

September 28, 1998

*M/710 Centerfire Bolt Action  
Concept Review 2*

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EXHIBIT  
19  
A-20

PLAINTIFF'S  
EXHIBIT  
334

ET36280

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# Model 710 - Agenda

- Program Plan Danny Diaz
- Concept Overview Mike Keeney
- Review Cosmetics / Function Mike Keeney
- Manufacturing Status Jim Rabbia
- Review Financials Bill Bruckeman
- Path Forward Proposal Mike Keeney
- Action Items Danny Diaz

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September 20, 1996

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# M/710 - Design Changes

- OBJECTIVE
  - ✓ MINIMIZE COST, CAP. AND PIECE PRICE
  - ✓ TECHNICALLY LOW RISK
  - ✓ RAPID INTRO TO MARKET
- Barrel
- Receiver
- Receiver Insert
- Trigger Assembly
- Bolt Assembly
- Magazine Assembly
- Stock

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**M/710 Barrel (Cost Baseline; +\$14.56)**

- Integral Locking Lugs
  - ✓ Dimensional Control
  - ✓ Establishment of Headspace
  - ✓ Compact Package
- "New" Cold Form GFM process
  - ✓ Finished bore
  - ✓ Rough Chamber
  - ✓ "Work Hardened"
    - Extensive testing required

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# M/710 Receiver (Cost Baseline; -\$9.10)

- Seamless Tubing
  - ✓ "Free Machining" Alloy
  - ✓ I.D. provided to size
  - ✓ No Heat Treatment Required
- Minimized Critical Machining
  - ✓ Eliminated Lug Clearance Broaching
  - ✓ Eliminated Feed Lips
  - ✓ Eliminated Fire Control Slots
  - ✓ Eliminated Tang
  - ✓ Eliminated Barrel Threads - Press Fit to Barrel

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83

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# M/710 Receiver Insert (New Part)

- Injection Molded
  - ✓ Low Piece Price
- "Sleeve" to provide smooth bolt guidance
  - ✓ Teflon additive to synthetic compound for lubricity
- Integral Tang
  - ✓ Complex geometry molded
  - ✓ Part to part control
- Integral trigger housing side plate w/ spacers
  - ✓ Eliminate housing assembly costs
  - ✓ Position controlled relative to receiver

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# M/710 Trigger Assembly (Cost Bsln; +\$2.45)

- M/700 Components
  - ✓ Robust Design
  - ✓ Eliminate development cost and time
- Three Position Safety
  - ✓ Safety Lever Redesign
  - ✓ Revised Detent System
    - Eliminate Side Plate Heat Treatment

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**M/710 Bolt Assembly (Cost Bsln; +\$1.60)**

- Bolt Head
  - ✓ Similar to M/700
    - three lugs
    - M/700 extractor
- Bolt Body
  - ✓ Seamless Tubing
  - ✓ Processed Complete on CNC Lathe
  - ✓ Pinned to Bolt Head
    - Similar to Savage and Browning
- Bolt Handle
  - ✓ No Heat Treatment Required
  - ✓ Screw Machine Part
  - ✓ Pinned/Welded or Brazed to Bolt Body
    - Similar to M/788

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*M/710 Firing Pin Assembly (Not Est'd)*

Firing Pin System

✓ Similar to M/700

✓ Reduced Weight

→ Reduced Lock Time

Bolt Plug

✓ Synthetic

✓ Keyed Assembly to Bolt Body

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*M/710 Magazine Assembly (Not Est'd)*

- Stamped w/ Synthetic Bottom
- Dual Stack/Single Feed

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M/710 Stock (Cost Baseline; -\$1.53)

One Piece Stock

✓ Recoil Pad vs. Butt Plate?

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## Review of Cost Enhancements

- Barrel -- Cold Form w/ Work Hardening
- Receiver -- Seamless Tubing w/ Insert
- Receiver Insert -- Molded/Combination
  - ✓ Receiver Sleeve
  - ✓ Tang
  - ✓ Trigger Assembly Housing
- Trigger Assembly
  - ✓ M700 Components
  - ✓ Cost Reduced Trigger Housing
- Bolt Assembly
  - ✓ Seamless Tubing Bolt Body
  - ✓ Screw Machined Bolt Handle
  - ✓ Pinned Assembly

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*Manufacturing Status*

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# M/710 Financials

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- Cost
- Capital
- Gross Margin
- ROI
- Break even
- etc.

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## *Path Forward Proposal*

- Cost Analysis Review for Further Savings
- M/700 Receiver Endurance Testing - \$6000/6 Wks
- Mold Flow Analysis - \$7000/4 Wks
- Magazine Prototyping - \$20,000/16 Wks
- Build Cosmetic Prototype - \$5000/8 Wks
- Detailed Cost Estimate
- Design Review #3 - Dec. 9, 1998**
  - ✓ Review Cosmetic Prototype
  - ✓ Review Final Cost Analysis

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