, lowest quote is $1.45 each.

Firing Pin Spring 300339
List cost shows $.14 cents each, lowest quote is $.08 cents each.

Magazine Box 300363
No quotes returned. Will re-source to new vendors.
Reasons were: not equipped for this part

Magazine Box Bottom and Follower (Family Mold) 300364 & 300365
Follower cost is $.09, and Bottom cost is $.10 each. Tooling is $78,786.00, which is $3000.00 less than single tools for the same parts. These piece prices are also less than half of the piece price of the single tool quotes.

Magazine Spring 17028 (Add Use)
List shows part #17028, my RFQ was for drawing #300399, are these the same part? My quote is $.10 each, list cost is $.42 each.

New Parts				Comments		
Part #	Part Name	Material	PPI $			
300327	Receiver Insert	0.62	$4,500	CMM inspection w/ fixture,	important	
			800	Function gage	.003 step height	
			350	Special .700 dia plug gage		
300333	Side Plate		0	thickness micrometers		
			1500	Comp Screen & fix	hole spacing	
300334	Safety Arm	0.31	2400	Comp Screen & fix	2 views	
			0	Plug gage	pivot hole	
			0	heat treat		
300345	Bolt Stop	0.19	1500	Comp Screen & fix	2 views	
300361	Recoil Bracket			mic and caliper		
300360	Bolt Handle Blank	1.63	2500	Comp Screen & fix	2 views	
300366	Bolt H. Braze Shim			micrometer for thickness		
300368	Bolt Plug	0.213	800	Function gage		
300336	Firing pin head	1.45	1500	Comp Screen & fix		
300362	Mag Latch	0.186		Pin and caliper		
300363	Magazine Box		4500	CMM inspection w/ fixture,		
300364	Magazine Follower	0.242	3000	Comp Screen & fix	glass plate with spring	
300365	Magazine Bottom	0.282	0	Caliper		
	Stock		4500	CMM inspection w/ fixture,		
300347	Threaded Insert	0.04	200	mic and caliper & thread gage		
300328	Side Plate Pin (2)	0.12	0	mic and caliper		
300351	Pivot Pins (3)		0	mic and caliper		
300352	Safety Pivot Pin		0	mic and caliper & check to comparator		
300343	Safety Spring		0	obsolete		
300329	Bolt Handle Pin		0	mic and caliper		
300342	Ejector		3000	comp screen & fixture-caliper & mic		
300330	Bolt Assy Pin		0	mic and caliper-gage pin		
300346	Bolt Plug Insert		3000	comp screen & fixture-2 profiles	plug gage and mic	
300334	Firing Pin	0.27	200	mic and caliper-comparator for straightness-heat treat		thread gage
300335	Firing Pin Tip	1.5	3300	mic and caliper-comp screen-thread gage 12-28 unf-2b		
300399	Firing Pin Spring		0	mic and caliper-comparator for length-		
	Middle Screw Bushing		0	plug gage and mic		
	Rear Screw Bushing		0	plug gage and mic		
300398	Mag Latch Spring		0	mic and comp for angle		
300371	Mag Latch Pin		0	mic and caliper		
300096	Sling Swivel Stud		0	check thread length		
	Take Down Screw R		200	thread gage-comp for length	check head type	
	Take Down Screw M		200	thread gage-comp for length	check head type	
	Take Down Screw F		0	thread gage-comp for length	check head type	
		0				
300338	Bolt Head Blank		120	comp screen		
	Barrel Blank		0			
	Receiver Blank		0	mic and caliper	O.D and I.D.	
	Bolt Body		0	mic and caliper	O.D and I.D.	
300367	Ejector Spring		0	mic and caliper		
300405	Magazine Spring	0.42	3000	hardness-caliper-comp screen and fixture		
	Total Material $ New known to date	7.053	$41,070			

Add Use from M700				
Part #	Part Name	Material	PPI $	
1444	Carton Assy	2.05	0	
15666	Sear Safety Cam	0.94	3000	hardness test-screen and fixture
17047	Sear Spring	0.02	0	mic and caliper
15280	Trigger	1.53	3000	gage pin-comp screen & fixture
19461	Trigger Connector	1.48	3000	hardness test-mic and caliper comp screen and fixture
17053	Trigger Front Screw	0.11	300	thread gage-mic
91128	Engagement Screw	0.03	300	thread gage-mic
15400	Trigger Spring	0.03	0	pin gage-mic
15481	Trigger Stop Screw	0.06	300	thread gage-mic
17044	Snap Washer	0.09	120	heat treat-comp screen
17034	Receiver Plug Screws	0.13	0	mic and thread gage-we have gage
93712	Extractor	0.78	3300	heat treat-comp screen and fixture build fixture w/3 magnets new anvil for hardnes
94555	Ejector Pin	0.01	0	mic and caliper
94084	Front sight	0.82	0	nothing
94657	front Sight Ramp	1.13	400	check dove tail cut with gage
28505	Front Sight Ramp Screws	0.09	0	mic-caliper-thread gage-heat treat-angle on comp
90906	Elevation Screw	0.02	0	thread gage-mic
94333	Rear Sight Aperature	0.14	0	just visual
103531	Rear Sight Base	0.97	0	just visual
94335	Rear Sight Slide	0.47	0	just visual
90904	Windage Screw	0.02	0	just visual
28505	Rear Sight Base Scre	0.09	0	just visual
15161	Front Screw Bushing	0.13	0	plug gage-mic-caliper
97971	Grip Cap	0.18	0	caliper-visual
97973	Recoil Pad	1.63	400	visual-caliper-durometer (cost)
98008	Recoil Pad Screws	0.05	0	visual-caliper
			$14,120	

$55,190

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CONFIDENTIAL

Golemboski, Matt R.

From: Chamblee, Danny
Sent: Tuesday, October 05, 1999 10:26 AM
To: Golemboski, Matt R.
Subject: FW: Model 710 Projection - Option X

FYI

From: Brueckmann, William R.
Sent: Tuesday, October 05, 1999 10:24 AM
To: Bristol, II Ronald H.
Cc: Chamblee, Danny
Subject: Model 710 Projection - Option X

Using the information you provided me from Danny Chamblee last Friday, I have recalculated the Model 710 project returns.

The project assumes 6,000 units will be sold in 4th quarter, 2000 and 30,000 units in 2001 and 38,000 units in 2002 and 2003 with a 50% replacement volume of the Model 700 ADL Synthetic. MSP is $269

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The last iteration of this project was completed on August 5. This version requires an additional $459,000 of capital and $194,000 of startup costs. Cost of Manufacturing has increased $2.12 per unit. Finished Product Turns were decreased to 12.0 from 14.1. IRR is now 20.7% versus 24.5% 2 months ago. NPV is now $729,000 versus $937,000 with payback at 49 months versus 36 months. ROIC with startup costs is 29.9% versus 42.6%. ROIC without startup costs is 46.6% versus 54.9%

Summary files are attached. I'm available to review any of this at your convenience.


M7100PTX xls


M710 X Comparison.xls


M710 Assumptions Option X.doc

Remington Arms Company, Inc.
Sportsman Model 710 Centerfire Rifle - Option X
Mayfield Manufactured
Sales Volume and Selling Prices
(Dollars per Gun)

	Sales Volume and Selling Prices			
	2000	2001	2002	2003
Sales Volume (Guns)				
All SKU's	6,000	30,000	38,000	38,000
Manufacturer's Suggested Retail Price				
All SKU's	$ 355.00	$ 355.00	$ 355.00	$ 355.00
Manufacturer's Selling Price				
All SKU's	$ 269.00	$ 269.00	$ 269.00	$ 269.00
Net Selling Price				
All SKU's	$ 221.11	$ 217.51	$ 217.51	$ 217.51

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10/5/99

October 5, 1999

Remington Arms Company, Inc.
Sportsman Model 710 Centerfire Rifle
Financial Model Assumptions

Options
Option X – 6,000 unit volume in 4th quarter, 2000. 30,000 unit volume in 2001 and 38,000 unit volume in 2002 and 2003. 50% replacement volume. 1 Selling price. Mayfield manufactured. Assumed that scope combo would be a pass-through of cost only with no impact on margin

Capital Investment
Provided by plants. Additional $809,000 required for manufacturing at Mayfield versus Ilion

Sales Volume
Provided by Marketing. See option variations above. Assumed sales begin in October, 2000

Manufacturers Selling Price
Provided by Marketing. Assumed no price increase in each of the next four years for either the Model 710 or the replacement volume. Pricing assumed that all sales would be Wal*Mart in 2000 and then all channels in 2001 – 2003.

Manufacturers Suggested Retail Price
Assumed MSP x 1.32

Net Selling Price
Assumed standard discounts and terms from 2000 Budget calculation for 2001 – 2003. All sales to Wal*Mart in 2000.

Standard Cost
Provided by Mayfield. Assumed 1.5% cost increase overall per unit per year

Period Expense and Manufacturing Cost Variances
No manufacturing cost variances included. 3.08% of standard cost included in period expense for scrap and warranty. Startup costs provided by plant and are included in Cash Flow calculation. Startup costs also include $100,000 of Marketing Expense. An additional $100,000 of startup costs required for Mayfield options for machinery relocations.

Distribution Expense
Used $2.25 x Sales Volume

Commission Expense
Used 1.0% x Net Sales

Bad Debt
Used 0.7% x Net Sales

Marketing Expense
Used $1.00 x Sales Volume

Product Related Expense
Used $2.00 x Sales Volume

Interest Expense
Used 8.0% annual interest rate and applied it to Capital Investment and the Average Annual Working Capital

Depreciation
Provided by Mayfield

Inventory
Raw Material – Assumed 5.3 turns. Based on Cost of Mfg 3rd month in future
Semifinished – Assumed 8.2 turns. Based on Cost of Mfg 2nd month in future
Finished Product – Assumed 12.0 turns. Based on Cost of Mfg 1st month in future

Accounts Receivable
Assumed standard Firearms programs

Cash Flow
Startup Costs are included in the first year. No impact for the positive impact of reducing other products' overhead costs.

