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MF1155

STOCK
E-300437

CONFIDENTIAL 83

MF1156

Zajk, Joseph J

From: Zajk, Joseph J
Sent: Friday, November 12, 1999 12:46 PM
To: Cook, Todd D.
Subject: 710 Mold Core Issue

Todd,

Have you gotten anywhere with resolving your mold core issue you discussed with me earlier this week? Just curious.

Joe Z.

CONFIDENTIAL 83

Zajk, Joseph J

From: Cook, Todd D.
Sent: Monday, November 15, 1999 8:03 AM
To: Zajk, Joseph J
Subject: RE: 710 Mold Core Issue

Joe,

I need to give you a more formal update, but NO. I have not resolved it. I have a path forward that the mold maker can live with, but I can't. There's just gotta be a pony in there somewhere.

More soon.

Todd

From: Zajk, Joseph J
Sent: Friday, November 12, 1999 1:41 PM
To: Cook, Todd D.
Subject: 710 Mold Core Issue

Todd,

Have you gotten anywhere with resolving your mold core issue you discussed with me earlier this week? Just curious.

Joe Z.

CONFIDENTIAL 83

Zajk, Joseph J

From: Zajk, Joseph J
Sent: Tuesday, November 23, 1999 3:09 PM
To: Cook, Todd D.
Subject: 710 Stock Core Issues
Importance: High

Todd,

I was wondering if you had any updated news regarding the 710 stock mold core issue. We're approaching a critical decision time, as it looks like we'll placing the P.O. for the stock vendor within the next 2-3 weeks, and we need to have this design issue resolved before then. The stock is going to constrain the whole 710 T&P timeline, so we need to order the tool as soon as possible after the final project approval comes in. I just want you to be aware of the time constraints now that I know what they are. Please let me know where we stand at your earliest convenience. Also, if you've narrowed your various options down to a select few, I'd like to know what they are.

Please let me know if I can be of any assistance in this matter.

Thanks,

Joe Z.

CONFIDENTIAL 83

Zajk, Joseph J

From: Cook, Todd D.
Sent: Friday, December 03, 1999 3:54 PM
To: Zajk, Joseph J
Cc: Diaz, Danny; Keeney, Mike
Subject: Model 710 Core Issues

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Todd

Zajk, Joseph J

From: Zajk, Joseph J
Sent: Monday, December 06, 1999 7:01 PM
To: Cook, Todd D.
Cc: Diaz, Danny; Keeney, Mike; Golemboski, Matt R.
Subject: RE: Model 710 Core Issues

Importance: High

Todd,

Here's a quick summary about what we discussed today and the paths we're pursuing:

- Options 1 & 2 are not viable options
- We will investigate options 3 & 4; in particular we need to see if a 700 grip cap, modified to fit in a 710, will still satisfy the requirements for the 700 stock

We are going to do some experimenting and investigation into the option 3 grip cap modification to see if its viable. If so, we will then need to weight the cost of modifying an existing tool vs. building a whole new one. This will require input from Mayfield, E'town and Ilion as to its viability. If you have any insight as to whether this is a good idea, please let me know.

In conclusion, as it stands now, we are only pursuing those options that give us the optimal coring for the 710 stock, with an emphasis on trying to find a modified 700 grip cap geometry that satisfies both 700 & 710 stocks in order to limit the amount of unplanned capital required. Any info on Ilion's grip cap/stock assembly process that you can offer will be of great help, as Ilion's knowledge base might be temporarily somewhat degraded now that Jeff Swanson is no longer with Remington. We will be attempting to gather as much information as we can from Ilion as well.

Joe Z.

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Cc: Diaz, Danny; Keeney, Mike
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Todd

Zajk, Joseph J

From: Cook, Todd D.
Sent: Tuesday, December 07, 1999 8:03 AM
To: Zajk, Joseph J
Subject: RE: Model 710 Core Issues

Joe,

Sounds like you have a good direction. I noticed the tooling cost being an issue and brought it up to the toolmaker that Par 4 uses for some of its work (Quality Tooling). Gary Hilliard, their design engineer, seemed to think that a core set that could be used some of the time when the 710 caps are molded in the 700 cap mold would be cheap (a few thousand at most). It may pay for us to get a tool print on that mold to Gary (and other mold makers -- TRT, Hi-Tech) and have them quote making a removable core set just for the 710 to fit that mold. That way we could make parts for both with the same mold. It may be a little difficult to find all the prints that you need, but many toolmakers I have worked with can quote something like that from some good photographs of the mold and a drawing of the new core. I can supply the drawing of the new part (and the old one). Let me know what you think.

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From: Zajk, Joseph J
Sent: Monday, December 06, 1999 7:54 PM
To: Cook, Todd D.
Cc: Diaz, Danny; Keeney, Mike; Golemboski, Matt R.
Subject: RE: Model 710 Core Issues
Importance: High

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MF1162

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Todd

CONFIDENTIAL 83

Zajk, Joseph J

From: Zajk, Joseph J
Sent: Tuesday, December 07, 1999 9:35 AM
To: Cook, Todd D.
Subject: RE: Model 710 Core Issues

Let's look in to that and see how much it costs. If you can round up the prints and talk with some of the toolmakers about it, I'd appreciate it.

Joe

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Sent: Tuesday, December 07, 1999 8:03 AM
To: Zajk, Joseph J
Subject: RE: Model 710 Core Issues

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To: Cook, Todd D.
Cc: Diaz, Danny; Keeney, Mike; Golemboski, Matt R.
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Todd

83

CONFIDENTIAL

Zajk, Joseph J

From: Cook, Todd D.
Sent: Tuesday, December 07, 1999 1:04 PM
To: Zajk, Joseph J
Subject: RE: Model 710 Core Issues

Joe,

Will do. I'm on it right now. I will have some info for you this afternoon. We may be better off than I thought (more on that when I can)

Todd

From: Zajk, Joseph J
Sent: Tuesday, December 07, 1999 10:29 AM
To: Cook, Todd D.
Subject: RE: Model 710 Core Issues

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Todd



Date: 12/22/99

No. of pages including cover sheet: 3

Remington Arms Co., Inc.
R&D Technical Center
315 W. Ring Road
Elizabethtown, KY 42701

Phone: 270-769-7600
Fax: 270-737-9576

Please note our new area code.

TO:

Joe Zajk

From:

Todd Cook

Phone

Fax Phone

CC:

Phone

Fax Phone

REMARKS:

☐ Urgent

☐ For your review

☐ Reply ASAP

☐ Please comment

Joe,
A quick sketch to show
you the area we changed
to fix the support/thin steel
issue. If you are not
thoroughly confused after you
read this, call me. I'll see
what I can do.

Todd

**The information contained in this FAX is confidential and/or privileged. The FAX is intended to be reviewed initially by only the individual named above. If the reader of this transmittal page is not the intended recipient or a representative, you are hereby notified that any review, dissemination or copying of this FAX or information contained herein is prohibited. If you have received this FAX in error, please immediately notify the sender or telephone and return this FAX to the sender at the above address. Thank you.

MF1168

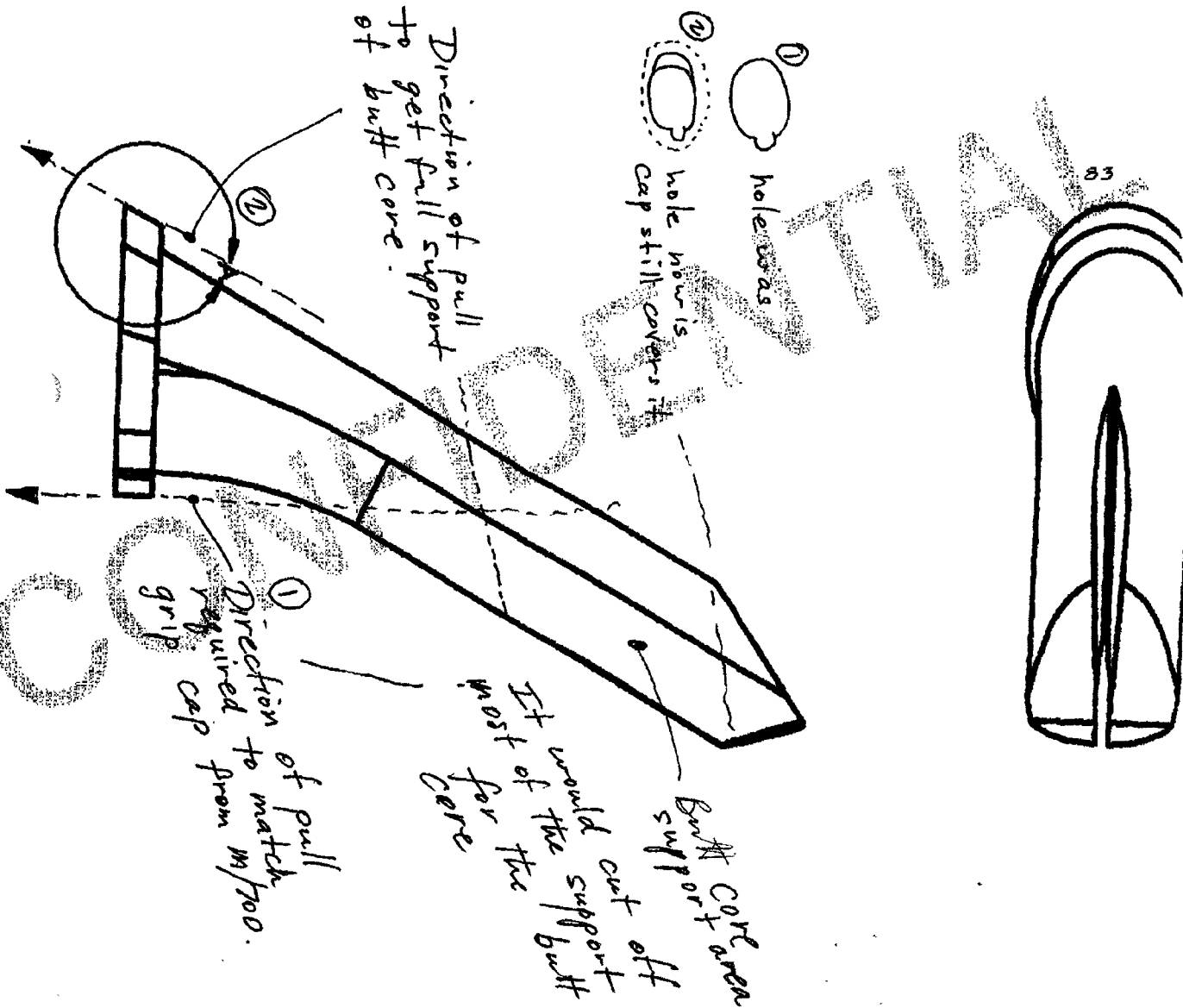
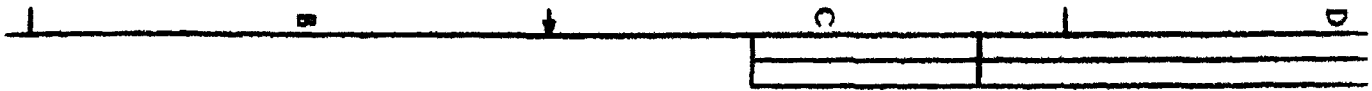


If we went with pull direction to match W/100 gph cap, the Cove would look like this.

here the butt
core is supported
to the end.

leaving of
a lot of
uncompacted
thin the
over.

