

REMINGTON ARMS COMPANY, INC.
Product Team Meeting Minutes
January 29th, 2004 Ilion Meeting (7:30 a.m.)

Future Meetings

Feb. 24th – Ilion Canceled
March 4th - Elizabethtown
March 24th – Ilion Canceled
April 13th- Ilion

Future Important Dates

Feb. 28 th	Customer Early Order Qualification Period Ends
March 3 rd	M2100 Review and Test Fire
March 11 th	Planning Meeting – Madison
March 31 st	Target Rev. 1 Forecast

Business Review

Jay Bunting to provide overview of current business environment

- Must ship all 870, 1100, 1187, 332 current orders in the 1st quarter
- Extra Barrel business is critical, same margin as Express
- New products are extremely important to the business and must be available in the first quarter
- Keys to hitting budget
 - Building what the customer wants
 - Line item efficiency
 - Get it right the first time

Competitive Product Review

Starting Next Meeting, Trull and Fink will Conduct Competitive Product Reviews for Group

- The first competitive product review will take place at the 4/13 meeting in Ilion to involve the whole team

ILION BASED SHOTGUN PRODUCTS

2002 New Shotgun Product

- Model 332
OBJECTIVE: Establish a legitimate presence in the O/U market

Production Status: Guns per day

- 7 guns per day current production rate
- Some wood issues with splitting
- 10 guns per day possible-Good Revival wood is a key
ACTION: Engineering to prepare CAR for Cahan to review and submit to corporate. Team concurs that this is an effort which needs to be pursued.

Salt Bleed Out

- Testing of no-bleed has been successful
- CAR being finalized for \$62K capital
- July/August installation
- Will set-up offline for O/U's only by 3-5-04
Fore end loosening has hopefully been corrected through Assembly further tightening fore ends prior to pack.

ACTION: Trull to review with Evans to see if any repairs or calls have been received regarding this issue.

CSR's are not reporting any new issues concerning loose fore ends.

Cosmetic issues identified above should be corrected.

ACTION: Trull to order 5 new guns from OHL to review for cosmetics

As a whole, guns looked good. A couple of guns with wood to metal fit that was not perfect. Gun function test was perfect for three guns.

ACTION: Perniciaro to contact Billy Crutchfield at Lonoke to discuss performance of current guns on hand at Lonoke and to arrange to have ported guns delivered to Lonoke for use. Steve to update Team at March PTM.

- Williams Wholesale has booked orders for 250 by end of March

2004 New Shotgun Product

- General New Product Discussion

OBJECTIVE: Ship new product on time

ACTION: Ilion to provide status of any 2004 new shotgun products that have not been released in production yet. From my notes, these products are:

- 9583 – M1100 Sporting 28/27

T&P scheduled for Feb. Production May.

- 9549 – M1100 Sporting 410/27

- T&P scheduled for Feb

ACTION: Engineering to insure gun reliably cycles both 2 ½" and 3" shells
Scheduled same as 28 GA

ACTION: Manufacturing to advise current T&P status and production date.

- 6457 – M870 SPS FR/CL 20 GA

T&P scheduled to begin 2/6 with production in April.

- Waiting on new guide rings
- Barrel incorporates new optimized rifling
- Every 20 gauge except 1100 now has 3" chamber

ACTION: Manufacturing to advise current T&P status and production date.

- 4455 – M1100 Sporting XBL 28/27

Schedule concurrent with gun

ACTION: Manufacturing to advise current T&P status and production date.

2005 New Shotgun Product

- 2005 New Shotgun Product

OBJECTIVE: New Product

ACTION: Discussion of prospective new shotgun programs and strategies for 2005.

M870 EXP .410 slug gun. Findlay working up quotes for sights. NPP-2004-35

- \$47K for sight tooling
- 10 prototypes being built
- Engineering will continue to develop

M332 Sporting

- 30" and 32" Barrels
- 2 ½" Chambers
- Lengthened Forcing Cones
- .735" Bore Diameter
- Ported Barrels

- Fiber Optic Sight
- 14 1/4" LOP
- M396 Type Stock and Fore End

M332 Trap Combo

- 34" Single Trap Barrels
- 32" OU Barrels
- 2 3/4" Chambers
- Lengthened Forcing Cones
- .735" Bore Diameter
- Ported Barrels
- Twin Beads
- 14 1/4" LOP
- M396 Type Stock and Fore
- Production-Are barrels longer than 30" an issue?
- Can we do raised side panels?
- Engineering-We must figure out shooting open issue
- ACTION: Engineering-Figure out what it will require to produce 32" and 34" barrels as well as raised side panels
- ACTION: Fink-Provide clear written NPP with direction
- OBJECTIVE: Announce Target models on 2005 Spring Gun Program