Cash Flow Measures
Discounted at an assumed 12% Cost of Capital using a five-year stream of cash flows

ROIC Calculation
Assumed 20% of Inventory and Accounts Receivable would be Liabilities and credited to Investment. ROIC calculated with and without the effect of Startup Expense

Updated 10/08/99

QUOTES ON MODEL 710

PM PARTS:

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
C-300345	BOLT STOP	STERLING SINTERED	07/19/99	08/15/99	20M=$219.20/M;**40M= $190.60/M**; 120M=$184.60/M	**$6,820.00**	
		ILION			$.57/EA		
C-91852	SAFETY BUTTON	STERLING SINTERED	07/19/99	08/15/99	20M=$108.30/M; **40M=$95.80/M**; 120M=$85.90	**$4,700.00**	
		ILION			$.12/EA		
C-15373	SIGHT	STERLING SINTERED	07/19/99	08/15/99	NO QUOTE-CANNOT DO W/O A SAMPLE		
		ILION			$.82/EA		
C-15280	TRIGGER	STERLING SINTERED	07/19/99	08/15/99	20M=$738.05/M; 40M=$724.70/M; 120M=$690.50/M	$19,750.00	SAMP-12 WKS.
		ILION			$1.53/EA		
C-15280 RE 31	TRIGGER (NO SERRATIONS)	STERLING SINTERED			20M=$377.10/M; 40M=$367.55/M; 120M= $347.70/M	$15,225.00	
C-15666	SEAR SAFETY CAM	STERLING SINTERED	07/19/99	08/15/99	20M=$759.50/M; **40M= $683.45/M**; 120M=$625.80/M	**$11,300.00**	SAMP= 12 WKS
		ILION			$.94/EA		
C-93906	APERTURE	STERLING SINTERED	07/19/99	08/15/99	20M=$155.65/M; **40M= $124.65/M**; 120M=$105.90/M	**$5,210.00**	SAMP= 12 WKS
		ILION			$.33/EA		

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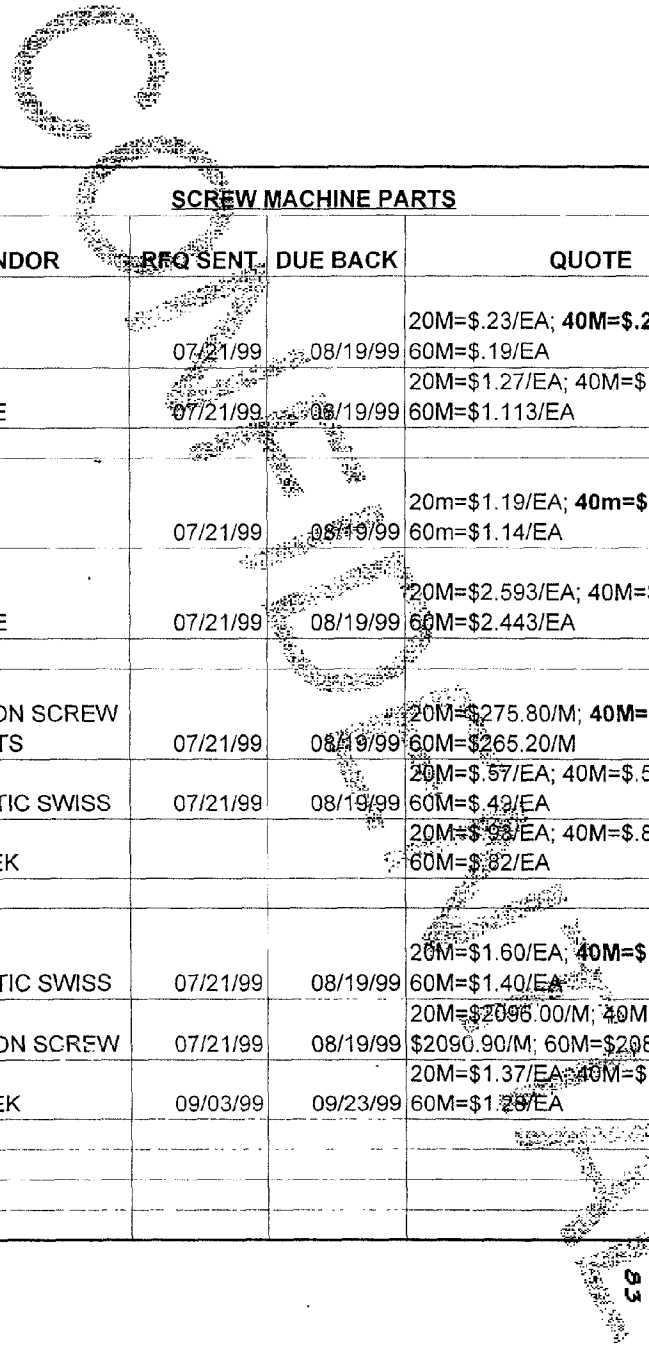
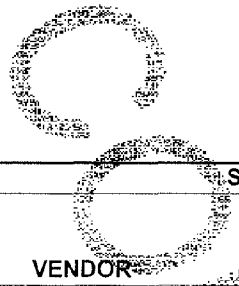
MIM PARTS							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
C-300336	FIRING PIN HEAD	PARMATECH	07/19/99	08/15/99	20M=NO QUOTE; 40M=$2.11/EA FOR 1-CAV.; $1.26/EA FOR 2-CAV; $1.81/EA FOR 3-CAV.; $1.95/EA FOR 4-CAV. 60M=$1.86/EA FOR 1-CAV; $1.12/EA FOR 2-CAV.; $1.56/EA FOR 3-CAV.;$1.74/EA FOR 4-CAV.	ONE CAVITY MOLD=$24,000; TWO-CAVITY MOLD=$32,600; SINTERING FIXTURES=$3,000; TAPPING FIXTURES=$2,000	MOLD DELIVERY 10-152 WKS; SAMPLES 4-6 WKS AFTER MOLD DELIVERY
		MEGAMET	07/19/99	08/15/99		**$15,000=MOLD; $7,500=FURNACE** FIXTURE	
C-93907	REAR SLIDE	PARMATECH	07/19/99	08/15/99	80M=$1.87/EA; 100M=$1.69/EA; 200M=$1.58/EA	TWO-CAVITY MOLD=$45,500; SINTENING FIXTURES=$4,000; TAPPING FIXTURES=$2,000	MOLD DELIVERY 12-14 WEEKS; SAMPLES 4-6 WEEKS LATER
		MEGAMET	07/19/99	08/15/99	80M=$1.20/EA; **100M=$1.15/EA**; 200M=$1.10/EA	**$15,000=MOLD; $2,500=FURNACE** FIXTURE	
C-103530	BASE	PARMATECH	07/19/99	08/15/99	80M=$1.69/EA; 100M=$1.50/EA; 200M=$1.44/EA;	TWO-CAVITY MOLD=$37,800; SINTERING AND SIZING FIXTURES=$6,000	MOLD DELIVERY 10-12 WEEKS; SAMPLES 4-6 WEEKS LATER
		MEGAMET	07/19/99	08/15/99	80M=$1.65/EA; **100M=$1.60/EA**; 200M=$1.50/EA	**$15,000-MOLD; $2,500=FURNACE** FIXTURE	



SCREW MACHINE PARTS							
PART NUMBER	DESCRIPTION	VENDOR	REQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
C-300335	FIRING PIN TIP (SUPREME DESIGN)	ISELI	07/21/99	08/19/99	20M=$.23/EA; **40M=$.20/EA**; 60M=$.19/EA	**225.00**	
		SUPREME	07/21/99	08/19/99	20M=$1.27/EA; 40M=$1.165/EA; 60M=$1.113/EA	$1,000.00	
D-300334	FIRING PIN (SUPREME DESIGN)	ISELI	07/21/99	08/19/99	20m=$1.19/EA; **40m=$1.15/EA**; 60m=$1.14/EA	**$400.00**	
		SUPREME	07/21/99	08/19/99	20M=$2.593/EA; 40M=$2.493/EA; 60M=$2.443/EA	$1,500.00	
C-300334	FIRING PIN (REMINGTON DESIGN)	ANDERSON SCREW PRODUCTS	07/21/99	08/19/99	20M=$275.80/M; **40M=$268.60/M**; 60M=$265.20/M	**$800.00**	
		AUTOMATIC SWISS	07/21/99	08/19/99	20M=$.57/EA; 40M=$.52/EA; 60M=$.49/EA	$250.00	
		QUICK TEK			20M=$.93/EA; 40M=$.84/EA; 60M=$.82/EA		
C-300335	FIRING PIN TIP (REMINGTON DESIGN)	AUTOMATIC SWISS	07/21/99	08/19/99	20M=$1.60/EA; **40M=$1.50/EA**; 60M=$1.40/EA	**$250.00**	
		ANDERSON SCREW	07/21/99	08/19/99	20M=$2096.00/M; 40M= $2090.90/M; 60M=$2088.40/M		
		QUICK TEK	09/03/99	09/23/99	20M=$1.37/EA; 40M=$1.31/EA; 60M=$1.28/EA		

SCREW MACHINE							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
C-300334-C300335 (ONE-PIECE)	FIRING PIN AND FIRING PIN TIP	ANDERSON SCREW			20M=$2709.60/M; **40M=$2699.70/M**; 60M=$2697.60/M		
		AUTOMATIC SWISS			NO QUOTE-SIGNIFICANTLY MORE EXPENSIVE		
B-300330	BOLT ASSEMBLY PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.15/EA; **40M=$.12/EA**; 60M=$.10/EA	**$450.00**	6 WKS.
		SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.226/EA; 40M= $.184/EA; 60M=$.177/EA	$380.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.26/EA; 40M=$.24/EA; 60M=$.235/EA	$350.00	
A-300329	BOLT HANDLE PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.10/EA; **40M=$.08/EA**; 60M=$.06/EA	**$450.00**	6 WKS.
		SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.122/EA; 40M= $.106/EA; 60M=$.101/EA	$150.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.13/EA; 40M=$.12/EA; 60M=$.11/EA	$200.00	
B-300351	PIVOT PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.09/EA; 40M=$.07/EA; 60M=$.06/EA	$450.00	6 WKS.
		SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.10/EA; **40M= $.075/EA**; 60M=$.068/EA	**$150.00**	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.25/EA; 40M=$.22/EA; 60M=$.21/EA	$225.00	

SCREW MACHINE							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
B-300352	SAFETY PIVOT PIN	AUTOMATIC SWISS	08/19/99	ASAP	NO QUOTE-CAN'T MEET TOLERANCE		
		SWISS PRECISION MACH	08/19/99	ASAP	20M=$.206/EA; 40M= $.163/EA; 60M=$.157/EA	$275.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.14/EA; **40M=$.11/EA**; 60M=$.10/EA	**$225.00**	
A-300348	SLIDE PLATE PIN	SWISS PRECISION MACH	08/19/99	ASAP	60M=$.093/EA; 120M= $.086/EA.; 180M=$.085/EA	$275.00	6-8 WKS.
		ISELI	08/19/99	ASAP	60M=$.08/EA; **120M= $.07/EA**; 180M=$.06/EA	**$225.00**	
A-300342	EJECTOR	SWISS PRECISION MACH.	08/19/99	ASAP	20M=$.189/EA; 40M= $.153/EA; 60M=$.148/EA	$325.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.11/EA; **40M=$.08/EA**; 60M=$.07/EA	**$400.00**	
B300371	LATCH PIN	AUTOMATIC SWISS	08/19/99	ASAP	20M=$.08/EA; 40M=$.06/EA; 60M=$.04/EA	$250.00	6 WKS.
		SWISS PRECISION MACH..	08/19/99	ASAP	20M=$.102/EA; 40M= $.076/EA; 60M=$.071/EA	$150.00	6-8 WKS.
		ISELI	08/19/99	ASAP	20M=$.07/EA; **40M=$.05/EA**; 60M=$.04/EA	**$225.00**	
C-EXP-0283	DETENT BUSHING	ISELI	08/20/99	ASAP	NO QUOTE-DUE TO RAW MATERIAL		