[illegible]



MF1170

Zajk, Joseph J

From: Cook, Todd D.
Sent: Wednesday, December 22, 1999 4:04 PM
To: Zajk, Joseph J
Subject: gripcore.zip -- Contains the IGES file of the core from CADD55 + a *.dwg file for AutoCAD



gripcore

CONFIDENTIAL 83

Zajk, Joseph J

From: Zajk, Joseph J
Sent: Wednesday, December 22, 1999 4:25 PM
To: Cook, Todd D.
Subject: IGES Files

I can read the dwg file, no problem. For whatever reason, AutoCAD 14 won't convert the IGES file, but that may be something I'm doing. If worst comes to worst, I might ask you for a DXF file of the core.

Have a Merry Christmas.

Joe Z.

CONFIDENTIAL 83

Zajk, Joseph J

From: Zajk, Joseph J
Sent: Friday, January 07, 2000 7:29 AM
To: Cook, Todd D.
Subject: Grip Core File

Todd,

Could you send the 710 grip core file to Par 4 for me (if you haven't already)?

Thanks,

Joe Z.

CONFIDENTIAL 83

Zajk, Joseph J

From: Cook, Todd D.
Sent: Monday, January 10, 2000 7:09 AM
To: Zajk, Joseph J
Subject: RE: Grip Core File

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Zajk, Joseph J

From: Cook, Todd D.
Sent: Tuesday, January 11, 2000 2:35 PM
To: Zajk, Joseph J
Cc: Par 4 Plastics (Sam Todd); Keeney, Mike
Subject: Update on M/710

Joe,

Mike Keeney let me know just a few minutes ago that he found some areas of the models for the M/710 stock that need attention. They are minor things, but I wanted to make sure you were aware of what is happening.

Areas Mike was concerned about:

1. Middle take down screw needs additional clearance for the head (made it ~0.015" deeper)
2. Front takedown hole needs additional head clearance (made it ~0.015" deeper)
3. Made magazine bottom clearance on stock 0.015" longer in the front.
4. Added 0.025" clearance to the front wall of the magazine well near the edges of the opening for the magazine latch well.

These changes are in new IGES files and I will be forwarding them soon to both Quality Tooling's Gary Hillyard and to you, Joe. As far as I know, everything else is good for fit and Mike has released these files to be the final version for production. Gary indicated that he is at a good point to incorporate these details as he has finished the mold base design and is ready to start in on the cavity and core detail.

Be looking for your copies of the files. Let me know if you have questions about the files.

Todd

CONFIDENTIAL

Zajk, Joseph J

From: Zajk, Joseph J
Sent: Tuesday, January 11, 2000 2:54 PM
To: Cook, Todd D.
Subject: RE: Update on M/710

Thanks for the update. I'll be looking for them.

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From: Cook, Todd D.
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Zajk, Joseph J

From: Zajk, Joseph J
Sent: Saturday, January 15, 2000 3:26 PM
To: Cook, Todd D.
Cc: Keeney, Mike; Golemboski, Matt R.
Subject: 710 Stock Issues

Importance: High

Sam Todd talked with me late yesterday afternoon concerning a couple of issues with the 710 stock. They are:

- **The changes in the magazine box area:** According to Sam Todd, Quality Tool still needs the updated electronic files for the changes outlined last week by you and Mike. They need the updated IGES files no later than the end of Tuesday in order to keep on track.
- **Magazine Latch Pin Retainer Core:** According to Sam, the folks at Quality Tool believe there will be a problem with the undercut or "wrap" that retains the mag latch pin as its currently modeled. They think there's too much undercut and they will deform material when the core pulls. Sam left me a drawing from Quality Tool that sort of shows what they mean. I'll fax it to you so you can take a look at it.

Both of these issues have to be addressed promptly in order to make sure the tool build progress stays on track. Please find out what you can as quickly as possible. Let me know if I can be of any assistance.

Joe Z.

CONFIDENTIAL

Remington Arms Company, Inc.
Mayfield Plant
22 Rifle Trail
P.O. Box 99
Hickory, KY 42051
Phone: (270) 856-4200
Fax: (270) 856-3233

Remington.**Fax****FAXED**
1-15-00

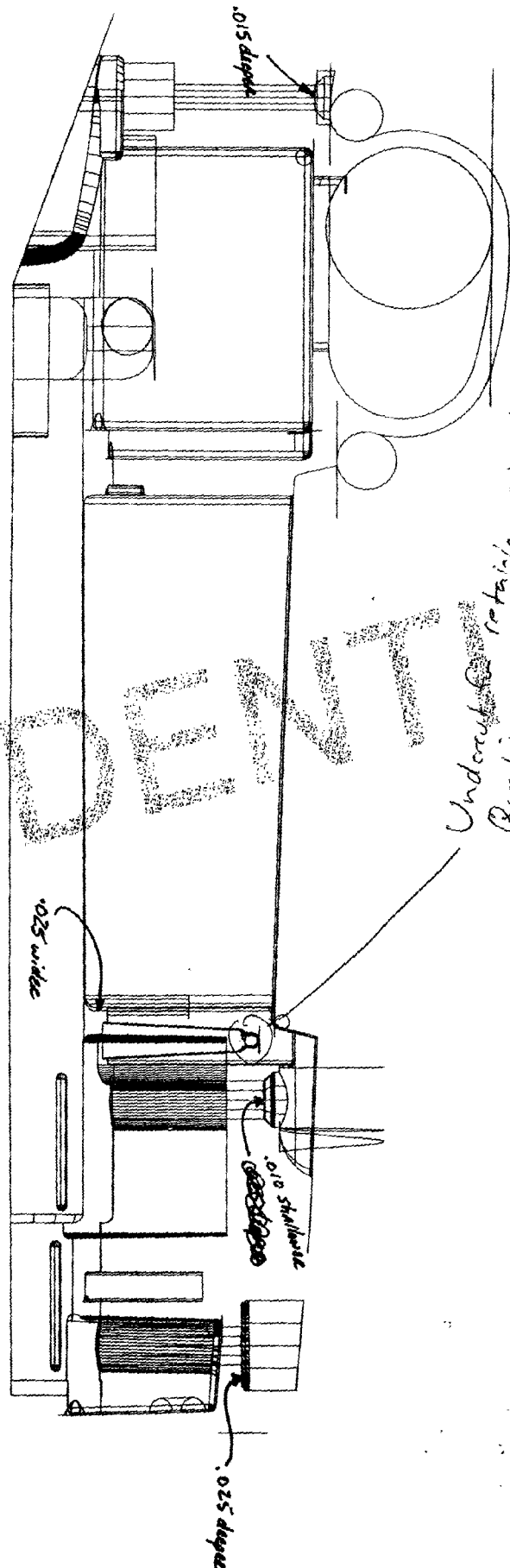
To: Todd Cook From: Joe Zijk
Fax: _____ Pages: 2
Phone: _____ Date: 1/15/00
Re: Core Issues - 710 Stock CC: _____
☒ Urgent ☒ For Review ☐ Please Comment ☒ Please Reply ☐ Please Recycle

● Comments:

Here's the drawing I referenced
in my e-mail. I don't know
how well it will come out, so I
added a sketch on the bottom that I
hope will make things clear.

Joe Z.

MF1179



CONFIDENTIAL

Zajk, Joseph J

From: Cook, Todd D.
Sent: Monday, January 17, 2000 7:04 AM
To: Zajk, Joseph J
Subject: RE: 710 Stock Issues

Joe,

The fax came through fine. I will get with Mike right away and we will contact you about it.

Todd

From: Zajk, Joseph J
Sent: Saturday, January 15, 2000 4:20 PM
To: Cook, Todd D.
Cc: Keeney, Mike; Golemboski, Matt R.
Subject: 710 Stock Issues
Importance: High

Sam Todd talked with me late yesterday afternoon concerning a couple of issues with the 710 stock. They are ⁸³

- **The changes in the magazine box area:** According to Sam Todd, Quality Tool still needs the updated electronic files for the changes outlined last week by you and Mike. They need the updated IGES files no later than the end of Tuesday in order to keep on track.
- **Magazine Latch Pin Retainer Core:** According to Sam, the folks at Quality Tool believe there will be a problem with the undercut or "wrap" that retains the mag latch pin as its currently modeled. They think there's too much undercut and they will deform material when the core pulls. Sam left me a drawing from Quality Tool that sort of shows what they mean. I'll fax it to you so you can take a look at it.

Both of these issues have to be addressed promptly in order to make sure the tool build progress stays on track. Please find out what you can as quickly as possible. Let me know if I can be of any assistance.

Joe Z.

