

11/17/98

M/710 DESIGN & ESTIMATE REVIEW NOTES

8:00 AM: Jeff Swanson

I. Receiver Insert

A. Material

1. Questioned Rev. 4 estimate material cost - Rev. 5 estimate changed to \$.47
2. Questioned material to be quoted - Glass filled Nylon - Need specifics

B. Tooling - Goal is to mold part complete w/o secondary op's

1. Quote 2 cavity mold - Rev. 5 estimate to reflect cycle time change
2. Can TRT pull adjustment screw holes as designed?
 - change screw holes to open faced to eliminate secondary op's.
3. Need positional tolerance $>.003$
4. \varnothing tolerance in question due to shrink, etc.
5. Need to sink threaded insert in tang - Rev. 5 estimate to reflect this

C. E'town Estimates:

- Material = \$3/lb.
- Part Volume = 1.8 in^3
- Cycle Time = 20.7 sec.
- Part Cost = \$.40 ea.

D. Mold Flow Analysis - Needed to be done to determine accurate cycle time, material, cavitation, etc.

II. Bolt Head

- A. Oper. 80 (Drill Cross Pin Hole) - Eliminated, redundant
- B. Oper. 30 (Chamfer Lugs) - Eliminated, incorporated into barrel chamber

III. Bolt Plug

A. Lugs

1. Need to determine if current design is strong enough to support loading
2. Need to determine material to be used - Can we flow glass into this area

B. Mold Cycle Time - Rev. 4 estimate high, potential \$ savings

1. Revisited & corrected in Rev. 5 estimate

IV. Stock Ass'y - Rev. 5 estimate to reflect stock w/ recoil pad

- A. Recoil Pad Cost - Rev. 5 estimate to reflect M/700 outsource \$
- B. Stock Cost - Rev. 5 estimate to reflect M/700 outsource \$

10:00 AM: Jim Parkhurst, Mike LeMay, Paul Zito

I. Barrel

- A. Chamber - Incorporate camming chamfer in lug configuration, Remove from bolt head to eliminate extra op.
- B. Finish - Replace C'less polish with finish turn
 - BBL form requires finish turn which should not adequate surface finish prior to blast
- C. Sight Holes - Remove from barrel ass'y process and integrate into barrel op 145 (CNC Drill & Tap)

11:00AM: Walt Zarnoch

I. Firing Pin Head - MIM w/ secondary's - OK as is

II. Receiver - Outsource to screw machine house

- A. Ilion to quote "our" vendors
- B. Rev. 5 Estimate to reflect E'town quote from DELTECH until others are received

III. Bolt Body - Outsource to screw machine house

- A. Ilion to quote "our" vendors
- B. Rev. 5 Estimate to reflect E'town quote from DELTECH until others are received

IV. Bolt Ass'y

- A. Oper. 40 (Ultrasonic Test) - Necessary? - Confered w/ Glenn, Replaced with Magnaflux in Rev. 5 Estimate
- B. Oper. 60 (Ream) - Eliminated, not needed

12:30 PM: Mike Santillo

I. Misc. Components

- A. Firing Pin - Need adequate clearance for vendor to form threads (Design change)
- B. Bolt Handle - Rev. 5 Estimate to reflect E'town quote from DELTECH until others are received
- C. BBL Assembly
 - 1. Oper. 30 (Stake Receiver) - Eliminated, not needed
 - 2. Oper. 40 (Wash, Magnaflux & Stamp) - Eliminated, not needed at this level
 - 3. Oper. 80 (Drill & Tap) - Moved to barrel process
- D. Fire Control Assembly - Defined Process - Rev. 5 estimate to reflect
 - 1. Stage 1 - Press side plate on insert & sink threaded insert
 - 2. Stage 2 - Assemble "guts" (sear, trigger, safety arm, etc.)

2:00 PM: Bob Joy, Bob Leskovar

I. Final Assembly - Familiarization session

- A. Discussion of components and probable assembly process - no foreseeable issues

3:00 PM: Jim Rabbia, Joe Mead, Danny Diaz, Mike Keeney, Mike Santillo

I. Group Discussion - Progress Report & Path Forward

A. Ilion

1. Rev. 5 estimate to be done based on individual sessions
2. Rev. 5 estimate to reflect '99 labor & overheads
3. Receiver & Bolt Body to be sent out for quotes
4. Misc. Component quotes to be expedited

B. E'town

1. Provide drawings for remaining components
2. Perform mold flow analysis on receiver insert
3. Alter design where applicable per individual discussions