SCREW MACHINE							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
B-300346	BOLT PLUG INSERT	SWISS PRECISION MACH	08/19/99	ASAP	20M=$.808/EA; **40M =$.784/EA**; 60M=$.767/EA***	**$775.00**	6-8 WKS.
		ISELI	08/19/99	ASAP	NO QUOTE-EQUPIMENT NOT ADEQUATE		
B-90904	WINDAGE SCREW	SWISS PRECISION MACH			25M=$.193/EA; **50M= $.171/EA**; 100M=$.15/EA****	**$400.00**	6-8 WKS
***QUOTED WITH .031 RADII IN CORNERS, INSTEAD OF THE .020 INDICATED ON THE PRINT							
****QUOTED WITH A CASE DEPTH FOR CARBURIZATION @ .010-.015							

STAMPINGS

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
E-300363	MAGAZINE BOX	TABER BUSHNELL, INC.	07/22/99	08/19/99	NO QUOTE-NOT IN CAPABILITIES		
		NEW HAMPSHIRE STAMPING CO., INC.	07/22/99	08/19/99	NO QUOTE		
		MORRISSEY, INC.	08/06/99	08/26/99	NO QUOTE-NOT SUIT. FOR VENDOR		
		METAL FLOW CORP.	09/02/99	ASAP			
		TRIANGLE PRECISION			NO QUOTE-EQUIPMENT		
		ODM	09/21/99	09/30/99	5M=$.466EA; 10M=$.374/EA; 12M=$.51/EA	$46,155.00	
		HIGHLANDS DIVERSIFIE	09/23/99	09/30/99			
		KICKHAEFER MFG. CO.					
		LOGAN STAMPINGS			NO QUOTE-MACHINE NOT CAPABLE		
		OKAY INDUSTRIES			20M=$3.65/EA; 40M=$3.05/EA; 60M=$2.90/EA	$46,500	SAMP 16-18 WKS.
		KEN-TRON MFG.	10/05/99	10/14/99			
		F & G MULTI-SLIDE, INC.	10/06/99	10/14/99			

STAMPINGS

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
300408	SAFETY	TABER BUSHNELL, INC.	07/22/99	08/19/99	NO QUOTE-NOT IN CAPABILITIES		
		NEW HAMPSHIRE STAMPING CO., INC.	07/22/99	08/19/99	20M=$230.00/M; 40M=$222.22/M; 60M=$220.00/M	$25.552.00	14-16 WKS
		SQUARE STAMPING			**40M=$299.37/M**	**$11,400.00**	8 WKS.
		SQUARE STAMPING			10M=$127.48/M; 20M=$122.94/M; 40M=$120.67/M; 60M=$119.92/M. MADE FROM C1008 STEEL, .187" =/- .003 THICK		
		HIGHLANDS DIVERSIFIE	09/23/99	09/30/99			
		KICKHAEFER MFG. CO.					
		LOGAN STAMPINGS			NO QUOTE-MACHINE NOT CAPABLE		
		KEN-TRON MFG.	10/06/99	10/14/99			
		F & G MULTI-SLIDE, INC.	10/06/99	10/14/99			

	STAMPINGS (CONTINUED)						
PART NUMBER	**DESCRIPTION**	**VENDOR**	**RFQ SENT**	**DUE BACK**	**QUOTE**	**SET-UP**	**LEAD TIME**
C-300343	SAFETY SPRING	SQUARE STAMPING			10M=$75.79; 20M=$71.25/M; 40M=$68.99/M; 60M=$68.23/M.FROM C-1075 STEEL		8 WKS.
(NEW NUMBER 300407)		SQUARE STAMPING			10M=$80.97/M; 20M=$76.44/M; 40M=$74.17/M; 60M=$73.41/M. FROM C-1095 STEEL		8 WKS.
		SQUARE STAMPING			10M=$110.80/M; 20M=$106.27/M; **40M=$104.00/M**; 60M=$103.24/M	**$8,950.00**	8 WKS.
C-300405	MAGAZINE SPRING	SQUARE STAMPING	09/01/99	09/23/99			
		NEW HAMPSHIRE STAMPING CO., INC.	09/21/99	09/27/99	NO QUOTE-EQUIPMENT NOT SUITABLE		
		TABER BUSHNELL					
		HIGHLANDS DIVERSIFIED					
		KICKHAEFER MFG.					
		LOGAN STAMPINGS			NO QUOTE-MACHINE NOT CAPABLE		
		KEN-TRON MFG.	10/06/99	10/14/99			
		F & G MULTI-SLIDE	10/06/99	10/14/99			

STAMPINGS

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
C-300343	SAFETY SPRING	SQUARE STAMPING			10M=$75.79M; 20M=$71.25/M; 40M=$68.99/M; 60M=$68.23/M. FROM C-1075 STEEL		8 WKS.
(NEW NUMBER 300407)		SQUARE STAMPING			10M=80.97/M; 20M=$76.44/M; 40M=$74.17/M; 60M=$73.41/M. FROM C-1095 STEEL.		8 WKS.
		SQUARE STAMPING			10M=$110.80/M; 20M=$106.27/M; **40M=$104.00/M**; 60M=$103.24/M	**$8,950.00**	8 WKS.
B-300361	RECOIL BRACKET	SQUARE STAMPING	08/19/99	ASAP	10M=$193.59/M; 20M=$189.05/M; **40M=$186.78/M**; 60M=$186.03/M	**$550.00**	8 WKS.
		TABER BUSHNELL	08/19/99	ASAP	NO QUOTE-NOT IN CAPABILITIES		
		NEW HAMPSHIRE STAMPING CO., INC.	08/19/99	ASAP	20M=$244.00/M; 40M=$240.00/M; 60M=$238.00/M	$2,225.00	5 WKS.

PLASTICS							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	EAD TIM
D-300365	BOX BOTTOM	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$.256/EA; **40M= $.241/EA;** 60M=$.226/EA; 100M=$.205/EA	**$47,880.00**	15 WKS
		KELLUM AND COE	07/23/99	08/19/99	20M=$.287/EA; 40M= $.282/EA; 60M=$.278/EA	$41,000.00	
		COMPLEX TOOLING	07/23/99	08/19/99			
		HI-TECH MOLD	07/23/99	08/19/99	$.55/EA (60M EST. YRLY)	$22,500.00	8-10 WKS
D-300364	FOLLOWER	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$.259/EA; **40M= $.217/EA**; 60M=$.207/EA; 100M=$.193/EA	**$33,300.00**	14 WKS
		KELLUM AND COE	07/23/99	08/19/99	20M=$.247/EA; 40M= $.242/EA; 60M=$.238/EA	$27,500.00	
		COMPLEX TOOLING	07/23/99	08/19/99			
		HI-TECH MOLD	07/23/99	08/19/99	$.56/EA (60M PER YR)	$15,300.00	8-10 WKS
D-300365& D-300364 FAMILY MOLD	MAGAZINE BOX BTM AND FOLLOWER	PAR 4 PLASTIC	(2 + 2 MOLD)		#300364: FOLLOWER=**$.093/EA**; #300365: MAG BOX BTM=**$.105/EA**	**$78,786.00**	18 WKS
		KELLEMS AND COE	(4 + 4 MOLD)		#300364: FOLLOWER= 20M=$.247/EA; 40M= $.242/EA; 60M=$.238/EA; #300365=BOTTOM= 20M=$.314/EA; 40M= $.309/EA; 60M=$.305/EA	$61,000.00	

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PLASTICS (CONTINUED)							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
C-300362	LATCH	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$.245/EA; **40M=$.231/EA**; 60M=$.212/EA	**$33,480.00**	14 WKS
		KELLUM AND COE	07/23/99	08/19/99	20M=$.191/EA; 40M=$.186/EA; 60M=$.182/EA	$39,000.00	
		COMPLEX TOOLING	07/23/99	08/19/99			
		HI-TECH MOLD	07/23/99	08/19/99	$.58/EA (EST 60M YRLY)	$18,000.00	8-10 WKS
	STOCK	PAR 4 PLASTIC	07/23/99	08/19/99	20M=$5.38/EA; **40M=$5.27/EA**; 60M=$5.17/EA	**$150,300.00**	21 WKS.
		COMPLEX TOOLING	07/23/99	08/19/99			
		THE HANSON GROUP			$11.02/EA=20% GF POLY; $11.37/EA=20% POLY USING IQC TECH.	$105,500.00	
		HI-TECH MOLD AND TOOL			$18.06/EA (EST. 60M YRLY)	$249,600.00	24-27 WKS.
C-200257	BOLT PLUG	PAR 4 PLASTIC	7/23/99	8/19/99	20M=$.249/EA; 40M=$.239/EA; 60M=$.215/EA	$38,088.00	12 WKS.
		KELLUM AND COE	7/23/99	8/19/99	20M=$.215/EA; **40M=$.213/EA**; 60M=.211/EA	**$36,000.00**	
		COMPLEX TOOLING	7/23/99	8/19/99			
		HI-TECH MOLD	7/23/99	8/19/99	$.61/EA (EST. 60M YRLY)	$19,800.00	8-10 WKS

MACHINING

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
D-300339	BOLT BODY	NOLTE SCREW MACHINE	07/26/99	08/19/99			
		KEN MAR TOOL	07/26/99	08/19/99	20M=$2.20/EA; **40M=$2.10/EA**; 60M=$2.05/EA	PINK	
		KEN MAR TOOL	07/26/99	08/19/99	20M=$2.05/EA; **40M=$1.95/EA**; 60M=$1.90/EA	YELLOW	
		TCR	08/06/99	08/26/99	NO QUOTE-LACK PROPER EQUIPMENT		
		BETTY MACHINE	08/06/99	08/26/99	NO QUOTE--NOT EQUIPPED TO MAKE		
		ANDERSON SCREW	07/21/99	08/19/99	UNABLE TO QUOTE-NOT SUITABLE FOR THEIR EQUIP.		
		ISELI	07/21/99	08/19/99	UNABLE TO QUOTE-PROBLEM WITH RAW MATERIAL		
		AUTOMATIC SWISS	07/21/99	08/19/99	UNABLE TO QUOTE-NOT SUITABLE FOR THEIR EQUIP.		
		QUICK TEK MFG.	09/03/99	ASAP	NO QUOTE		
		NORTHWEST SWISSMATIC		09/20/99	NO QUOTE-NOT EQUIPPED		
		MFG					
		NORTHWEST AUTOMATIC					
		WAUCONDA TOOL					
D-300339	BOLT BODY	G. S. PRECISION			20M=$2.54/EA; 40M=$2.35/EA; 60M=$2.21/EA	COM-PLETE TO PRINT	20-22 WKS.
C-300370	BOLT HANDL	FANSTEEL ESCAST	08/03/99	08/19/99	**1.63/EA**	**$12,575.00**	11 WKS= SAMP. 8 WKS= PROD