Zajk, Joseph J

From: Cook, Todd D.
Sent: Monday, January 17, 2000 10:01 AM
To: Golemboski, Matt R.
Cc: Keeney, Mike; Zajk, Joseph J
Subject: RE: M/710 Stock Issues

Matt,

Thanks for the note. We will see you Wednesday.

The CAD Group and I are working on a request from Quality Tooling to get a trimmed surface model of the complete stock--if it's easy, it will be done by then. If not, we may be working on it until the end of the week. They did not have to have the trimmed surface model, so it's a "nice to have" at this point, but we are working on it with an eye on your future need for the data (ala DeRobertis, etc on M/597) Apparently, Quality is okay with all the other dimensions on the new models we sent, except for the under cut on the magazine latch pivot. There will need to be some undercut, but we will have to resolve with them, Mike, and you how much undercut. At this point, my opinion is that 0.007 - 0.010" per side will pull without damage. This is much less than what's called for in the CAD model. It may not be enough, if the part has to stay there for the life of the product, though. More Wednesday.

Todd

From: Golemboski, Matt R.
Sent: Monday, January 17, 2000 10:25 AM
To: Cook, Todd D.
Subject: keeney

Keeney is not going here today. I will be in E'town on Wednesday to discuss design issues on 710.

Matt Golemboski

CONFIDENTIAL



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

FAX

Date: 1/11/08

Number of pages including cover sheet: 2

To:

Mr. Joe Zajk
Remington Arms Co.

Phone:

Fax phone: 1-270-956-3233

From:

SAM TODD

Phone: (502) 965-9141

Fax phone: (502) 965-9560

REMARKS:

☐ Urgent

☒ For your review

☐ Reply ASAP

☐ Please comment

Sam
Todd

MF1183

**PAR 4 PLASTICS, INC.**(502) 965-9141
Fax (502) 965-9560Princeton Road
P.O. Box 385
Marion, KY 42064**PROGRESS REPORT DATA**TO Mr. Joe Zajk / Remington Arms, Co.DATE 1/11/00P.O. NUMBER MD17435PROJECT 710

PART NO. _____

PART NAME StockDESCRIPTION 1 cavity Injection MoldDESIGN COMP. DATE 2/14/00% DESIGN COMP. 45%

EST. DESIGN REVIEW _____

CONSTRUCTION COMP. DATE 4/10/00% CONSTRUCTION COMP. 10%

EST. MOLD TRYOUT DATE _____

NOTES!

- * All Construction Materials Have Been Order
- * Quality Tooling Received Most Recent Design
- * Revision Dated 1/15/00.

BEST REGARDS![Signature]

CC _____

MF1184

Quality Tooling, Inc.

Mold Construction Progress Report

Customer: Par4 Plastics

QT Job#	00-101	Part Number:	710-Stock
Attention:	Sam Todd	Part Name:	Stock
Current Date:	1/14/00	Delivery Date:	4/10/00
Start Date:	12/6/99	Week Number:	6

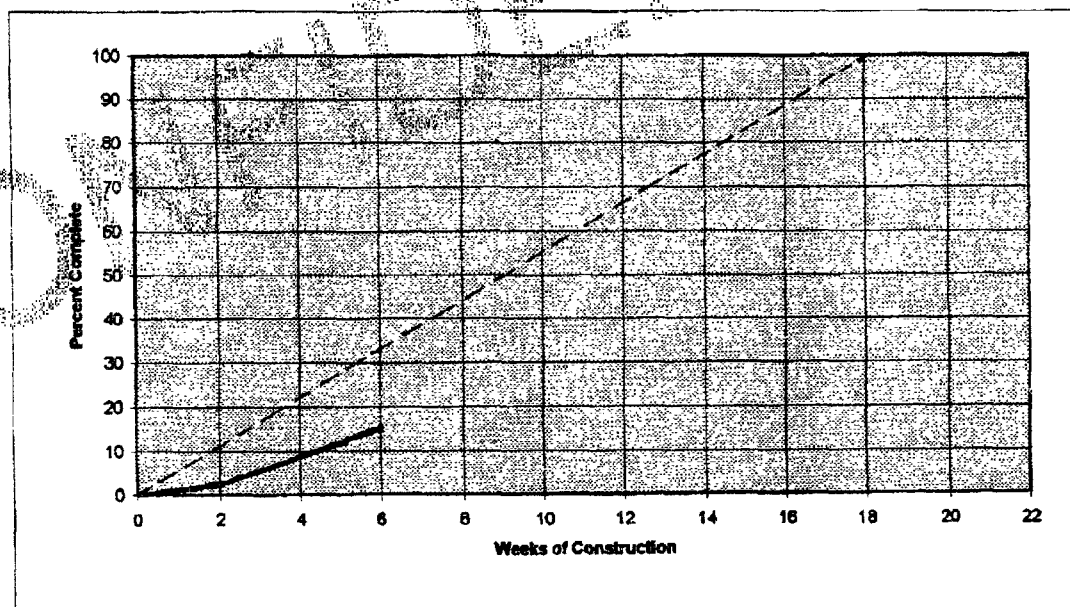
Process	% Breakdown	% Complete	% Process Complete
Engineering	10	60	6
Mat'l Ordered	5	75	3.75
Core Work	30	5	1.5
Cavity Work	30	5	1.5
Mold Base Work	10	15	1.5
Fit and Assy.	5	0	0
Polishing	10	0	0

Total Percentage of Mold Construction Complete

14.25

Quality Tooling
Mold Construction Progress

— Actual Progress
--- Projected Progress



Notes:

MF1185

No change to tech cast

1/18/00

Par 4 Mtg.

Quality
Stuck

Collins Eng.

Late
May Bex Botte
Follow

- CAD data for Late, Botte & Follow

Bottom



Distance for can lifter - can
you make distance smaller if
possible - ~~can~~ every bit helps

- Uniform radius all around on bottom so
shutoff between top & bottom halves of core
- worked above for clean parting line.

- Rear undercut - thin wall

- Insert area can't be cooled - won't heat part
but may increase cycle time.

MF1186



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, Remington Arms Co.

DATE 1/25/00

P.O. NUMBER MO17435

PROJECT 710

PART NO. _____

PART NAME Stock

DESCRIPTION 1 Cavity Inj. Mold

DESIGN COMP. DATE 2/14/00

% DESIGN COMP. 75%

EST. DESIGN REVIEW 2/15/00

CONSTRUCTION COMP. DATE 4/10/00

% CONSTRUCTION COMP. 11%

EST. MOLD TRYOUT DATE 4/13/00

NOTES! @ Quality Tooling

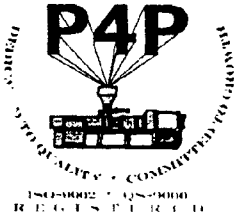
- * Just received latest revisions of
- * The Stock File on 1/20/00. At this
- * point, everything looks O.K.

BEST REGARDS!

Sam Zell

CC Charlie Nicklin
Mary Kilgus

MF1187



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, Remington Arms Co.

DATE 2/1/00

P.O. NUMBER M017435

PROJECT 710

PART NO. _____

PART NAME Stock

DESCRIPTION 1 Cavity Injection Mold

DESIGN COMP. DATE 2/14/00

% DESIGN COMP. 82%

EST. DESIGN REVIEW 2/15/00

CONSTRUCTION COMP. DATE 4/10/00

% CONSTRUCTION COMP. 14%

EST. MOLD TRYOUT DATE 4/13/00

NOTES!

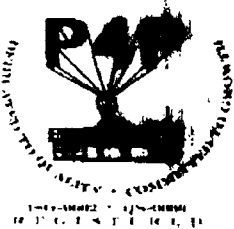
- * Remington Tech Center Adding Detail To
- * the Draft for w/o 1/28/00. Quality Tooling
- * Received Changes 1/31/00. I will Review With
- Remington Mayfield 2/1/00.

BEST REGARDS!

J. Todd

CC Charlie Higgin
Gary Killyard

MF1188

**PAR 4 PLASTICS, INC.****PROGRESS REPORT DATA**(502) 965-9141
Fax (502) 965-9560Princeton Road
P.O. Box 385
Marion, KY 42064TO Mr. Joe Zajk, "Remington Arms"DATE 2/15/00P.O. NUMBER M017435PROJECT 710

PART NO. _____

PART NAME StockDESCRIPTION 1 Cavity Injection Mold

DESIGN COMP. DATE _____

% DESIGN COMP. 88%

EST. DESIGN REVIEW _____

CONSTRUCTION COMP. DATE 4/10/00% CONSTRUCTION COMP. 22%EST. MOLD TRYOUT DATE 4/13/00**NOTES!**

- * Analyzed And Reviewed Butt Core Run Today.
- * Mold Base Construction Has Been Restarted.
- * All Materials For Construction Have Arrived.

BEST REGARDS!Tom ToddCC Charlie Hicklin
Gary Hildyard

MF1189



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"

DATE 2/22/00

P.D. NUMBER M017435

PROJECT 710

PART NO. _____

PART NAME Stock

DESCRIPTION 1-cavity Injection Mold

DESIGN COMP. DATE 2/25/00

% DESIGN COMP. 92%

EST. DESIGN REVIEW _____

CONSTRUCTION COMP. DATE 4/10/00

% CONSTRUCTION COMP. 29%

EST. MOLD TRYOUT DATE 4/13/00

NOTES!

- * Program Work Has Started On The Core Block
- * Core Construction Is 40% Comp.
- * _____

BEST REGARDS!

Tam T. Ald

CO Charlie Kishlin
Gary Kilgus

MF1190



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"

DATE 2/29/00

P.O. NUMBER M 01743-5

PROJECT 710

PART NO. _____

PART NAME Stack

DESCRIPTION 1-Cavity Injection Mold

DESIGN COMP. DATE 2/25/00

% DESIGN COMP. 100%

EST. DESIGN REVIEW _____

CONSTRUCTION COMP. DATE 4/10/00

% CONSTRUCTION COMP. 26%

EST. MOLD TRYOUT DATE 4/13/00

NOTES!

- * _____
- * _____
- * _____

BEST REGARDS!