M332 Small Gauge

- Small frame 20 gauge
- Frame to accommodate 16 gauge barrels
- Stock dimensions-trimmed down version of 12 gauge
- 26" and 28" Barrels
- Steve Perniciaro and Dave Findlay have drawings
- Need to examine ways to build low volume items efficiently
- Investment cast-brings some new issues and solves others
- Have to improve cost, efficiency and quality
- OBJECTIVE: To announce 20 gauge M332 on 2006 Spring Gun Program

Ilion Quality – Shotguns

- Shotgun POI
OBJECTIVE: Conformance to SAAMI spec
ACTION: Ilion to provide status of this project. Priority of shotguns in which to incorporate these changes first:
 1. All 1100 Target, 1100 Classic Field and Synthetic
 2. 11-87 Premier and SP/SPS
 3. 870 Wingmaster and SPS
 4. 870 Express
 5. SP-10
 Findlay presented prototype of proposed new rib design to bring our POI in line with SAAMI.
ACTION: Ilion to test in January and report on results of testing at next months PTM.
Need samples shipped to Madison to evaluate.
 - 12 gauge 870, 1100, 1187 SAAMI sight picture 3.27" low, Remington sight picture .90" High
 - Raised POI 3"-4"
 - M332 shoots to SAAMI sight picture
 - Tooling & Gauging to be complete by June 2004
 - T&P Scheduled September 2004 for 870/1187
 ACTION: 12 gauge 1187 standard contour barrels shipped to J. Fink for Marketing evaluation and report at March PTM

- 11-87 Super Mag

OBJECTIVE: Determine necessary changes to make this product to the performance requirements as originally specified.

Action: Engineering to provide update on design recommendations and timeline for implementation. What testing needs to be done and when can we expect to make the transition in production?

Findlay presented new gas collar design to give a better seal.

- (10) 12 gauge barrels in test with new design
- Objective to reduce 3" & 3 1/2" terminal velocities and improve function
- Testing to be completed by 2.15.04
- MIM gas cylinder prototype-10 weeks and \$15K
- 30 piece 12 gauge machined sample to transmit April 30, 2004

ACTION: Report on test status

Choke Tube Constriction/Patterning Concerns

OBJECTIVE: Conformance to SAAMI spec/product enhancement.

Testing with the M1100 Tournament Skeet 20 GA showed that we had a problem with the extended choke tubes patterning too tight. This has sparked discussion of a full scale audit of all of our 12 and 20 GA choke tubes to verify patterns are correct. Findlay has proposed drawing changes that will be confirmed through a test plan.

ACTION: Review test results at January PTM.

Corrective action date-

New Tube Identification-Need some sort of symbol or marking to differentiate new tubes from older tubes.

- Complete shooting of 12/20/28 gauge extended Briley tubes by end of February
- Old fixed skeet was "bow tie" configuration all others tapered to .5" flat; why?

ACTION: Pursue making tubes meet SAAMI specs. Gain an understanding of old fixed choke dimensions and performance. Get hardcopy of specs to J. Fink and J. Bunting

ILION BASED GENERAL TOPICS

- Elimination of ISS on common fire control and Model 700, Model 7

ACTION: Establish final plan forward for ISS.

Action Items

- Conversion to be complete no later than 1.1.05
- Design transmittal of Regal trigger block for all common fire controls from D. Diaz by end of February to S. Perniciaro and D. Findlay
- Audit current CA DOJ designs
- Trigger block must allow M7400 to lock bolt open
- Block must not mar gun or fire control
- Regal needs conditional PO by Mid-March
- 2 months delivery from receipt of PO and \$2.95 cost each
- Regal will have block tested by CA DOJ by 6.15.04
- With DOJ approval, all common fire controls converted by 1.1.05
- M700/M7 to cable lock-\$1.63 cost

- 3" Chambers in 20 ga deer barrels (NPP 2003-78)

OBJECTIVE: Uniformity across 20 gauge slug offerings.

ACTION: Ilion to confirm 870 chambers changed to 3" and 1100 chamber stayed 2 1/4" Ilion confirmed that the M1100 20GA Magnum has a different action sleeve configuration than the non-magnum counterpart.