MACHINING

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
E-300340	RECEIVER	CROSROL (COMPLETE)	07/26/99	08/19/99	20M=$21.75/EA; **40M=$20.26/EA;** 60M=$19.51/EA****	COM-PLETE TO PRINT	
		NOLTE SCREW MACHINE	07/26/99	08/19/99			
		KEN MAR TOOL	07/26/99	08/19/99	20M=$3.70/EA; **40M=$3.55/EA**; 60M=$3.30/EA	PINK	
		KEN MAR TOOL	07/26/99	08/19/99	20M=$3.50EA; **40M=$3.35/EA**; 60M=$3.10/EA	YELLOW	
		TCR	08/06/99	08/26/99	NO QUOTE-LACK PROPER EQUIPMENT		
		BETTY MACHINE	08/05/99	08/26/99	NO QUOTE--NOT EQUIPPED TO MAKE		
		QUICK TEK MFG	09/03/99	ASAP	NO QUOTE		
		NORTHWEST SWISSMATIC		09/20/99	NO QUOTE-NOT EQUIPPED		
		NORTHWEST AUTOMATIC					
		DEER CREEK					
E-300338	**BOLT HEAD**	NOLTE SCREW MACHINE	07/26/99	08/19/99			
		KEN MAR TOOL	07/26/99	08/19/99	NO QUOTE (NO REASON CITED)		
		TCR	08/06/99	08/26/99	NO QUOTE-LACK PROPER EQUIPMENT		
		BETTY MACHINE	08/06/99	08/26/99	NO QUOTE-NOT EQUPPED TO MAKE		
		QUICK TEK MFG	09/03/99	ASAP	20M=$8.47/EA; 40M=$7.74EA; 60M=$7.51/EA	$5,650.00	
		ANDERSON SCREW	09/23/99	ASAP			
BLANK	BOLT HEAD	QUICK TEK	09/03/99	09/23/99	20M=$3.96/EA; 40M=$3.86/EA; 60M=$3.82/EA		
		ANDERSON SCREW	09/23/99	ASAP			
****PRICES QUOTED INCLUDE ALL TOOLS, FIXTURES, GAUGES, PROGRAMS, AND SET UP.							

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FASTENERS

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP
B91128	SCREW, TRIG. ENG.	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$6.45/C; 40M=$4.18/C; 60M=$3.32/C	
		FASTENAL	07/23/99	08/19/99	20M=$40.25/M; **40M=$32.65/M** 60M=$29.05/M	
B17053	SCREW, TRIG STOP	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$6.80/C; 40M=$3.78/C; 60M=$3.07/C	
		FASTENAL	07/23/99	08/19/99	20M=$39.50/M; **40M=$32.40/M** 60M=$28.80/M	
A-15481	SCREW, TRIG STOP	EVANSVIILE BOLT & NUT	07/23/99	08/19/99	20M=$6.72/C; 40M=$4.45/C; 60M=$3.66/C	
		FASTENAL	07/23/99	08/19/99	20M=41.50/M;**40M=$32.40/M** 60M=29.25/M	
A-90906	SCREW ELEVATION	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$5.64/C; 40M=$4.95/100; 60M=$3.96/C	
		FASTENAL	07/23/99	08/19/99	20M=$36.00/M;**40M=$27.00/M** 60M=$24.00/M	
A-94555	PIN, SPIRAL	EVANSVILLE BOLT & NUT	07/23/99	08/19/99	20M=$1.35/C; **60M=$1.12/C**	
		FASTENAL	07/23/99	08/19/99	20M=$15.00/M;40M=$13.88/M	

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FASTENERS AND PACKAGING							
PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP	LEAD TIME
A-90908	RECOIL PAD (CONSISTS OF THE FOLLOWING PARTICLE BOARD SCREWS:						
A98008	PARTICLE BOARD SCREW	FASTENAL			$12.08/M		
		EVANSVILLE BOLT AND NUT			**$.85/C**		
A99989	PARTICLE BOARD SCREW	FASTENAL			$8.06/M		
		EVANSVILLE BOLT AND NUT			**$.60/C**		
A200197	PARTICLE BOARD SCREW	FASTENAL			$11.08/M		
		EVANSVILLE BOLT AND NUT			**$.74/C**		
	STYROFOAM BED	TUSCARORA	08/03/99	08/15/99	**$.87/EA**	**$18,900.00**	
	CARTON	ORPACK	08/17/99	08/22/99	20M=$450.20/M; **40M=$444.35/M**; 60M=$442.75/M		
		SEMO BOX	08/17/99	08/22/99			

COLD FINISHED ROUND BAR STOCK

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	LEAD TIME
	ANNEAL-COLD DRAWN 241 MAX BHN	REPUBLIC STEEL			**$57.50/CWT**	**14-16 WEEKS**
					9# PER BARREL	
	QUENCH AND TEMPER COLD DRAWN STRESS RELEIVED TURNED AND POLISHED	REPUBLIC STEEL			COLD DRAWN=$64.00/CWT TURNED AND POLISHED=$69.00/CWT	20-22 WKS
	TUBING BOLT	FEDERAL STEEL	08/03/99	08/15/99	10M FT=$1.2400/FT	14-18 WKS.
					5-1/2" PER BOLT	
	TUBING RECEIVER	FEDERAL STEEL	08/03/99	08/15/99	10M FT=$2.9400/FT	5-6 WKS.
					6.4" PER RECEIVER	

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MISCELLANEOUS PARTS

PART NUMBER	DESCRIPTION	VENDOR	RFQ SENT	DUE BACK	QUOTE	SET-UP
C-IEXP-0315	PRESSED INSERT	AUTOMATIC SWISS	09/08/99	09/20/99		
		ISELI	09/08/99	09/20/99	60M=$110.00/M	$250.00
		SWISS PRECISION MACH.	09/08/99	09/20/99	60M=$.318/EA	$300.00
		MICRON	09/08/99	09/20/99	60M=$.686/EA	$735.00
		G.S. PRECISION	09/08/99	09/20/99		
C-IEXP-0315	DETENT BUSHING	AUTOMATIC SWISS	09/08/99	09/20/99		
		ISELI	09/08/99	09/20/99	60M=$122.40/M	$250.00
		SWISS PRECISION MACH.	09/08/99	09/20/99		
		MICRON	09/08/99	09/20/99	60M=$.203/EA	$810.00
		G.S. PRECISION	09/08/99	09/20/99		
C-IEXP-0283		SWISS PRECISION MACH.			NO QUOTE-MACHINES NOT CAPABLE	
#1E-300327	RECEIVER INSERT	THE HANSON GROUP	MODIFY MOLD PER REVISION 28 & 29=$2,823.00;			
			SAMPLE PART USING IQC PROCESS=$1,200.00;			
			EXTEND RIB AREA AND ADD FILLET=$3,700.00			
			SAMPLE PART USING IQC PROCESS=$1,200.00;			

#305315 - Barrel

OP #	Op. #	PROCESS DESCRIPTION	MACHINE DESCRIPTION	Part #	Print #	REV	Material $	Std. Run Hours	Variable Overhead $	Preop $	Capital	PPI Gages $	Material Handling	Comments
		Material (Blank 94523)		305315	E-305315	1								
10	10	Cut to Length					$ 4 800	0 000000	$0 12	$4,140 72	$0 00			
20	20	Gundrill Bore Dies & Rams						0 034670						
30	30	Ream Bore					n/a	0 029946	$0 39	$15,118 96	$6,080 00			
40	40	Rifle Bore						0 000000						
50	50	Wash & Stress Relieve					$ -	0 000413	$0 00	0	$7,000 00			M710 Barrel Wash and Stress Relief
60	60	Turn O D & Inspect for Runout Gaging					-	0 027713	0 072	$4,893 90	$5,000 00			Turn O D & Inspect
70	70	Cut-off & Crown Muzzle End						0 000000						
			Clamping Chuck				$ -	0 011670	$0 03	$1,440 56	$15,000 00			M710 Cutoff and Crown Operation
80	80	Face, Chamber, Machine Hub End, Drill & Tap Takedown Screw Holes, Mill Recoil Lug Slot & 100% Inspect Chamber Finish	Gaging					0 080145						
			Okuma LB-300								$222,880 00			
			Chamber operation				$ -		$0 00	$0 00	$0 00			M710 Chamber Operation
90	90	Wash & Magnaflux Barrel						0 013750						
100	100	Drill & Tap Sight Screw Holes Gaging						0 090000						
110	110	Induction Heat Treat Hub						0 000000						
120	120	Press Receiver onto Barrel Gaging						0 028370						
130	130	Inspect for Runout & Straighten if Necessary						0 000000						
140	140	Roll Mark						0 003000						
150	150	Angularity Straighten Muzzle & Inspect Bore						0 006667						
160	160	Centerless Polish						0 004166						
170	170	Glass Bead						0 005556						
180	180	Black Oxide						0 004167						
		TOTALS					$ 4 800	0 246986	$0 59	$25,694 14	$255,960 00	$0 00	0 00	

710 Complete 1

New Parts			
Part #	Part Name	Material $	Ilion Quotes or *Estimates*
300327	Receiver Insert	0 62	
300333	Side Plate		0.09
300334	Safety Arm	0.31	
300345	Bolt Stop	0.19	
300361	Recoil Bracket	0 193	
300360	Bolt Handle Blank	1.63	
300366	Bolt H. Braze Shim	0	
300368	Bolt Plug	0 25	
300336	Firing pin head	1.45	
300362	Mag Latch	0 25	
300363	Magazine Box		2.79
300364	Magazine Follower	0 259	
300365	Magazine Bottom	0 256	
	Stock	5 38	
300347	Threaded Insert	0 04	
300328	Side Plate Pin (2)	0 12	
300351	Pivot Pins (3)	0 18	
300352	Safety Pivot Pin	0 06	
300407	Safety Spring		0 03
300329	Bolt Handle Pin	0 06	
300342	Ejector		0 16
300330	Bolt Assy Pin	0 1	
300346	Bolt Plug Insert		0.29
300346	Tumbler		0.41
	lock plunger		0 05
	lock spring		0.01
	key		
300334	Firing Pin	0 27	
300335	Firing Pin Tip	1 5	
	Firing Pin Spring		0.14
	Middle Screw Bushing		0 05
	Rear Screw Bushing		0 05
300405	Mag Latch Spring		0.02
300371	Mag Latch Pin	0.04	
300096	Sling Swivel Stud (2)		0 14
	Take Down Screw R		0 08
	Take Down Screw M		0 08
	Take Down Screw F		0.08
300338	Bolt Head Blank		1 6
	Barrel Blank	4 92	
	Receiver Blank	1 76	
	Bolt Body	0 74	
	Carton Assy (Ilion)	2.05	