Todd

cc Charlie Highlin
Gary Hilgard

MF1191

Quality Tooling, Inc.

Mold Construction Progress Report

Customer: Par4 Plastics

Job#	00-101	Part Number:	710-Stock
Attention:	Sam Todd	Part Name:	Stock
Current Date:	3/10/00	Delivery Date:	4/10/00
Start Date:	12/8/99	Week Number:	14

Process	% Breakdown	% Complete	% Process Complete
Designing	10	100	10
Design Review	5	100	5
Cut Work	30	45	13.5
Drill Work	30	50	15
Machine Work	10	80	8
Final Assy.	5	0	0
Painting	10	0	0

Total Percentage of Mold Construction Complete

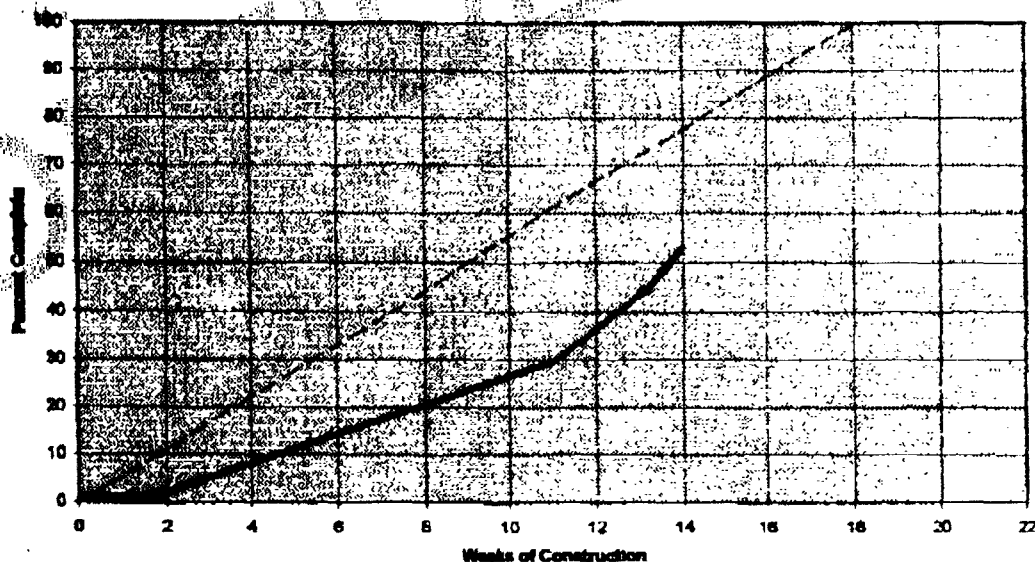
31.8

Quality Tooling

Mold Construction Progress

Actual Progress

Projected Progress



MF1192



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"

DATE 3/13/00

P.O. NUMBER M017435

PROJECT 710

PART NO. _____

PART NAME Stock

DESCRIPTION 1- Cavity Injection Mold

DESIGN COMP. DATE 3/25/00

% DESIGN COMP. 100%

EST. DESIGN REVIEW _____

CONSTRUCTION COMP. DATE 4/10/00

% CONSTRUCTION COMP. 36.5%

EST. MOLD TRYOUT DATE 4/13/00

NOTES:

- * _____
- * _____
- * _____

BEST REGARDS!

Tom Todd

CC Charlie Highlin
Greg Kihlman

MF1193

MAGAZINE
BOTTOM
D-300365

CONFIDENTIAL 83

MF1194



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, Remington Arms Co.

DATE 1/25/00

P.O. NUMBER MO17466

PROJECT 710

PART NO. D-300065 & D-300364

PART NAME Magazine Box Bottom & Follower

DESCRIPTION 2 + 2 Family Mold

DESIGN COMP. DATE 2/24/00

% DESIGN COMP. Start - w/o 1/24/00.

EST. DESIGN REVIEW 2/25/00

CONSTRUCTION COMP. DATE 4/19/00

% CONSTRUCTION COMP.

EST. MOLD TRYOUT DATE 4/21/00

NOTES!

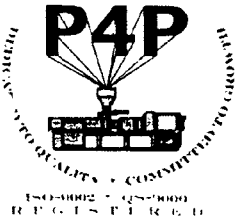
- * Workable CAD Data Received By Collins
- * Engineering On 1/19/00.
- *

BEST REGARDS!

Sam Todd

cc Charlie Kucklin
Brad Shouder

MF1195



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, Remington Arms Co.

DATE 2/1/00

P.O. NUMBER MO 17466

PROJECT 710

PART NO. D-30065 & D-300364

PART NAME Mag. Box Bottom & Follower

DESCRIPTION 2 + 3 Family Mold

DESIGN COMP. DATE 2/24/00

% DESIGN COMP. 5%

EST. DESIGN REVIEW 2/25/00

CONSTRUCTION COMP. DATE 4/19/00

% CONSTRUCTION COMP. 0

EST. MOLD TRYOUT DATE 4/21/00

NOTES!

* Initial Design Work In Process.
*
*

BEST REGARDS!

Sam Todd

CC Charlie Hicklin
Brad Shouder

MF1196

3.



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"

DATE 2/15/00

P.O. NUMBER MO 17466

PROJECT 710

PART NO. A-30065 & A-300364

PART NAME Mag. Box Bottom & Follower

DESCRIPTION 2+2 Family Mold

DESIGN COMP. DATE 2/24/00

% DESIGN COMP. 75%

EST. DESIGN REVIEW 2/25/00

CONSTRUCTION COMP. DATE 4/19/00

% CONSTRUCTION COMP. 87%

EST. MOLD TRYOUT DATE 4/21/00

NOTES:

- * _____
- * _____
- * _____

BEST REGARDS!

Todd

CC Charlie Kilduff
Road Shoulder

MF1197



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, "Remington Arms"

DATE 2/22/00

P.O. NUMBER M017466

PROJECT 710

PART NO. D-30065 & D-300364

PART NAME Mag. Box Bottom & Follow-up

DESCRIPTION 2 + 2 Family Mold.

DESIGN COMP. DATE 2/24/00

% DESIGN COMP. 100%

EST. DESIGN REVIEW

CONSTRUCTION COMP. DATE 4/19/00

% CONSTRUCTION COMP. 100%

EST. MOLD TRYOUT DATE 4/21/00

NOTES:

- * _____
- * _____
- * _____

BEST REGARDS!

Tom Todd

cc Charlie Highlin
Bob Sheldons

MF1198



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"

DATE 2/29/00

P.O. NUMBER AM 017466

PROJECT 710

PART NO. A-30065 & A-300364

PART NAME Mag. Box Bottom & Follower

DESCRIPTION 2 + 2 Family Mold

DESIGN COMP. DATE 2/24/00

% DESIGN COMP. 100%

EST. DESIGN REVIEW

CONSTRUCTION COMP. DATE 4/19/00

% CONSTRUCTION COMP. 100%

EST. MOLD TRYOUT DATE 4/21/00

NOTES:

- * _____
- * _____
- * _____

BEST REGARDS!

Tom Todd

CC Charlie Hicklin
Bob Shoulters

MF1199



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, "Remington Arms"

DATE 3/13/00

P.O. NUMBER MD17466

PROJECT 710

PART NO. D-30065 & D-300364

PART NAME Mag. Box Bottom & Follower

DESCRIPTION 2 + 2 Family Mold

DESIGN COMP. DATE 2/24/00

% DESIGN COMP. 100%

EST. DESIGN REVIEW

CONSTRUCTION COMP. DATE 4/19/00

% CONSTRUCTION COMP. 60%

EST. MOLD TRYOUT DATE 4/21/00

NOTES:

- * _____
- * _____
- * _____

BEST REGARDS!

Karen Todd

cc Charlie Kipling
Paul Shelders

MF1200

MAGAZINE
FOLLOWER
D-300364

83

CONFIDENTIAL

MF1201

CONFIDENTIAL

MAGAZINE LATCH
C-300362

83

MF1202



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, Remington Arms Co.

DATE 1/25/00

P.O. NUMBER M017465

PROJECT 710

PART NO. C-300362

PART NAME MAGAZINE LATCH

DESCRIPTION 2 cavity Injection Mold

DESIGN COMP. DATE 3/2/00

% DESIGN COMP. started

EST. DESIGN REVIEW 3/3/00

CONSTRUCTION COMP. DATE 4/24/00

% CONSTRUCTION COMP.

EST. MOLD TRYOUT DATE 4/26/00

NOTES!

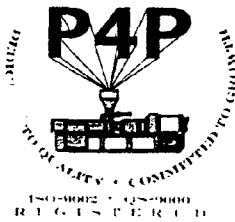
- * Workable CAD Data Received By Collins
- * Engineering on 1/19/00.
- *

BEST REGARDS!

Tom Todd

CC Charlie Nicholson
Paul Shoulters

MF1203



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, Remington Arms Co.

DATE 2/1/00

P.O. NUMBER MO 17465

PROJECT 710

PART NO. C-300362

PART NAME Latch

DESCRIPTION 2 Cavity Mold

DESIGN COMP. DATE 3/2/00

% DESIGN COMP. 50%

EST. DESIGN REVIEW 3/3/00

CONSTRUCTION COMP. DATE 4/24/00

% CONSTRUCTION COMP. 0

EST. MOLD TRYOUT DATE 4/26/00

NOTES!

- * Initial Design Work Started
- * Waiting On Word From Collins Esq. About -
- * Putting Fire rods In The Mold.

BEST REGARDS!

Sam Todd

CC Charlie Hicklin
Brad Shoulders

MF1204

4.



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"DATE 2/15/00P.O. NUMBER M017465PROJECT 710PART NO. C-300362PART NAME LatchDESCRIPTION 2 cavity Injection MoldDESIGN COMP. DATE 3/2/00% DESIGN COMP. 56%EST. DESIGN REVIEW 3/3/00CONSTRUCTION COMP. DATE 4/24/00% CONSTRUCTION COMP. 9EST. MOLD TRYOUT DATE 4/26/00

NOTES:

- * All Construction Materials Have
- * been Ordered.
- *

BEST REGARDS!