- R3 Pad on Wood Stocks
OBJECTIVE: Product enhancement
Action: Ilion to confirm roll-in to begin Q2 and establish timeline by model.
 - Waiting of norbides from S&K
 - No RAMAC change
 - Start implementation in February 2004
ACTION: Matrix of products to J. Trull and J. Fink from Engineering. R3 Label on 5 pack for identification.
 - Will be cataloged in 2005
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- Styrofoam Insert in Gun Boxes
OBJECTIVE: Product enhancement
Action: Shumway to update team on progress.
 - Two new vendors given drawings
ACTION: Make sure trigger block will fit into new insert
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- Salt Bleed Out
OBJECTIVE: Quality Improvement
We continue to see bluing salt bleed out all too frequently on both our shotguns and our rifles. Other manufacturers do not appear to have the same degree of problems with this issue.
ACTION: Ilion to advise on progress to eliminate(no-bleed tank project)
SEE M332 for current status

ILION BASED RIFLE PRODUCTS

2004 New Rifles

- Model 700 CDL (Classic Deluxe)
NPP-2004-24 RAMACS(7007,7015,7011,7017,7047,7049,7051,7053)
OBJECTIVE: New Product
Action: Production Status from Ilion
 - Magnum and Long Action at first article
 - All eight skus scheduled for March production
 - Have tested stocks and accuracy; no concerns to date
 - Need Rep Samples 41 guns plus 5 for Press Argentine hunt
Action: WE MUST SHIP CDL'S IN THE FIRST QUARTER!
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- Model Seven Synthetic Stock
OBJECTIVE: New Product
Action: Status of mold texturing and samples for SHOT to Trull
 - Go to black stock-eliminate custom color.
 - Being told black polypropylene same price as black rynite
 - Why isn't black rynite more expensive?
ACTION: Samples to Trull at SHOT, determined to go with Polypropylene gray stock. Texturing not great, but will leave as is for not. Marketing direction to proceed with production.
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- Model 700 204 Ruger
OBJECTIVE: New Product
NPP-2004-36, 37, 38 RAMACS 6196 (LV SF), 7467 (VLS), 7527 (ADL SYN)
ACTION: Test and Production Status from Ilion
 - Project ahead of schedule
 - Barrels going to assembly 1st of February
 - Meeting 1.5" 5 shot accuracy may be problematic for ADL, may need 2.2" spec

- Hornady has orders for proof, dummy and test ammunition
- ACTION:** Marketing to continue to touch base with Engineering each week on status.

2005 Prospective Ilion New Rifle Programs

- 2005 New Products

OBJECTIVE: New Product

- Model 700 Syn Stock Redesign Status
- Need sample stocks by Sept. 30, 2004
- May have vendor that will furnish mold to get our business

ACTION: D. Diaz need design by March PTM

- M700 LV-Custom Foam \$30 savings v. Bell & Carlson
- Pillar bedded, steel reinforced
- Weight currently with in ounces of B&C stock, can change weight

ACTION: Communicate desire to pursue to purchasing

- Model 700 Special Purpose Synthetic – Trull to issue NPP prior to Meeting.
- Must compete with Tikka and Vanguard
- Update to Varmint Line – Review/discuss new concepts. Review McMillan stock designs
- HS Precision is now a competitor
- Samples have been received from McMillan.

ACTION: D. Diaz to check intellectual property concerning bedding block in HS Precision stocks

- Model 700 Classic thoughts – Any Ideas? 35 Remington?
- Despite 1979 catalog-308 Win has never been done
- Ultimate Firearms Muzzleloader – Samples received. Need to review and address path forward.
- 700ML Concept
- Improves 209 Primer ignition
- Interchangeable barrel that eliminates blow-back
- Sample to present to customers at SHOT Show

ACTION: J. Trull to report on customer response and plan forward

Ilion Engineering Topics – Rifles

- Alternative Metal Finish for Stainless Rifles

OBJECTIVE: Product Enhancement

Action: Sietsema to brief team on Bodycote process, what it is, how it performs, and what it costs.

- Titanium Carbide-Hardest >RC90-\$50
- Zirconium Carbide <RC90-\$29
- Will get samples to test & shoot

ACTION: Marketing to provide direction on color-black or silver. Engineering to have samples and testing started by next meeting.

- Roller Burnish for Rifle Chambers

OBJECTIVE: Product Enhancement

Engineering reported at last meeting that this process is being held up due to chamber eccentricity issues. Bulk of problem appears to rest with current CF heading process at Ilion.

Action: Engineering to update on status. Can we implement on 7400/7600's?

Action: Did not review. Will review at next Meeting.