Add Use from M700			
Part #	Part Name	Material $	Quotes from Mayfield
1444	Carton Assy	2 05	
15666	Sear Safety Cam	0.94	
17047	Sear Spring	0.02	
15280	Trigger	1 53	
19461	Trigger Connector	1.48	
17053	Trigger Front Screw	0.11	0.032
91128	Engagement Screw	0.03	
15400	Trigger Spring	0.03	
15481	Trigger Stop Screw	0 06	0.032
17044	Snap Washer	0.09	
17034	Receiver Plug Screws	0.13	
93712	Extractor	0 78	
94555	Ejector Pin	0.01	
94084	Front sight	0 82	
94657	front Sight Ramp	1.13	
28505	Front Sight Ramp Screws	0 09	
90906	Elevation Screw	0.02	
94333	Rear Sight Aperature	0 14	0 105
103531	Rear Sight Base	0 97	
94335	Rear Sight Slide	0 47	
90904	Windage Screw	0 02	
28505	Rear Sight Base Scre	0 09	
15161	Front Screw Bushing	0 13	
97971	Grip Cap	0 18	
97973	Recoil Pad	1 53	
98008	Recoil Pad Screws	0 05	0 012
17028	Magazine Spring	0 42	
	Total Add Use Parts	$13 42	
	Add Use is	31 86%	% of total

Total Material $ New known to date	**22.628**
% of Total anticipated	**53.73%**

Total Material $ Estimated or from M700 costing	**6.07**
% of Total anticipated	**14.41%**

Total Add Use Parts	**13.42**
Add Use is	**31.86%**

% of total material cost know by quote	**85.59%**

Add Use from M700			
Part #	Part Name	Material	Quotes from Mayfield
1444	Carton Assy	2.05	
15666	Sear Safety Cam	0.94	
17047	Sear Spring	0.02	
15280	Trigger	1.53	
19461	Trigger Connector	1.48	
17053	Trigger Front Screw	0.11	0.032
91128	Engagement Screw	0.03	
15400	Trigger Spring	0.03	
15481	Trigger Stop Screw	0.06	0.032
17044	Snap Washer	0.09	
17034	Receiver Plug Screws	0.13	
93712	Extractor	0.78	
94555	Ejector Pin	0.01	
94084	Front sight	0.82	
94657	front Sight Ramp	1.13	
28505	Front Sight Ramp Screws	0.09	
90906	Elevation Screw	0.02	
94333	Rear Sight Aperature	0.14	0.105
103531	Rear Sight Base	0.97	
94335	Rear Sight Slide	0.47	
90904	Windage Screw	0.02	
28505	Rear Sight Base Screw	0.09	
15161	Front Screw Bushing	0.13	
97971	Grip Cap	0.18	
97973	Recoil Pad	1.63	
98008	Recoil Pad Screws	0.05	0.012
17028	Magazine Spring	0.42	
	Total Add Use Parts	$13.42	

1601 INSERT $0.603

1609 TOP $0.150

Part #	Part Name	Dwg #	Rev#	Ilion SAP Cost	Mayfield Quote	Mayfield Requirement From Ilion for 2000	Mayfield Requirement From Ilion for 2001	Comments
17047	Sear Spring	A-17047	26	$0.023	$0.038	7250	0	Purchase from Ilion in 2000 and buy from our own source in 2001
19461	Trigger Connector	C-19461	21	$1.476		7250	20,000	Re-evaluate in 2000. Several secondaries currently done in Ilion.
15400	Trigger Spring	A-15400	11	$0.031	$0.062	7250	0	Purchase from Ilion in 2000 and buy from our own source in 2001
17044	Snap Washer	B-17044	26	$0.090		7250	0	Purchase direct from Ilion vendor and secondary heat treat to be done by Mayfield source.
93712	Extractor	C-93712	2	$0.783		7250	0	Purchase direct from Ilion vendor and secondary heat treat to be done by Mayfield source.
94555	Ejector Pin	A-94555	1	$0.014	$0.014	7250	0	Purchase from Ilion in 2000 and buy from our own source in 2001
15161	Front Screw Bushing	B-15161		$0.149		7250	20,000	Purchase from Ilion or Ilion source.
97971	Grip Cap	C-97971	-	$0.180		7250	20,000	Maintained by Ilion
97973	Recoil Pad	D-97973	26	$1.610		7250	20,000	Maintained by Ilion
1444	Carton Corr.			$1.963	$0.444	0	0	Cost savings suggests, Mayfield to purchase tool and Ilion to purchase direct from the Mayfield vendor.

1601

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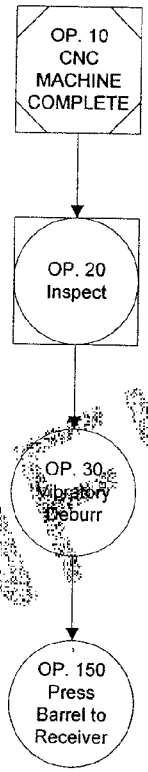
	Carton Insert				$0.870	0	0	Cost savings suggests, Mayfield to purchase tool and Ilion to purchase direct from the Mayfield vendor.

Part #	Part Name	Dwg #	Rev#	Ilion SAP Cost	Mayfield Quote	Mayfield Requirement From Ilion for 2000	Mayfield Requirement From Ilion for 2001	Comments
15666	Sear Safety Cam	C-15666	24	0.952	0.759	7250	20,000	Secondaries completed in Ilion. Part received in Mayfield complete.
15280	Trigger	C-15280	31	1.91	0.738	0	0	Possible trigger re-designed for M710. Otherwise 20,000 in 2001.
94084	Front sight	C-15373	26	0.806	0.82	7250	20,000	Vibratory deburr, black oxide and paint in Mayfield
94657	front Sight Ramp	B-28510	33	1.18	---	7250	20,000	Vibratory deburr and black oxide in Mayfield
94333	Rear Sight Aperature	C-93905	9	0.35	0.294	7250	20,000	Vibratory deburr and black oxide in Mayfield
103531	Rear Sight Base	C-10353	3	1.01	1.65	7250	20,000	Vibratory deburr and black oxide in Mayfield
94335	Rear Sight Slide	C-93904	7	1.27	1.2	7250	20,000	Vibratory deburr and black oxide in Mayfield

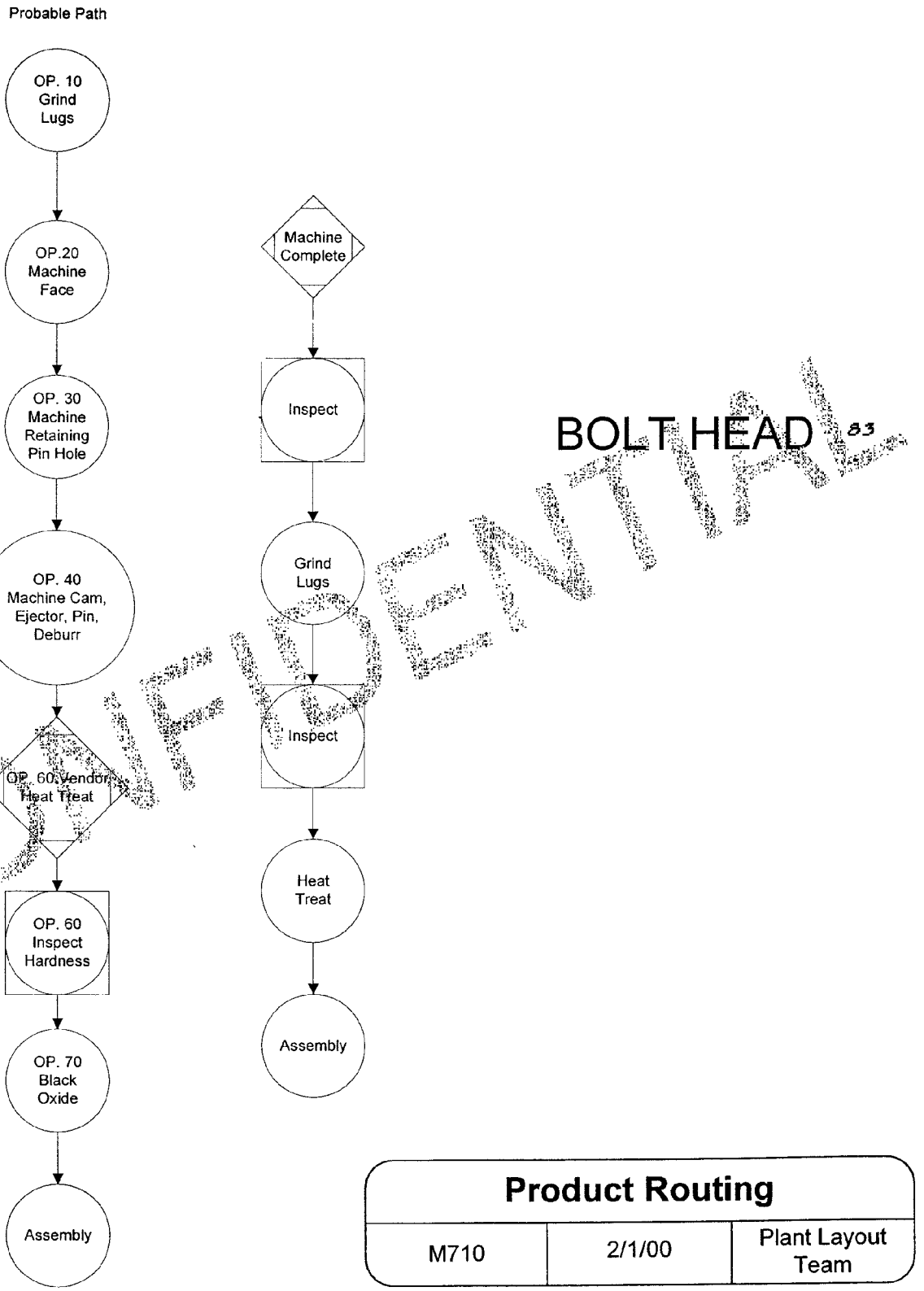
Part #	Part Name	Dwg #	Rev#	Ilion SAP Cost	Mayfield Quote	Mayfield Requirement From Ilion for 2000	Mayfield Requirement From Ilion for 2001	Comments
17053	Trigger Front Screw	B-17053	32	0.105	0.039	7250	0	
91128	Engagement Screw	B-91128	7	0.027	0.04	7250	20,000	
15481	Trigger Stop Screw	A-15481	9	0.062	0.041	7250	0	
17034	Receiver Plug Screws	B-17034	34	0.033	0.036	29000	80,000	
28505	Front Sight Ramp Screws	B-28505	21	0.047	0.039	7250	0	
90906	Elevation Screw	A-90906	19	0.023	0.036	7250	20,000	
90904	Windage Screw	B-90904	8	0.022	0.163	7250	0	
28505	Rear Sight Base Screws	B-28505	11	0.047	0.038	14500	0	
98008	Recoil Pad Screws	A-98008	7	0.266	0.012	7250	0	

710 BARREL PROCESS FLOW: 1/18/00



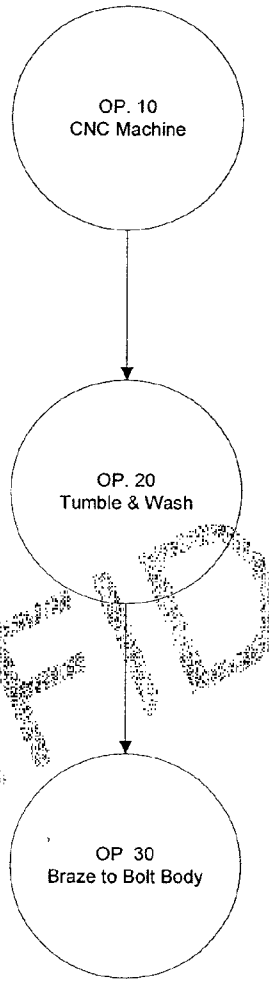
RECEIVER 83

Product Routing		
M710	1/31/00	Plant Layout Team

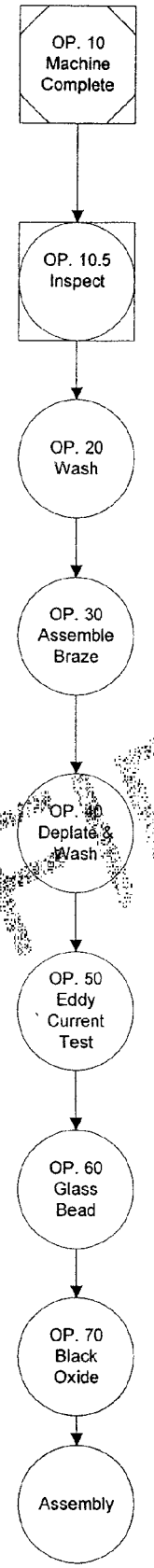


Product Routing		
M710	2/1/00	Plant Layout Team

BOLT HANDLE



Product Routing		
M710	1/31/00	Plant Layout Team



BOLT BODY 83

Product Routing		
M710	1/31/00	Plant Layout Team

MF0691

TAKEDOWN SCREW MOVEMENT TEST

Objective:

Measure the movement if any that occurs with the takedown screws when subjected to sudden shock and vibrations from normal handling/shooting.