Joe Toddcc Charlie Hicklin
and Sholders

MF1205



PAR 4 PLASTICS, INC.

PROGRESS REPORT DATA

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

TO Mr. Joe Zajk, "Remington Arms"

DATE 2/22/00

P.O. NUMBER MA 017465

PROJECT 710

PART NO. C-300362

PART NAME Latch

DESCRIPTION 2 cavity Injection Mold

DESIGN COMP. DATE 3/2/00

% DESIGN COMP. 60%

EST. DESIGN REVIEW 3/2/00

CONSTRUCTION COMP. DATE 4/24/00

% CONSTRUCTION COMP. 0

EST. MOLD TRYOUT DATE 4/26/00

NOTES!

- * All Construction Materials Are
- * For.
- *

BEST REGARDS!

Tom Todd

cc Charlie Highlin
Paul Shouder

MF1206



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"

DATE 2/29/00

P.O. NUMBER M017465

PROJECT 710

PART NO. C-300362

PART NAME Latch

DESCRIPTION 2 Cavity Injection Mold

DESIGN COMP. DATE 3/2/00

% DESIGN COMP. 75%

EST. DESIGN REVIEW 3/3/00

CONSTRUCTION COMP. DATE 4/24/00

% CONSTRUCTION COMP. 100%

EST. MOLD TRYOUT DATE 4/26/00

NOTES!

- * _____
- * _____
- * _____

BEST REGARDS!

Tom Todd

CC Charlie Hicklin
Paul Thaddeus

MF1207



PAR 4 PLASTICS, INC.

(502) 965-9141
Fax (502) 965-9560

Princeton Road
P.O. Box 385
Marion, KY 42064

PROGRESS REPORT DATA

TO Mr. Joe Zajk, "Remington Arms"

DATE 3/13/00

P.O. NUMBER M017465

PROJECT 710

PART NO. C-300362

PART NAME Latch

DESCRIPTION 2-Cavity Injection Mold

DESIGN COMP. DATE 3/2/00

% DESIGN COMP. 100%

EST. DESIGN REVIEW

CONSTRUCTION COMP. DATE 4/24/00

% CONSTRUCTION COMP. 100%

EST. MOLD TRYOUT DATE 4/26/00

NOTES!

- * _____
- * _____
- * _____

BEST REGARDS!

Kenn Todd
Chris Higdon
Arac Shouder

MF1208

CONFIDENTIAL

BOLT PLUG
D-300368

MF1209

Chadrick Faith
2200 Centennial Blvd.
Jeffersonville IN 47131
Tel.: (812) 283-4435 ext 306
Fax: (812) 218-6125

Remington Arms Co. Inc.
Mr. Joseph J. Zajk
22 Rifle Trail
Hickory, KY 42051

Joe,

Enclosed are two sets of preliminary mold designs for the Bolt Plug, #D-300368. Please review and sign and return one set to me for approval.

Regards,

Chadrick Faith

83

MF1210

CONFIDENTIAL 83

FIRING PIN HEAD
C-300336

MF1211

CONFIDENTIAL 83

MAGAZINE BOX
E-300363

MF1212

BraininFYI
COPY

ISO 9001

Deer Park Die & Stamping Division

Fairfield

QUOTATION

December 14, 1999

Remington Arms Company, Inc.
22 Rifle Trail
PO Box 99
Hickory, Ky 42051

Attn: Matt Golembowski

Ref: Part # E-300363 rev. 9 with radius on edge at section B-B

We are pleased to submit the following quotation for your consideration.

TOOLING COST

Design and build progressive die to stamp part complete \$83,000.00

PRODUCTION COST PER/M

Quantities:	Price/M
20/M.....	\$600.36/M
40/M.....	\$511.61/M
60/M.....	\$476.20/M

Notes: Quote based on running part in quarterly production runs.

Parts will be bulk packed in Deer Park boxes on a skid.

Material quoted is a 1010/1020 Cold Rolled Steel.

Parts are to be produced by stamping in a progressive die and welding the overlap.

Tooling cost includes cost for welding fixture.

Quote Modified to allow for additional station in die to coin .020 radius edge at B-B.

Inspection: Production parts to be sample inspected per Deer Park's internal procedure when no other standard is specified by the client.

Delivery: Tooling, 14-16 weeks. Production, 4-6 weeks upon receipt of raw material.

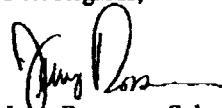
Terms: Tooling, 1/3 at PO, 1/3 at sample submission, 1/3 at customer approval.

Terms: Production, Net 30 days.

FOB: Deer Park

Thank you for considering Deer Park Die & Stamping, an ISO 9001 certified firm, as your supplier.

Best Regards,



Jerry Rossman, Sales Engineer



Carl Dearman, Engineering Manager

Cc: Mike Kerney, Remington Arms Company, Inc.



Deer Park Die & Stamping Division

ISO 9001

Fairfield

QUOTATION

December 9, 1999

Remington Arms Company, Inc.
22 Rifle Trail
PO Box 99
Hickory, Ky 42051

Attn: Metty Morgan
Ref: Part # E-300363 rev. 9, Prototypes

We are pleased to submit the following quotation for your consideration.

TOOLING COST

Design and build secondary "soft" tooling to stamp laser-cut parts \$12,500.00

PRODUCTION COST

Quantities:

10 pcs.	\$188.87 each
100 pcs.	\$ 26.28 each
500 pcs.	\$ 13.17 each
1000 pcs.	\$ 11.83 each

Notes: Prototype parts are to be manufactured on tooling not intended for production runs.

Parts will be bulk packed in Deer Park boxes on a skid.

Material quoted is a 1010/1020 Cold Rolled Steel.

Inspection: Production parts to be sample inspected per Deer Park's internal procedure when no other standard is specified by the client.

Delivery: Tooling, 8 weeks. Production, 2-4 weeks upon receipt of raw material.

Terms: Tooling, 1/3 at PO, 1/3 at sample submission, 1/3 at customer approval.

Terms: Production, Net 30 days.

FOB: Deer Park

Thank you for considering Deer Park Die & Stamping, an ISO 9001 certified firm, as your supplier.

Best Regards

Jerry Rossman, Sales Engineer

Edward J. Kreuzer, Vice President/General Manager

Copy: Matt Golominski, Mike Keeney

4346 LE SAINT COURT, FAIRFIELD, OH 45014-5486, TEL: (513) 874-8760, FAX: (513) 874-8764, WWW.BRAININ.COM
A Subsidiary of Stern Metals, Inc.

Cookson

MF1214

Confidential - Subject to Protective Order
BARBER-5:22:06Y0011164
Williams v. Remington

CONFIDENTIAL 83

25.0 737-9576

MF1215

CONFIDENTIAL 83

BOLT HANDLE
BLANK
D-300360

MF1216



Quotation

21 North Church Street / Addison, Illinois 60101
 General Office (630) 543-6800
 Sales (630) 543-6728
 FAX (630) 543-2095

*FYI
Forward
To Kristan*

To: REMINGTON ARMS CO., INC.
 P.O. BOX 99
 22 RIFLE TRAIL
 HICKORY KY 42051

Quotation No. 7442
 Date 12/01/99
 Inquiry No.

Attention: HETTE MORGAN

Telephone No. 502-856-4204

WE ARE PLEASED TO SUBMIT THE FOLLOWING QUOTATION SUBJECT TO THE TERMS & CONDITIONS ON THE REVERSE SIDE AND THE NOTATIONS STATED BELOW

PART NOMENCLATURE	QUANTITY	PRICE	TOOLING DESCRIPTION	PRICE
NAME BOLT HANDLE NUMBER C-300370 REVISION LEVEL ALLOY 8620 ESTIMATED WEIGHT .250 GATE WITNESS 3/16 MAX ESTIMATE NUMBER 0805990	20,000 AND UP	\$1.63 EA.	<input checked="" type="checkbox"/> WAX <input checked="" type="checkbox"/> AUTOMATIC <input type="checkbox"/> CUSTOMER SUPPLIED TOOLING <input type="checkbox"/> GAUGES <input type="checkbox"/> OTHER <input type="checkbox"/> PLASTIC <input type="checkbox"/> MANUAL 4 CAVITIES TOTAL	\$12,575 83 \$12,575

LEAD TIMES

- ☒ Samples will be supplied 12 weeks after order
☐ Production will be supplied 9 weeks after approval

CERTIFICATION

- ☐ Chemistry
☐ N.D.T.
☐ Specification
☐ Physicals
☐ Compliance
☐ Heat Treat

NON-DESTRUCTIVE TESTING

- ☐ X-Ray
☐ Penetrant
☐ Magnetic Particle
☐ Specification
☒ Samples
☐ Samples
☒ Samples
☐ A.Q.L.
☐ A.Q.L.
☐ A.Q.L.
☐ 100%
☐ 100%
☐ 100%

CONDITIONS

- ☐ Parts will be supplied complete to print
☒ Parts will be supplied per marked print
☒ Casting tolerances of $\pm .005$ in/in. apply
☐ Parts will be supplied as previously ordered

HEAT TREAT

- ☒ As Cast
☐ Anneal
☐ Carburize
☐ Homogenize
☐ Age Harden
☐ Other
☐ Hardness Range
☐ Normalize
☐ Carbon Restore
☐ Solution Anneal
☐ Harden & Temper

COMMENTS

DRILLING OF .250 HOLE AND MILLING OF .350R TO BE DONE BY REMINGTON. CASTING WILL HAVE SHORT GATE WITNESS ON .350R .350K SURFACE WILL BE CAST TO .335R (.015 NOMINAL STOCK FOR MACHINING)

Record #3-2-00.02 / WI #3.2-2 Rev A.