Ilion Quality Issues – Rifles

- Bolt-Action Rifle "Lays Left" Issue
OBJECTIVE: Quality Issue
Action: Engineering and Quality to Provide a brief overview of implementation of corrective action on issues uncovered by team.
Action: Did not review. Will review at next Meeting.
- Model 700/Seven Trigger Pull Weights
OBJECTIVE: Quality Issue
Sales and Marketing are receiving a great deal of feed back from customers and consumers that we are losing sales at a devastating level to the Savage Accutigger offerings.
Action: Let's finalize direction and path forward given plans on the table at this meeting.
Action: M700/7 Trigger Pull- Set pull at final assembly to 4 ½ to 5 ½ pounds. Ilion engineering to report at next meeting.
Action: D. Diaz to evaluate fluted firing pin and report status at next meeting.
- Centerfire Rifle Chamber Specs – Ilion reamers as compared to SAAMI
OBJECTIVE: Quality Issue
Action: Perniciaro/Diaz to advise if proposals will be made to SAAMI to add freebore to cartridge drawings determined to be an issue from last meeting.
Action: Team agreed not to present to SAAMI as conversations with Ken Green indicated we had only a snowball's chance of getting approval.
- Model 7400 Improvement Project
OBJECTIVE: Quality Issue
ACTION: Need status update from Findlay. Also, need to determine if we can have 150 replacement barrels in 35 Whelen for Borchers by this spring. They have big problems with their guns in Spain right now. Trull needs to be prepared to address performance concerns with key customers at IWA show complete with timelines that manufacturing can support.
 - Orifice hole moved rearward and reduced in size
 - 5 guns in bolt velocity test
 - 3 guns in endurance test
 - 1.7% malfunction rate
 - Will have more data next PTM
 - Return all 150 guns from BorchersResolve-Carbine 308 Win and 35 Whelan-a new model or a Carbine 7400
ACTION: Trull must have information to present to customers at IWA. Primarily, what we are doing, why we are doing it and when we will see the changes. Also, how to handle the 150-200 35 Whelen guns that Borchers has in their possession.
- Bolt-Action Rifle Torque Settings at Final Assembly
OBJECTIVE: Quality Issue
ACTION: Manufacturing to confirm that processes have been changed at final assembly.
 - Manufacturing fine tuning processAction: Ilion to confirm that all controls are in place by March PTM.
- Other Concerns from Ilion.

Priorities – Need to understand priorities and understand how LE/Military fits into the fold with the Sporting line. There is no separate budget for LE/Military new products.

Also, Engineering expressed concern over what the priorities were from Marketing. They are:

1. New Products
2. Shotgun POI

Action going forward:

- o Marketing and Engineering need to evaluate priorities after SHOT Show
- o Direction needed on Commercial/LE/Military
- o S. Perniciaro to keep two separate ledgers for commercial & LE projects from a budget perspective

R&D TOPICS

E-Town Development Topics

- Model 597 Performance Improvement
OBJECTIVE: Performance Improvement of 597
Action: Diaz to advise of redesign efforts.
 - o Different magazine springs & box designs being evaluated
 - o Should start shooting new boxes week of 2/2
 - o Three different boxes .070", .120", .140"ACTION: Get boxes to J Trull once we have redesigned box
- Model 7600 223 Rem
OBJECTIVE: New Product
Action: Diaz to update on DAT status. Guns were received from Ilion. Advise of anticipated completion date.
 - o Colt magazine box to E-Town
 - o Issues with stem low
 - o Modified insert by 5°, 400 rounds with no issues
 - o Colt is standard but supply is extremely tightAction: R&D to give status at next PTM

MAYFIELD BASED RIFLE PRODUCTS

2004 New Rifle Product – Mayfield

- Model 504
OBJECTIVE: New Product
Action: Golemboski to advise of production status.
Problem encountered with left extractor creating a burr in the barrel due to hitting the extractor cut. Will I.D. the problem and correct within one week. Otherwise, production is coming up to speed.
Action: Will continue to follow at subsequent PTM's.
- Model 710 Magnum
OBJECTIVE: New Product
Action: Review status of T&P and build plan.
Continuing to struggle with riveted extractors.
Action: Samples at E-Town to test week of 2/16/04
Status needed prior to next PTM

2005 New Rifle Product – Mayfield

- Model 504-T LS HB
OBJECTIVE: New Product
NPP-2005-03 RAMAC's TBD
Line Extensions to M504 line in 22LR and 17HMR target versions.
Action: **Discuss concepts and clarify any issues**
Manufacturing and R&D understand the guidelines by Marketing.
Action: **Will review stock prototype at SHOT from Boyd's. Will continue to monitor at next PTM.**
- Model 710 Steel Receiver
OBJECTIVE: Product Enhancement
Early 2004 indicators suggest that "sprucing up" the line in 2005 will be needed.
Action: **Discuss path forward**
Action: **Team agreed to focus on this after 710 Magnums get into production.**
- Model 710 Short Action
OBJECTIVE: New Product
Action: **Discuss plan of action to introduce .243 Win caliber in M710. True short action vs. using current action.**
Team agreed that if we can make the all steel extruded receiver work, a true short action is a viable product option. Possibly for 2005 if we can get the magnums behind us.