Tests 1:

1. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

2. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

Test 2:

3. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten screws
   - Tap on gun stock in several locations on shooter's left and right
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

4. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten screws
   - Tap on gun stock in several locations on shooter's left and right
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

Tests 3:

5. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten screws
   - Tap on gun stock in several locations on shooter's left and right

- Retighten screws
- Tap on gun stock in several locations on shooter's left and right
- Retighten screws
- Tap on gun stock in several locations on shooter's left and right
- Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

6. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten screws
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten screws
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten screws
   - Tap on gun stock in several locations on shooter's left and right
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

Tests 4:

7. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten Screws
   - Shoot (1) proof + (2) regular rounds
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

8. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
   - Tap on gun stock in several locations on shooter's left and right
   - Retighten Screws
   - Shoot (1) proof + (2) regular rounds
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

Tests 5:

9. Bias stock so that it seats in a natural position before setting screws. Set torque of front and middle screw to 40 ft/lbs.; hand tighten back screw.
   - Shoot (2) regular rounds
   - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

10. Bias stock so that it seats in a natural position before setting screws. Set torque of front and middle screw to 50 ft/lbs.; hand tighten back screw.
    - Shoot (2) regular rounds
    - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

11. Bias stock so that it seats in a natural position before setting screws. Set torque of front and middle screw to 60 ft/lbs.; hand tighten back screw.
    - Shoot (2) regular rounds
    - Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

TEST 6:

12. Bias stock so that it seats in a natural position before setting screws. Set torque of front and middle screw to 40 ft/lbs.; torque back screw to 20 ft/lbs.

---USE 4 guns

- Shoot (5) magazines (20) regular rounds
- Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

------OPTIONAL TEST 13 BASED ON TIME CONSTRAINT, PROCEED TO 14----

13. Bias stock so that it seats in a natural position before setting screws. Set torque of front and middle screw to 50 ft/lbs.; torque back screw to 20 ft/lbs.

---USE 4 guns

- Shoot (5) magazines (20) regular rounds
- Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

14. Bias stock so that it seats in a natural position before setting screws. Set torque of front and middle screw to 60 ft/lbs.; torque back screw to 20 ft/lbs.

---USE 4 guns

- Shoot (5) magazines (20) regular rounds
- Measure torque w/ torque wrench-measurement should be taken from force needed to loosen screw.

RESULTS:

TEST 1.1

	Target	Reduction	% Reduction
Front	40	32.5	18.75
Middle	40	38.5	3.75
Back	10	8	20

TEST 1.2

	Target	Reduction	% Reduction
Front	60	45	25
Middle	60	42.5	29.2
Back	10	9	10

TEST 2.3

	Target	Reduction	% Reduction
Front	40	30	25
Middle	40	35	12.5
Back	10	9	10

TEST 2.4

	Target	Reduction	% Reduction
Front	60	48	20
Middle	60	44	26.7
Back	10	8	20

TEST 3.5

	Target	eductio	Reductio
Front	40	35	12.5
Middle	40	39	2.5
Back	10	10	0

TEST 3.6

	Target	Reduction	% Reduction
Front	60	45	25
Middle	60	48	20.0
Back	10	10	0

TEST 4.7

	Target	Reduction	% Reduction
Front	40	20	50
Middle	40	28	30.0
Back	10	8	20

TEST 4.8

	Target	Reduction	% Reduction
Front	60	32	46.66666667
Middle	60	40	33.3
Back	10	9	10

TEST 5.9

	Targe	Reduction	% Reduction
Front	40	25	37.5
Middle	40	35	12.5
Back	10	5	50

TEST 5.10

	Targe	Reduction	% Reduction
Front	50	25	50
Middle	50	32	36.0
Back	10	0	100

TEST 5.11

	Targe	Reduction	% Reduction
Front	60	53	11.6666667
Middle	60	50	16.7
Back	10	10	0

TEST 6.12-1

	Targe	Reduction	% Reduction
Front	40	10	75
Middle	40	28	30.0
Back	20	18	10

TEST 6.12-2

	Targe	Reduction	% Reduction
Front	40	20	50
Middle	40	28	30.0
Back	20	14	30

TEST 6.12-3

	Targe	Reduction	% Reduction
Front	40	19	52.5
Middle	40	30	25.0
Back	20	14	30

TEST 6.12-4

	Targe	Reduction	% Reduction
Front	40	18	55
Middle	40	30	25.0
Back	20	13	35

AVERAGE TEST RESULT of 6-12:(1-4)

	Reduction	% Reduction
FRONT:	16.75	58.2
MIDDLE:	29	27.5
BACK:	14.75	63.2

TEST 6.14-1

	Targe	Reduction	% Reduction
Front	60	30	50
Middle	60	32	46.7
Back	20	15	25

TEST 6.14-2

	Targe	Reduction	% Reduction
Front	60	18	70.0
Middle	60	42	30.0
Back	20	18	10

TEST 6.14-3

	Targe	Reduction	% Reduction
Front	40	28	30
Middle	40	40	0.0
Back	20	16	20

TEST 6.14-4

	Targe	Reduction	% Reduction
Front	60	25	58.3333333
Middle	60	38	36.7
Back	20	13	35

AVERAGE TEST RESULT of 6-14:(1-4)

	Reduction	% Reduction
FRONT:	25.25	57.91
MIDDLE:	38	36.67
BACK:	15.5	74.12

710 TRAIL & PILOT SERIES- B
11/15/00
TEST LAB TRACKING NUMBER- TLW0300

PRELIMINARY MEASUREMENTS & CHECKS

BLUE INDICATES BELOW SPEC.
RED INDICATES ABOVE SPEC.