BY

Barbara Patten

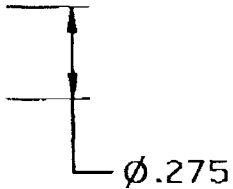
P.01

DEC-01-1999 09:26

MF1217

CONFIDENTIAL

710



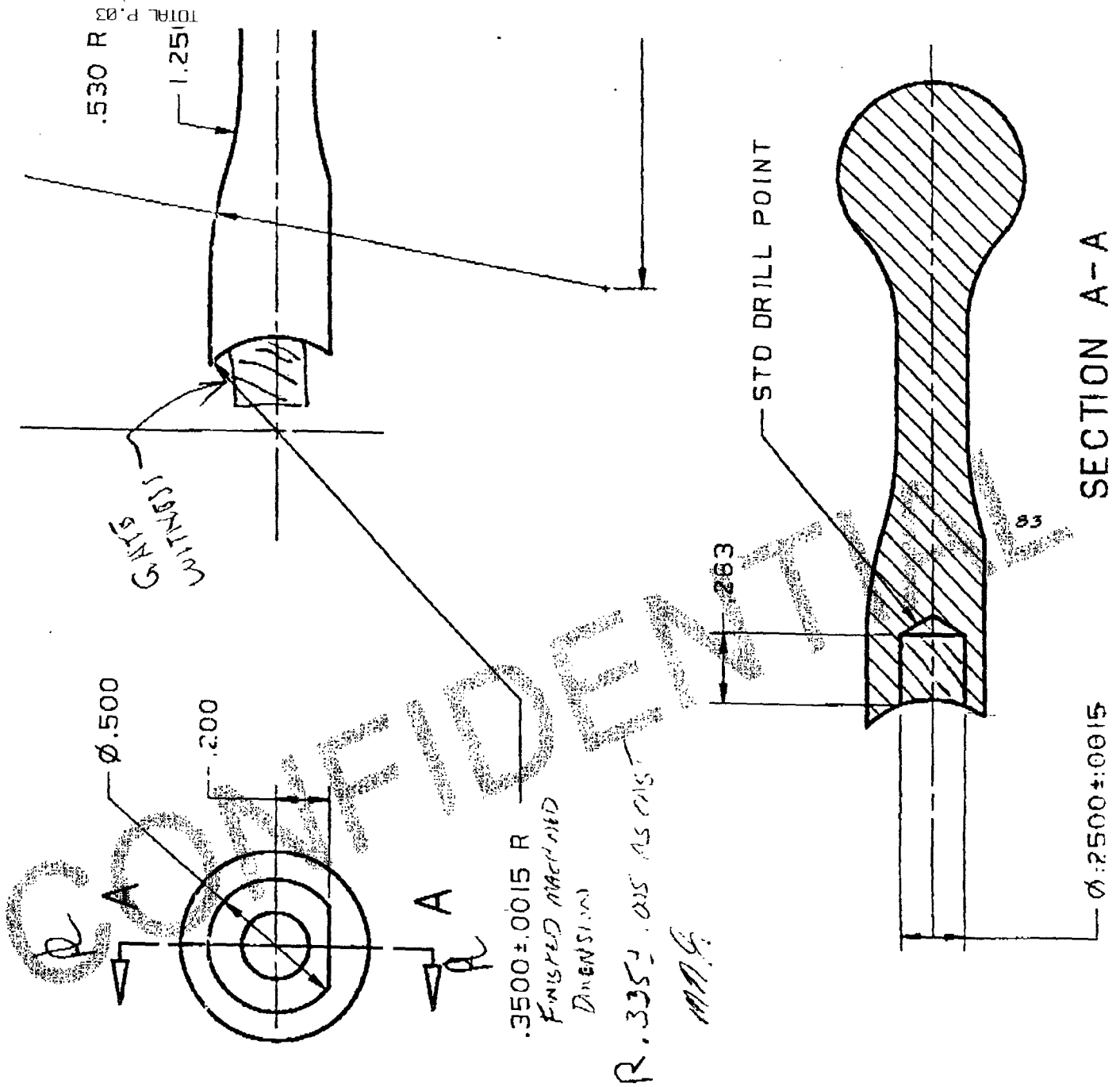
*Quote: THE FINISHED PART, AS CAST,
IS TO HAVE THE BEND
GEOMETRY AS SHOWN ON
C-300370. REAMING OF HOLE
AND MILLING OF RADII TO BE
DONE BY REMINGTON*

MODEL	PART NO.	PART USE
DES. BY DATE	DRN. BY DATE MDK 03/02/99	CHK. BY DATE
APP. BY DATE		
TITLE BOLT HANDLE BLANK		
NUMBER C-300360	SCALE 2:1	SUPERSEDES
REFERENCE REMINGTON ARMS CO. INC. RESEARCH DIV.		

P.02

DEC-01-1999 09:27

MF1218



P.03

DEC-01-1999 09:27

MF1219

SIDE PLATE
C-300333

CONFIDENTIAL 83

MF1220

METAL
 STAMPINGS

STAMPING
Manufacturing Corporation



TOOLS
 & DIES
 WIRE EDM

CNC
 DATE December 1, 1999

QUOTATION NO. _____

TO: Remington Arms Co., Inc.
 P.O. Box 99
 Hickory, KY 42051

*COPY
 FYI
 12/21/99
 mm*

ATTENTION: Metty Morgan
 In accordance with your request, we are submitting our quotation,
 below for your consideration:

OPTION #1

Side Plate #C-300333

10,000 pcs.	\$120.77/M
20,000 pcs.	\$116.45/M
40,000 pcs.	\$114.29/M

TOOLING: \$8,500.00

Tool Lead Time: 12 Weeks

Part Lead Time: 2 weeks after tool completion

* NOTE: Above prices do not include heat treatment or color.

OPTION #2

Side Plate #C-300333

10,000 pcs.	\$299.41/M
20,000 pcs.	\$290.77/M
40,000 pcs.	\$286.45/M

TOOLING: \$1,750.00 - Tooling price consists of removing
 punches from existing trigger side plate tooling
 and make temporary tool to pierce holes per print.

Tool Lead Time: 6 Weeks

Part lead Time: 2 weeks after tool completion.

* NOTE: Above prices do not include heat treat or color.

F.O.B. Barneveld, NY

Quotation Effective: 60 Days

Terms: Parts - 1/2* 10 days,
 Net 30 Days

Tooling:

Delivery: Parts

Tools:

Thank you for the opportunity to be of service.

Very truly yours,
 SQUARE STAMPING MFG., CORPORATION

Dan Hart

Dan Hart, General Manager

108 Old Remsen Road • P.O. BOX 207 • Barneveld, NY 13304-0207 • (315) 896-2641 • FAX (315) 896-2734

MF1221

METAL
STAMPINGS
CNC

**SQUARE
STAMPING**



Manufacturing Corporation

TOOLS
& DIES
WIRE EDM

DATE December 1, 1999

QUOTATION NO. _____

TO: Remington Arms Co., Inc.
P.O. Box 99
Hickory, KY 42051

*COPY
FYI
12/21/99
m m*

ATTENTION: Metty Morgan

In accordance with your request, we are submitting our quotation,
below for your consideration:

Safety #D-300408

10,000 pcs.	\$887.79/M
20,000 pcs.	\$866.29/M
40,000 pcs.	\$855.39/M

TOOLING: \$19,900.00

NOTE: Above prices do not include heat treatment
or color.

P.O.B. Barneveld, NY

Quotation Effective: 60 Days

Terms: Parts - 1/2% 10 days,
Net 30 Days

Tooling: Net 45

Delivery: Parts 2 weeks after tool completion Tools: 16 - 18 weeks

Thank you for the opportunity to be of service.

Very truly yours,
SQUARE STAMPING MFG., CORPORATION

Dan Hart
Dan Hart, General Manager

108 Old Remsen Road • P.O. BOX 207 • Barneveld, NY 13304-0207 • (315) 896-2641 • FAX (315) 896-2734

MF1222

SAFETY ARM
D-200408

CONFIDENTIAL 83

MF1223

LOCK TUMBLER
BLANK
D-300420

83

CONFIDENTIAL

MF1224

CONFIDENTIAL

83
BOLT STOP
C-300345

MF1225

CONFIDENTIAL

RECEIVER INSERT
E-300327

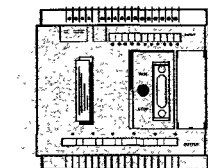
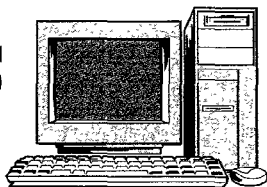
MF1226

MC 2000 Computer-Controlled Marking System

Data Input Options and Accessories

Data Input Options

Personal Computer (PC)

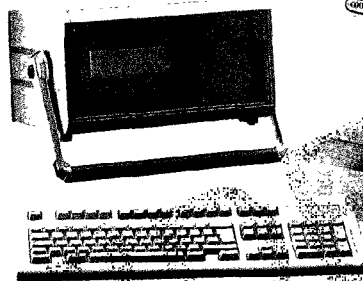


Programmable Logic Controllers (PLCs)



Barcode Reader

MC 2000 K- Standard System with Keyboard (Stand-alone Operation)



Host Computer via RS232 Interface

The MC 2000 Marking System is designed to be flexible and to meet the diverse needs of industry. It can

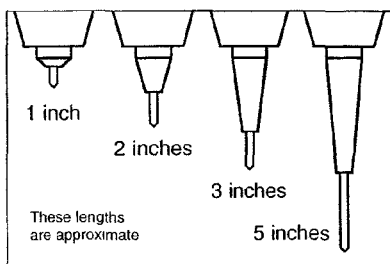
be used as a stand-alone marking station or fully integrated into the user's manufacturing process.

Information to be marked is entered into the unit's control system using any one of the methods shown above.

Marking Stylus Pins

The MC 2000 Marking System's single-pin, carbide stylus is available in four sizes. These interchangeable marking pins can be easily removed and replaced. When marking is in a hard-to-reach or recessed area, the longer marking pins work best.

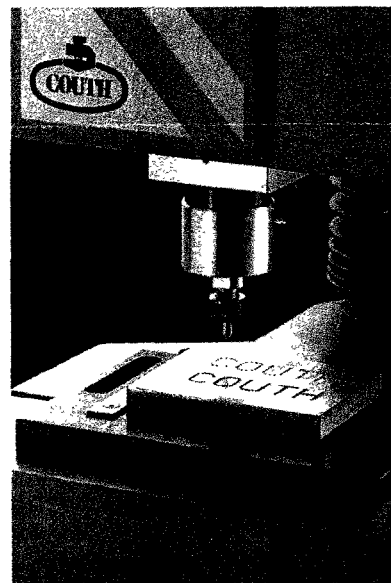
A matching pin guide, included with each stylus pin, adequately supports the pin during the actual marking



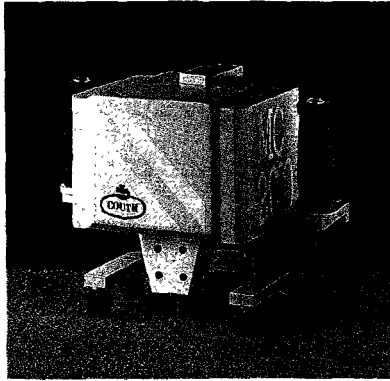
action. Stylus pins can be resharpened for extended life and ground to meet specific requirements.

Pneumatic Marking Head

The standard MC 2000 Marking System operates on a 110V hookup and requires no compressed air. Marking forces generated by this system are sufficient for most marking applications. When an extra deep mark is required or a super hard material needs to be marked, the Pneumatic Marking Head is recommended. Equipped with pneumatic cylinders, this model fires the single-pin stylus with extra force throughout its travel range. For very irregular surfaces or when the marking head will be exposed to high temperatures, the Pneumatic Model should be used.

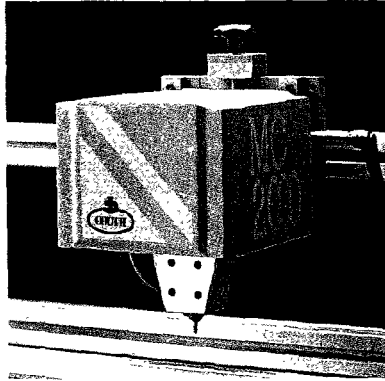


MF1227

Portable Unit

When extremely large or heavy parts need to be marked, the Portable Unit can be taken to the marking site. Two Portable Units are available. The larger model marks an area measuring 6 in. x 4 in. and weighs 25 lbs. The smaller model's marking area measures 3 in. x 2 in., and the unit weighs 20 lbs.

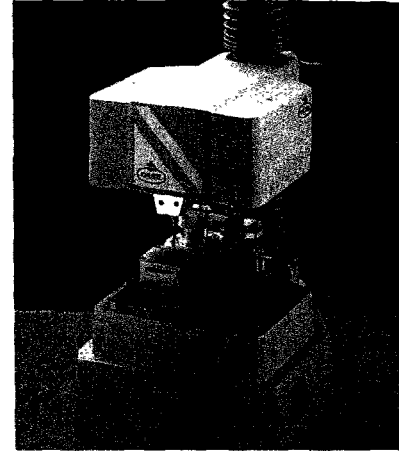
A flexible connector cable allows the Portable Unit to be positioned up to 15 ft. away from the controller. Start/stop switches, built into the handles, activate the marking sequence. Rubber feet grip the surface to be marked and stabilize the unit when not in operation. A counter-balance can be added. Both standard and pneumatic models are available.

U Model

The MC 2000 U Model is designed to be integrated into the user's assembly or transfer line as a fixed-position marking station.

Unlike the standard MC 2000, there is no table and column support. The marking unit is connected to the controller by an 8-ft. flexible cable. The marking head can be vertical, horizontal or in any other desired position.

The U Model is readily available in two sizes. The larger model has a marking unit that measures 11-3/4 in. x 11 in. x 9 in. high and offers a marking area of 6 in. x 4 in. The smaller model's marking unit measures 7-7/8 in. x 7-1/2 in. x 9 in. high with a marking area of 3 in. x 2 in. Models with other size marking areas can be custom ordered.

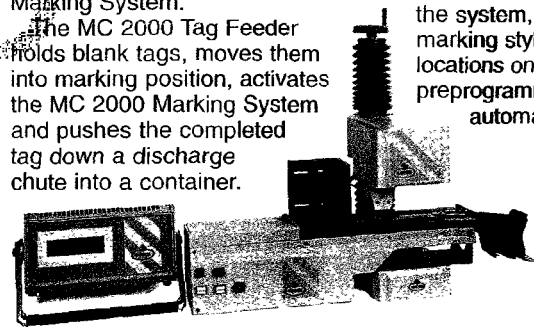
Power Z Marking Machine

The standard MC 2000 marking head is raised and lowered by turning a hand wheel attached to the top of the support column. The Power Z Marking Machine features a Power Z control button which, when pressed, quickly raises or lowers the marking head. An indicator window on the front of the base provides a digital readout of the distance between the marking stylus and the table. By observing the indicator reading, the operator knows when the marking head is near its proper position. To stop the marking head, the operator releases the button. The hand wheel is turned to fine tune the final position of the stylus.

Tag Feed/Marking System

The computer-controlled MC 2000 Tag Feed/Marking System combines the automated MC 2000 Tag Feeder with a field-proven MC 2000 Marking System.

The MC 2000 Tag Feeder holds blank tags, moves them into marking position, activates the MC 2000 Marking System and pushes the completed tag down a discharge chute into a container.



The Tag Feeder can be customized to accommodate multiple discharge chutes. The MC 2000 can be programmed to mark multiple locations on each tag. After marking position locations have been entered into the system, the controller moves the marking stylus between the marking locations on the tag and imprints the preprogrammed data. Precise, automatic marking of metal

tags is assured . . . each and every time. Characters, logos, inspection symbols and sequential numbering can all be generated.

Previously-purchased MC 2000 Marking Systems can be upgraded to work with the MC 2000 Tag Feeder. The standard MC 2000 controller, however, must be replaced by a controller designed to operate with the Tag Feeder.

Feeder Tag Size Range

Model	Width		Length		Thickness
	Min.	Max.	Min.	Max.	Min.
Standard Unit	15 mm	75 mm	20 mm	105 mm	.3 mm
Large Unit	15 mm	105 mm	20 mm	150 mm	.3 mm



Manufactured in Spain by COUTH.
Distributed in the U.S.A. by:

MECCO MACHINE LTD.
Rochester Road, Ingomar, PA 15127
Mailing Address: Box 222, Ingomar, PA 15127
412/369-9110 • Telefax: 412/366-7090

mecco
marking systems

March 29, 2000

Joe Zajk
Remington Arms Company, Inc
22 Rifle Trail
PO Box 99
Hickory, KY. 42051

Subject: Marking Plastic Samples

Dear Joe:

Enclosed please find a sample, which I have marked with both the MC-2000 dotpeen machine and engraved dies. Please note that the cosmetics of the mark have been compromised by make shift fixturing. Proper nesting will dramatically improve the cosmetics.

By now you will have already received my quotation. Please call if you have questions. We look forward to serving your marking needs.

Very truly yours,

MECCO Marking Systems

Rich Miller
/llh

Richard W. Miller

RWM:llh

Enclosures: Marked Sample, MC2000 data page

M. E. Cunningham Co. - MECCO Machine Ltd.
Rochester Road, Ingomar, PA 15127 - Mailing Address: Box 307, Ingomar, PA 15127 - 1-888/369-9199 FAX: 1-412/366-3048
mecco@usaor.net www.meccomark.com

MF1229

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BARBER - 5.22.06r0011179
Williams v. Remington

P.01/01
Kochester Road, Box 307
Ingomar, PA 15127
Phone 888-369-9199
Fax 412-366-3048
Email mecco@usaor.net
www.meccomark.com

mecco
marking systems

Rick Miller

Inside Sales Manager

MO18158

QUOTATION / ORDER WORK SHEET

Customer # _____ ☐ Cunningham ☐ MECCO Machine Date 3-29-00

P. O. No. _____ Ship To Cust. P.O. # _____

BILL TO: REMINGTON ARMS SHIP TO: _____

PO BOX 99 22 RIFLE TRAIL

HICKORY, KY 42051

Attn: JOE ZASK Attn: _____

Phone # 270-856-4200 Fax # 3233

S. I. C. # _____ Consignee Billing # _____

Taxable ☐ yes ☐ no Sales Tax Exempt # _____ Fed ID # _____

NOTE: PA., CA., & AZ. Must have a sales tax exemption number. Other states if available.

Qty	Computer Code	Description	Reorder Item. Y/N	Price Each	Total
1	10-MC2000KN3x2	MC-2000 3x2		11,600 ⁰⁰	
2		MARKER - (DOT PEN)			
3					
4	OPTION 1	NEST FIXTURE TO		1,650 ⁰⁰	
5		MOUNT PART TO BE			
6		MOUNTED TO BASE OF MC-2000			
7	OPTION 2	PNEUMATIC MARKER		4,250 ⁰⁰	
8		(NON IMPACT) COMPLETE WITH			
9		HEAT PACKAGE, MARKING DIE, BASE PLATE WITH NEST			
10					
11		SPARE MARKING DIE		450 ⁰⁰	
12		FOR ABOVE			

Ship Via: ☐ UPS Regular ☐ UPS Orange 3day ☐ UPS Blue 2day ☐ UPS Red ☐ 3PM ☐ 10:30AM

☐ First Class ☐ Parcel Post ☐ Air Express ☐ Fed Express - Level of service _____

☐ Other _____ Special Shipping Account # _____

☐ CHECK IF CONTINUED ON BACK PAGE ORDER TAKEN BY: _____

TOTAL P.01

MF1230

Remington Arms Company, Inc.
 Mayfield Plant
 22 Rifle Trail
 P O Box 99
 Hickory, KY 42051
 Phone: (270) 856-4200
 Fax: (270) 856-3233

Remington.