PROOF TEST & MAGNAFLUX COMPLETED AT MAYFIELD

GUN ID #	SERIAL NUMBER	INSPECT FOR PROOF STAMP	INSPECT FOR MAGNAFLUX STAMP	HEADSPACE, REM. SPEC GAUGES	TRIGGER PULL WITH SPRING SCALE TLW0300J LBS.				FIRING PIN INDENT WITH COPPER CRUSHERS TLW0300H				SEAR TO TRIGGER ENGAGEMENT TLW0300I out of stock @ 20X				SEAR LIFT TLW0300I out of stock @ 20X			
		TLW0300E,F	TLW0300E,F	TLW0300G	1	2	3	AVERAGE	1	2	3	AVERAGE	1	2	3	AVERAGE	1	2	3	AVERAGE
B-1	71001124	YES	YES	MIN.+.002	5	5	5 5	5.17	0 017	0.017	0 018	**0.0173**	0 0297	0 0296	0 0288	**0.0274**	0 0122	0.0139	0 0133	**0.0131**
B-2	71001184	Y	Y	MIN.+ 002	5 25	5 5		5.25	0 018	0.017	0 018	**0.0177**	0.0277	0.0278	0.0268	**0.0274**	0.0127	0.0132	0 0131	**0.0130**
B-3	71001244	Y	Y	MIN.+ 002	4 25	4.75	4 25	4.42	0 017	0 016	0.018	**0.0170**	0.0282	0.0291	0.0272	**0.0282**	0.015	0 0145	0 0147	**0.0147**
B-4	71001288	Y	Y	MIN + 001	5	4.5	4 25	4.58	0 018	0 016	0 018	**0.0173**	0.032	0.0311	0.0307	**0.0313**	0 0151	0.0173	0 0167	**0.0164**
B-5	71001421	Y	Y	MIN + 001	4 25	4	4	4.08	0.018	0.018	0.017	**0.0177**	0.0268	0 027	0.026	**0.0266**	0 0134	0.0123	0 0113	**0.0123**
B-6	71001462	Y	Y	MIN.+.001	4 75	4.25	4 25	4.42	0 016	0 016	0.017	**0.0163**	0 0262	0 0261	0 0259	**0.0261**	0.012	0 0124	0 0121	**0.0122**
B-7	71001504	Y	Y	MIN +.001	5.5	5.25	5	5.25	0.017	0.016	0.016	**0.0163**	0.0294	0.0299	0 0294	**0.0296**	0.0154	0.0139	0 0136	**0.0143**
B-8	71001511	Y	Y	OUT OF TEST, TRIGGER LOCATED TO THE RIGHT OF CENTER IN TRIGGER GUARD, GUN HELD FOR MARKETING EVALUATION																
B-9	71001524	Y	Y	MIN +.001	5 5	5 25	5 25	5.33	0 017	0.018	0.017	**0.0173**	0.0265	0.0267	0.0281	**0.0271**	0.0138	0 0132	0 0145	**0.0138**
B-10	71001529	Y	Y	MIN.+.001	5.5	5.25	5 25	5.33	0 017	0.018	0 017	**0.0173**	0.0287	0 0283	0.0302	**0.0291**	0.0123	0.0141	0 0141	**0.0135**
B-11	71001534	Y	Y	MIN.+.002	4.5	5	4.5	4.67	0 017	0 017	0.017	**0.0170**	0 0311	0.031	0 0306	**0.0309**	0.0141	0.0137	0 0131	**0.0136**
B-12	71001535	Y	Y	MIN + 001	5.5	5	4 75	5.08	0 019	0.018	0.018	**0.0183**	0.0273	0 0283	0 0286	**0.0281**	0 0144	0.0137	0 013	**0.0137**
B-13	71001539	Y	Y	MIN.+.001	5.5	5	5	5.17	0 017	0.018	0.017	**0.0177**	0 0291	0.0295	0.0299	**0.0295**	0 0152	0 0143	0 0146	**0.0147**
B-14	71001559	Y	Y	MIN.+.002	5	5	5	5.00	0 019	0 019	0 02	**0.0193**	0 0314	0.0306	0.0315	**0.0312**	0.013	0 0126	0 0149	**0.0135**
B-15	71001578	Y	Y	MIN.	4.5	4.75	4.5	4.58	0.017	0.017	0.017	**0.0170**	0.029	0.0279	0 0293	**0.0287**	0 0162	0.0163	0.0158	**0.0161**
B-16	71001580	Y	Y	MIN.+.001	5.75	5.5	6	5.75	0 017	0.018	0 018	**0.0177**	0.0307	0.0304	0.0313	**0.0308**	0.0156	0 0161	0.0158	**0.0158**
B-17	71001583	Y	Y	MIN + 002	5	5	5.25	5.08	0.017	0.018	0.019	**0.0180**	0.036	0.0375	0.0366	**0.0367**	0 0137	0.0135	0.0137	**0.0136**
B-18	71001584	Y	Y	MIN.+ 001	4.75	6	6 25	5.67	0.018	0.018	0.017	**0.0170**	0.0291	0 0272	0.0286	**0.0283**	0 014	0.0138	0.0138	**0.0139**
B-19	71001595	Y	Y	MIN.+.001	5	5.5	5.25	5.25	0.019	0.018	0.019	**0.0187**	0.0286	0.0282	0.0286	**0.0285**	0.0119	0 0119	0 011	**0.0116**
B-20	71001605	Y	Y	MIN.+ 001	5	4.5	4.75	4.75	0.016	0.016	0.017	**0.0163**	0.0262	0 0271	0 026	**0.0264**	0.0175	0.0153	0 0165	**0.0164**
B-21	71001613	Y	Y	BELOW MIN.	5.75	5 75	5 25	5.58	0 017	0.017	0.018	**0.0173**	0.0256	0.0256	0.0251	**0.0254**	0.0151	0.0146	0 0145	**0.0147**
B-22	71001623	Y	Y	MIN	4.75	4 75	5.25	4.92	0 016	0.018	0.018	**0.0173**	0.0271	0.0273	0.0262	**0.0269**	0 0134	0.0134	0.0144	**0.0137**
B-23	71001632	Y	Y	MIN.+.001	5	4.75	5.25	5.00	0 018	0 016	0.017	**0.0170**	0 0267	0.0271	0.0278	**0.0272**	0 0126	0 015	0.0157	**0.0144**
B-24	71001634	Y	Y	MIN.+ 001	5 5	5.5	5 25	5.42	0 019	0 017	0.017	**0.0177**	0.0279	0.0276	0.0288	**0.0282**	0.0145	0 0141	0 0149	**0.0145**
B-25	71001643	Y	Y	MIN +.001	4.25	4	4 5	4.25	0 018	0.017	0.018	**0.0177**	0.0301	0.0304	0.0312	**0.0306**	0.0156	0,013	0.0149	**0.0145**
B-26	71001647	Y	Y	MIN.+.001	5	5	5	5.00	0.017	0.017	0.017	**0.0170**	0.0269	0.0285	0.0292	**0.0282**	0 0129	0 0138	0.0135	**0.0134**
B-27	71001724	Y	Y	MIN +.002	5 75	4 75	4.25	4.92	0.019	0.019	0.02	**0.0193**	0.0298	0 0304	0 0299	**0.0300**	0 0163	0.0173	0.0175	**0.0170**
B-28	71001760	Y	Y	MIN.+.002	5 25	4 75	4.5	4.83	0 016	0.017	0.016	**0.0163**	0.0344	0.036	0 0367	**0.0357**	0 0171	0.0127	0.0149	**0.0149**
B-29	71001782	Y	Y	MIN +.002	4 25	4.75	5	4.67	0 019	0.019	0 018	**0.0187**	0.0294	0.0293	0.0303	**0.0297**	0.0162	0 0154	0.0157	**0.0156**
B-30	71001789	Y	Y	MIN.+.002	4.25	4 5	4 5	4.42	0.019	0.017	0 019	**0.0183**	0 0284	0 0285	0 0307	**0.0292**	0 0128	0.0138	0 0131	**0.0132**
							TEST AVERAGE	**4.96**			TEST AVERAGE	**0.01752**			TEST AVERAGE	**0.02906**			TEST AVERAGE	0.0132
							SPEC = 4 0 TO 5.5 LBS.				SAAMI MIN.= .017				SPEC = .020 TO .025				SPEC = .006 TO 018	

COMMENTS FROM TECHNICIANS-
STOCK TAKE DOWN SCREWS ARE NOT TIGHTENED TO TORQUE SPEC, SOME ARE BARELY TIGHTENED AT ALL.
SCOPE RING TO MOUNT SCREWS ARE NOT TIGHT

Bore Sight.

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NOTE- MAR ON RECEIVER OUT OF BOX
NOTE- MISSING REAR TAKE DOWN SCREW OUT OF BOX, NOTHING IN BOX

NOTE- SAFETY IN FIRE POSITION OUT OF BOX

NOTE- MAR ON STOCK OUT OF BOX

Precision Products Machine & Fab., Inc.
P.O. BOX 1390/ 220 LATIMER ST.
Phone: (912)375-9169 HAZLEHURST, Ga. 31539 Fax:(912)375-9161

From: Tim Kauger
To: Matt Golemboski
Fax #: 1-270-856-4203
Subject: Quote #2257
Date: November 1, 2000
Pages: 2 pgs.,including cover sheet

Comments:

83

MF0701

Precision Products Machine & Fab., Inc.
P.O. BOX 1380/ 220 LATIMER ST.
Phone: (912)375-9159 HAZLEHURST, Ga. 31539 Fax:(912)375-9161

From: Tim Kauger
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Fax #: 1-270-856-4203
Subject: Quote #2257
Date: November 1, 2000
Pages: 2 pgs.,including cover sheet

Comments:

83

Confidential

Remington Arms Co.

Memo

To: 710 team

From: Joe Zajk

CC: 710Nov16

Date: 11/16/00

Re: M/710 Meeting

Action Items	Person Responsible	Completion Date
Engagement Screw Modifications • Delivery of new production parts	Mett	11/30
Assembly, Gallery, & Final inspection Procedures – Process Records Changes to area from T&P build experience • Right tooling • Space / designated areas for assembly storage • Order preset T-Handle Torque Wrenches for all takedown screws	Jerry / John / Calvin John / Jerry	ASAP ASAP
Serial Number Fixture • Design • Build	Joe	11/15
Resonant Inspection Machine • Cut P.O. by 11/17	Joe	11/17
Accuracy Device • Status of assembly	Kristan / Maintenance	11/16
Sight Hole Gage • Build Gage – prints out for quote	Joe	P.O. cut by 11/17
Bolt Stop • Status of delivery of parts to Rev. 39	Mett	11/167

Bolt Plug Insert • Status of Campbell's parts • Status of production parts from Anderson Screw	 Mett Mett	 11/17 11/17
Screen all guns build for tightness of takedown screws and that all screws are present	Production	ASAP once torque wrenches are in
710 Scope Mounting • Determine torque for tightening scope mount screws • Order appropriate torque wrench to tighten screws	 John John / Jerry	 ASAP ASAP

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PRECISION PRODUCTS

Technology At Work

Precision Products Machine & Fab., Inc.
P.O. BOX 1390 / 58 LATIMER ST.
HAZLEHURST, Ga. 31539
Phone: (912)376-9159 Fax: (912)376-9161

November 1, 2000

Remington Arms Company, Inc.
Mayfield Plant
22 Rifle Trail
PO Box 99
Hickory, KY 42051

Attn: Mr. Matt Golemboski

Re: Est. #2257

We offer our quote for labor and materials necessary to supply your requirement for Bolt Heads.

20,000 pcs.	Bolt Head, ref. dwg. #E 300338:	
	Partially machined to point of sample provided	$4.90 each
	Completely machined including undercuts	$6.15 each

Prices include labor, material, and packaging.

F.O.B. Hazlehurst, Ga.

Note: (1) SPC printouts to be provided with shipments according to Remington's requirements.

(2) As per conversation with Matt Golemboski, undercuts will be excluded from SPC data.

(3) Proper alternate methods for measuring undercuts will be later determined between Remington Arms Company and Precision Products Machine.

Submitted by:

PRECISION PRODUCTS MACHINE & FAB., INC.

Tim Kauger

Tim Kauger

M/710'2 w/latest rev. on bolt plug insert 11/1/00

Ser. no's

1	7100 1232
2	1470
3	1249
4	1463
5	1242
6	1238
7	1245
8	1212
9	1218
10	1460
11	1210
12	1230
13	1250
14	1480
15	1229
16	1191
17	1217
18	1489
19	1223
20	1336 - for Proofed

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11/2/00

TO: JOE
SHELLY
MATT
FROM: JERRY

THESE ARE THE 20 - M/710'2 WITH THE LATEST BOLT PLUG INSERT REV. "V"

SerialNbr	ModelID	Status	StatusDate	UpdatedBy
71001001	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001002	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001003	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001007	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001011	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001012	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001017	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001021	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001026	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001027	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001031	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001035	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001038	710	Scrapped	Sep 15 2000 9:34AM	hutsonlr
71001043	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001044	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001050	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001051	710	Scrapped	Sep 7 2000 1:32PM	hutsonlr
71001052	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001053	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001054	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001057	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001058	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001066	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001071	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001072	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001076	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001078	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001082	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001084	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001085	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001086	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001089	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001090	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001091	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001116	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001117	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001141	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001145	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001146	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001155	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001158	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001159	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001161	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001164	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001165	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001166	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001169	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001170	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001172	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001173	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001177	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001178	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001180	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001183	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001187	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001188	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001189	710	Scrapped	Sep 20 2000 11:21AM	hutsonlr
71001190	710	Scrapped	Sep 7 2000 1:32PM	hutsonlr
71001191	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr

71001192	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001195	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001197	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001198	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001199	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001200	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001201	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001203	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001204	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001206	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001248	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001255	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001257	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001259	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001260	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001263	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001264	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001266	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001270	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001271	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001272	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001273	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001274	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001276	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001281	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001283	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001284	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001285	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001287	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001291	710	Scrapped	Sep 15 2000 9:36AM	hutsonlr
71001293	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001294	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr
71001295	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001301	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001303	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001304	710	Scrapped	Sep 20 2000 11:20AM	hutsonlr
71001305	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001306	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001307	710	Scrapped	Sep 15 2000 9:36AM	hutsonlr
71001309	710	Scrapped	Sep 15 2000 9:34AM	hutsonlr
71001310	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001312	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001314	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001315	710	Scrapped	Sep 15 2000 9:36AM	hutsonlr
71001316	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001317	710	Scrapped	Sep 15 2000 9:36AM	hutsonlr
71001318	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001319	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001320	710	Scrapped	Sep 15 2000 9:36AM	hutsonlr
71001321	710	Scrapped	Sep 15 2000 9:34AM	hutsonlr
71001323	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001330	710	Scrapped	Sep 15 2000 9:35AM	hutsonlr
71001332	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001334	710	Scrapped	Sep 20 2000 11:22AM	hutsonlr
71001335	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001342	710	Scrapped	Oct 23 2000 4:18PM	hutsonlr
71001343	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001344	710	Scrapped	Sep 7 2000 1:32PM	hutsonlr
71001347	710	Scrapped	Oct 23 2000 4:19PM	hutsonlr
71001443	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001455	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr

71001456	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001458	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001487	710	Scrapped	Oct 17 2000 8:56AM	hutsonlr
71001498	710	Scrapped	Sep 20 2000 11:23AM	hutsonlr

(124 row(s) affected)

58 guns made thru 10/29

182

500
-190
320

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Golemboski, Matt R.

From: Cook, Todd D.
Sent: Wednesday, October 11, 2000 5:21 PM
To: Danner, Dale
Cc: Zajk, Joseph J; Golemboski, Matt R.
Subject: Draft of response on Tool House Question

Gentlemen:

This is probably the hardest plastics-related question of the year. Below is a review of experiences we have had here with mold making and molding vendors:

Hi-Tech Mold and Tool (Louisville, KY)
We have had very good experiences with Hi-Tech Mold and Tool, including engineering changes to the NAS stock that were very complicated. Hi-Tech concentrates on production molding, breaking even on tooling as part of their strategy. We have not done a mold project with them in over a year because they were unsuccessful in converting prototype work into production work. I have heard that business is softening and that they might be looking for projects to quote soon. They would want to do production molding as well. Since they have mold making and molding in-house at the same site, mold check out concerns are less complicated. They are short-staffed in engineering, but the founder and tool shop manager are both good tool makers with lots of experience and they have an engineer whose creativity is amazing at times. The only down side to in-house sampling is that they are near capacity on big presses which might lead to delays in sampling during mold development.

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Kellems and Coe Tool Corporation (New Albany, IN)
We have had good results from Kellems and Coe on mold development, including magazines and some NAS engineering changes. They have more engineering capability than Hi-Tech but concentrate on tooling with molding as a new side effort, so tooling prices are higher. Kellems would not have a press to sample a stock mold and sample check-out is a very important part of doing this right.

Collins Engineering (Dixon, KY)
Collins Engineering has done a lot of engineering changes on the NAS stock mold as well. They have the tool making and creativity to handle the job. However, Collins is staffed small on the engineering side, requiring them to do the work quickly would mean hiring additional contract help in mold engineering, which is available. Danny Marsh, the owner of Collins takes his responsibilities to deliver work that performs as promised seriously and will correct problems with no charge, but they are slower due to their size. Collins has Pioneer Plastics right next door who have molded al the NAS samples since October 1999 (there have been quite a few). Pioneer is a reasonable molder, but makes mostly commodity parts in commodity plastics. They do have fast mold setting ability, a number of good processing people, and competitive pricing to offer that might work well as part of development. I wouldn't rule them out as a possible molder, but we would be nearing their technical limits with these jobs.

Juno, Inc. (Plymouth, MN)
We have sourced several prototype molds from Juno, Inc. of Plymouth, MN with good success. They have the engineering resources and the molding capacity in Plymouth to complete this type of work as well as a molding plant near Hickory (Blytheville, AR). Their pricing was competitive on both molds and molding. Juno has not done a mold project for us in more than a year due to their inability to convert prototype mold and molding work into production mold building and molding work. Juno was very responsive on concerns about dimensions that were out of tolerance on parts and did many internal inspections of parts and tools on their own as part of the process to measure parts and correct the tool before the customer gets the parts.

Three Rivers Tool Corporation (Oneida Rostone, Oneida Molded Plastics, Phoenix, NY)
Three Rivers Tool, a vendor Ilion uses frequently, is capable of making the mold, but is also short on the engineering side--to the point that they initially said the NAS stock could not be molded. They built the simplified original stock mold successfully fairly quickly (8 weeks) and cheaply to avoid alienating a big customer. They have molding capability, but located in the next village over from the tool shop.

We do not have experience with any other mold shops in mold this size. Manufacturing has used the Hanson Group, now United Plastics Group, which is now one of the largest injection molders in the country. They have the engineering capability and the tool making ability to make the mold. However, they were not solid performers in mold prove out. They did, as far as I know, provide good delivery and addressed other issues in a timely manner. They were not nor will they ever be inexpensive.

I could speculate that several companies I have worked with in the past could handle this effort. Cascade Engineering from Grand Rapids, MI has the engineering, mold making, and molding capacity to handle a job like this. They specialize in engineering resins and newer processes, like gas-assist. They are good but not cheap. Responsiveness is very dependent upon work load as they are a large shop. I also spoke to their Sales/Mktg. manager briefly and they have a license for the M&C process. I will visit there when I am in Michigan on Research efforts Oct 23-25 and give you a little report on it. This is a $200 million company--no small potatoes.

Other shops I have heard about from past days in appliances who do bigger molds and molding: Triangle Tool, ABC, and Ivanhoe (although they do more multi-cavity molds than most). I will provide more research on this and try to identify some other shops for you to look at. My ultimate goal would be a list of three very competent moldmakers that you could shop for the best deal.

Comments welcome.

Todd

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From: Danner, Dale
Sent: Wednesday, October 11, 2000 11:25 AM
To: Cook, Todd D.
Cc: Zajk, Joseph J; Golemboski, Matt R
Subject: Tools House Identification

Todd,
Mayfield has asked us for three tool house recommendations capable of technically handling mold development consistent with the M/710 stock. Throw in recommendations as well for houses you believe can handle the more complicated NAS stock - if you have any. . . . . .

Copy Golemboski/Ziak and me with your recommendations. . . . .
Thks,
Dale

PAR 4 PLASTICS, INC.

(270) 965-9141
Fax (270) 965-9560
351 Industrial Drive
P.O. Box 385
Marion, KY 42064

10/10/00

FYI
APPROVED?
MM
10/12

Ms. Metty Morgan
Remington Arms Co. Inc.
22 Rifle Trail
Hickory, KY. 42051

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Dear Metty,

CONFIDENTIAL

Please issue a P.O. for the following work on the 710 Stock Mold, which has been completed at "Remingtons" request.

#1.	Mold Tech,	Bench and blend	$ 3,000.00
		Triboccoat: strip and recoat	$ 3,525.00
		Texture repair and satinizing	$ 2,300.00
		Shipping, two trips	$ 750.00
#2.	Quality Tooling,	Reblue parting lines, repair waterlines	$ 1,925.00
		Total	$ 11,500.00

Sincerely
PAR 4 PLASTICS, INC.

Sam Todd
Dir. Sales/Marketing

MF0712

FYI
MM
9/25

9/25/00

TO: MR. LARRY KNIGHT
FROM: MS. METTY MORGAN
RE: NEW CARTON PART #'S

LARRY, BELOW ARE THE NEW PART NUMBERS THAT WE WILL BE USING FOR THE NEW 710 CARTON:

CARTON ASSEMBLY	F305487
FLAT CARTON FROM ORPACK	F300504
FOAM BED FROM TUSCARORA	F300805

YOU WILL RECEIVE APPROXIMATELY 5000 BEDS AT A TIME, AND ABOUT 10,000 (36 PALLETS OF 300) OF THE CORRUGATED FLATS AT A TIME.

ASSEMBLY WILL BE JUST LIKE WHAT YOU ARE DOING NOW FOR THE 597. FOLD THE BOX, INSERT BED AND DOCUMENT ENVELOPE ASSEMBLY, DELIVER TO THE PLANT, TWICE A WEEK.

IF YOU HAVE ANY QUESTIONS, GIVE ME A CALL AT 856-4204

MM

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Tuscarora Incorporated
1479 Parker Road
Conyers, GA 30094
800 347-3626
770 922-3513
Fax 770 922-1471

TUSCARORA

Copy FYI
Revised Negotiated Decrease to Will Cut Today
MM 9/15

REMINGTON ARMS
ATTN: METTE MORGAN
22 RIFLE TRAIL
HICKORY, KY 42051

E-Mail:
Phone: 270-256-4204
Fax: 270-856-3233

cc: MATTHEW VASSAR
vassar@tuscarora.com

WE ARE PLEASED TO SUBMIT THE FOLLOWING QUOTATION:			QUOTATION NO. 146-00-0799-B		
ANTICIPATED PRODUCTION PLANT Lewisburg, TN			FOB Lewisburg, TN		
DATE 09/15/00	INQUIRY NO.	PRICE PER SET		TERMS Net 30 Days	
PART NO., DRAWING NO. OR DESCRIPTION		QUANTITY	PRICE	PER	
710 COMBO PACK MOLDED PACK - BASE & LID		30,000/YR was	$1.805 Was 1.90 19,216.00	SET	
TOOLING CHARGE			$17,716.00		
NUMBER OF CAVITIES			2		
WEEKLY PRODUCTION					

CONFIDENTIAL

REMARKS:
1. MATERIAL: 1.5# EPS

TUSCARORA INCORPORATED

TOOLING DELIVERY: (6-8) WEEKS AFTER RECEIPT OF ORDER AND APPROVED DRAWINGS.

QUOTATION SUBJECT TO CONDITIONS ON REVERSE SIDE.

By *Chris Disney* SR

Chris Disney 1-800-245-3034, Ext. 875
Account Manager

Form #311
Issue Date: November 17, 1998
Revision Date: November 19, 1999

MF0714

7/3/00

Remington Follower

	R.S.M. - Parts		R.T.P. - Parts	
Weights				
	Cav. #1 = 4.5 grs.		#1 = 5.5	
	Cav. #2 = 4.6 grs.		2 = 5.5	
Dimention #	Cav. #1	#2	Cav. #1	#2
1.	1.022 O.K	1.025 O.K.	1.028 (+.003)	1.030 (+.005)
2.	.834 O.K.	.837 O.K	.837 O.K.	.839 O.K.
3.	3.380 O.K	3.378 O.K.	3.383 O.K.	3.383 O.K.
4.	.264 (+.003)	.263 (.002)	.268 O.K.	.266 O.K.
5.	1.252 O.K.	1.249 O.K.	1.259 (+.004)	1.255 O.K.
6.	.146 O.K.	.146 O.K.	.148 O.K.	.146 O.K.

#	P.S.M. #1	P.S.M. #2	R.T.P. #1	R.T.P. #2
7.	2.774 O.K.	2.775 O.K.	2.779 O.K.	2.780 O.K.
8.	.320 (-.002)	.318 (-.004)	.319 (-.003)	.320 (-.002)
9.	.757 O.K.	.756 O.K.	.757 O.K.	.757 O.K.
10.	.676 (-.004)	.675 (-.005)	.676 (-.004)	.678 (-.002)
11.	.512 (-.008)	.513 (-.007)	.513 (-.007)	.513 (-.007)
12.	.051 O.K.	.052 O.K.	.051 O.K.	.052 O.K.
13.	.053 O.K.	.049 O.K.	.047 O.K.	.047 O.K.
14.	.203 O.K.	.205 O.K.	.207 (+.002)	.205 O.K.