FAXED
 3-16-00

Fax

To: Rich Kosko

From: Joe Zajk

Fax: 413-589-0761

Pages: 3

Phone: 413-589-0534

Date: 3/16/00

Re: Dimensions per your request

CC: Mike Keeney

☐ Urgent

☒ For Review

☐ Please Comment

☐ Please Reply

☐ Please Recycle

• **Comments:** Rich,

Here are the requested dimensions for you to review. I'm referencing both the drawing and the inspection number from the prints I sent to you :

Critical Dimensions:

On 1E-300327 Inspection #14: 1.109 boss bottom measured from Datums A, B, & C

On 1E-300327 Inspection #35 & 36: .175 +.003/.001 Sideplate Pocket Depth

On 2E-300327 Inspection #37: .1220+/- .0015 Datum D Hole size & position relative to Datums A, B, C

On 2E-300327: Inspection #38: .1220+/- .0015 Sear Stop Pin Hole size and position relative to Datums D, C

On 2E-300327: Inspection #40: .1220+/- .0015 Safety Pin Hole size & position relative to Datums D, C

On 2E-300327: Inspection #41: .1220+/- .0015 Trigger Pin Hole size & position relative to Datums D, C

On 2E-300327: Inspection #56: .097+/- .0015 Sideplate Rivet Hole size & position relative to Datums D, C

On 2E-300327: Inspection #58: .097+/- .0015 Sideplate Rivet Hole size & position relative to Datums D, C

MF1231

March 16, 2000

In-process Checks:

On 1E-300327: The .701+/- .002 Datum A & lug profile -- use special form plug gage

On 1E-300327: Inspection #25: 1.043+ .003/- .001 Part OD

On 1E-300327: Inspection #26: 1.049+/- .001 OD Ring

On 1E-300327: Inspection #24: 5.075 Length from Datum B to front edge of part

On 1E-300327: Inspection #12: .559 Firing Pin Head Slot depth from Datum A

Please note the following:

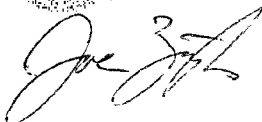
The dimensions given above are to assist Hanson Group, Ltd. in defining and controlling its process capabilities for the receiver insert E-300327 and are not to be interpreted as the only inspection information Remington Arms will require from Hanson Group. As part of the tool qualification and first article inspection process Remington requires of all its vendors to submit the following:

- Complete dimensional layout of the submitted first article samples, capability studies, and all other items listed in Remington Arms Sample Submission checklist C-1018.

During production runs Remington requires lot traceability, lot traceable SPC information on mutually agreed upon critical dimensions (not necessarily limited to the ones listed above), lot traceable in-process checks, and inspection reports on samples from the lot being shipped. Those samples must be tagged and included with the inspection reports. The features included in the inspection reports are not necessarily limited to the ones listed above and will be mutually agreed upon by both Hanson Group & Remington Arms.

I will bring more information concerning all of this with me next week.

Best regards;



Joe Zajk

Engineering Manager -- Mayfield Plant

Attachments: C-1018 Sample Submission Checklist

• Page 2

MF1232

Receiver Insert 300327 Meeting Notes

Meeting Date: 3/23/00
 Attendees: Joe Zajk – Remington Arms
 Rich Kosko – Hanson Group
 Frank Fasano – Hanson Group

Reason: To discuss the path forward on the Remington receiver insert program, P/N 300327

Five general topics were covered during the meeting between Hanson & Remington on Thursday, 3/23/00. These topics were:

1. Decide on conventional molding vs. IQC molding process for receiver insert.
2. Discuss and come to an agreement on inspection methods for receiver insert.
3. Review dimensional layout
4. Discuss Lot traceability requirements
5. Gage Repeatability & Reproducibility.

A more detailed list of the topic detail and the decisions mutually agreed upon by Remington & Hanson are given below. The topic detail is given in bold italics, and the decision is given below it in normal type.

Topics

1. ***Decide on conventional & IQC processes for receiver insert***
 - ***Using dimensional layouts determine best process for running receiver insert. This will be determined through analysis of feature positions between the two processes and determine which is the more accurate of the two processes.***

Based on sample parts run by Hanson on 3/22, it was determined that the IQC process was most dimensionally stable. This was determined by measuring key features on five pieces each of the conventional & IQC process. After several process iterations it was decided to use a chiller to circulate 55°F water through the long core (cores out receiver ID and tang) and to extend the cooling time in the press by 10 seconds. This yielded a cycle time of approximately 64 seconds, 10 seconds longer than the baseline IQC process used in Michigan. This resulted in a reduction of part warping by approximately 38% from the baseline IQC process and approximately 50% from the conventional process.

MF1233

- *Once process is determined run off sufficient parts to determine process stability. Remington requests copies of process parameters for final settings used for process stability run. Remington proposes the following process stability test:*
 - *Using "final parameters", run 50 pcs. to warm up mold. Discard those parts.*
 - *Mold a 600-piece run. From the start of the run pull & mark the following pieces: 1, 2, 3, 51, 52, 53, 101, 102, 103, 151, 152, 153, 201, 202, 203, 251, 252, 253, 301, 302, 303, 351, 352, 353, 401, 402, 403, 451, 452, 453, 501, 502, 503, 551, 552, 553, 598, 599, 600. This will form thirteen data points for an x-bar chart (subgroup n=3) for each feature on the receiver insert. These samples will be shipped to Remington Arms. The parts will then be inspected via CMM by the mutually agreed upon inspection method discussed in section 2 below. NOTE: Remington's CMM software has the capability to automatically create x-bar charts for all features inspected.*

It is desired that Hanson grinds the Bolt Stop core pin to match model drawing and grind .0015" off the diameter of the four pins currently used for the four .1220 fire control pins prior to starting the process stability run listed above.

Hanson agreed to run the capability test as stated above. Run was to begin on 3/27, after the pins were ground down. Parts will be numbered and sent to Remington for analysis. Hanson will keep an additional 50 pieces to conduct their own capability analysis in order to correlate to Remington's analysis of data. Measurement will be by the agreed upon method listed in Topic 2, below.

2. Discuss and come to an agreement on inspection methods for receiver insert

- *Propose using .699 diameter rod of sufficient length to locate part along entire surface of the A-datum diameter and incorporate this into general CMM fixture design D-K-10400.*

Remington and Hanson both agree to this method.

- *Propose establishing a datum target on the shooter's LH side B-datum surface due to its dimensional stability and incorporating this B-Datum target on CMM inspection fixture D-K-10400.*

Remington and Hanson both agree to this pending approval of Remington's R&D's facility.

MF1234

- **Remington to build and supply Hanson copy of all special gaging & fixtures (including prints) it will use during the inspection process.**

Agreed upon by both parties. This is normal procedure for Remington where special fixturing is involved.

- **Remington to supply Hanson with plug gage information sheets for plug gages Remington plans to use during its inspection process so Hanson can order duplicate plug gages.**

Agreed upon by both parties. Remington left copies of all standard plug gages so Hanson can order the same plugs to the same wear allowance, gage tolerance class, etc.

- **Discuss & come to agreement on critical and in-process dimensions**

Critical and in-process dimensions agreed upon based on fax from Joe Zajk of Remington to Rich Kosko of Hanson dated 3/16/00. Terminology of "critical" vs. "in-process" mutually agreed upon. Critical dimensions are checked at first and last article inspection. In-process dimensions are checked at regular intervals during run. Due to the special nature of this part the distinction between critical and in-process dimensions overlap. Therefore, Hanson has agreed to use their programmable Micro-View to check all critical dimensions (fire control holes & other dimensions listed in fax) as part of their in-process checks as well as for first and last article inspection.

Additionally, several visual issues were discussed. They consisted of the following:

- Flash: Critical areas for flash were pointed out and defined. On the inner surface of the fire control sideplate, ejector pin flash had to remain within the .175 +.003/-.001 model drawing tolerance (inspection #35 & 36). On the bosses surrounding the rivet holes (#57 & 59), flash had to remain below the surrounding .250 surface in order to allow sideplate to sit flush on the .250 spacer surfaces.
- Step Gate: Hanson agreed to investigate the fit of step gate on bottom of part immediately forward of the sideplate in order to improve shutoff and matchup in order to reduce flash in that area.
- Acceptable Parting Line Flash: Hanson to supply Remington with standard parting line flash and witness sizes for non-critical areas so Remington can review. Hanson asks that Remington locate text defining parting line flash and witness on prints once the size is agreed upon.

MF1235

- Mismatch on Tang: Hanson to investigate and correct pronounced visual mismatch on top LH side of the 20 degree tang cut. Mismatch appears to be an oversight from a previous tool revision in which the tang surface was modified.
- Core pin for Press Insert Hole: During the dimensional layout review it was noticed that the GO/NOGO plug gage Remington supplied would not go down the GO depth notch on the .370 deep hole on the rear boss where the pressed insert would be ultrasonically welded in. At first glance it appears that the core pin might be damaged on the edge. Hanson will investigate and repair as necessary.

3. *Review dimensional layout*

Dimensional layout for IQC and conventional parts were reviewed. Remington supplied various plug gages to assist in the dimensional layout of the parts. This assisted in coming to final determination of process used in Topic 1 and in gaging method in Topic 2.

4. *Discuss Lot traceability requirements*

- *Review Remington's draft of lot traceability requirements*

A draft copy of Remington's draft lot traceability requirements was supplied to Hanson. Hanson agrees to comply with the requirements. In addition, Hanson will keep all in-process and critical dimension inspections, material certifications, etc. for each lot for a minimum of two years. Hanson would notify Remington when it plans to dispose of such records so Remington has the option of obtaining this documentation for its own records.

Hanson & Remington also discussed possible ways of easily identifying parts from various lots. As there will most likely be a small number of runs per year, it may be possible to vapor hone an identification mark on a non-critical surface of the receiver insert that both Remington and Hanson can use for quick identification of lot vintage. This mark would change from run to run and be tied back to the lot number. One suggestion was to use Remington's date code system it uses for assembly; others include symbology used by other manufacturers. Remington will supply Hanson with its date code system for review. Hanson to submit to Remington possible other symbology to review. The mutually agreed upon symbology would most likely be placed on the shooters LH side of the part immediately under the rear tang surface.

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5. *Gage R&R*

Remington and Hanson agreed upon Gage R&R method for determining the repeatability and reproducibility of the various inspection gages.

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