M1911-A1 REDUX

FROM RIO BENSON, RIO BENSON CONSULTING, ON THE PREPARATION OF THESE DOCUMENTS

To qualify my efforts in the development of this drawing package: As a Machine and Mechanical Designer, I’ve been preparing drawings to DOD-100/1000 and ASME/ANSI Y14 standards, for a living, for more than a half century. I am a shooter and a firearms enthusiast with sporting experience since my mid-teens and significant military firearms experience from my late teens to my late-twenties. I am also an avid fan of John M. Browning and the “original” M1911.

Historically, when the drawings for John M. Browning’s Colt M1911 were first created, there was little in the way of ‘consensus’ standards to guide the designers and manufacturers of the day in either drawing format or in DOD documentation of materials and finishes. For the most part, these were added, hit or miss, in later drawing revisions. Furthermore, due to the original design’s flawless practicality and it’s amazing longevity, the government’s involvement, and the fact that in the ensuing 100-plus years of production the M1911 design has been officially fabricated by several different manufacturers, the drawings have gone through many, many revisions and redraws in order to accommodate all these various interests. These ‘mandated by committee’ redraws and revisions were not always made by the most competent of designers, and strict document control was virtually non-existent at the time. All of this has led to an exceedingly sad state of credibility, legibility, and even the availability of legitimate M1911 drawings today.

Granted, the M1911 is still being produced by a multitude of manufacturers, but obviously not to the original drawings. The current manufacturers have their own documentation, including their own modifications and production improvements. Because of their competitiveness, there is little chance any of these current manufacturers will publish or furnish any part of their documentation, since they might be giving away some of their trade secrets. Of course, we must assume that none of these manufacturers have ever heard of “reverse engineering” [LOL].

With that being said, I have noticed numerous requests for M1911 drawings over the years, and now having the time, the knowledge, and the means, I decided to model the M1911 in 3D, using SolidWorks 2012, and then create updated drawings from those models. My source for the original[?] drawings came, free of charge, from the internet. As a drawing set for the M1911 these were better than nothing, but they were full of misinterpretations, errors, omissions, in addition to being very difficult to read. Unfortunately, that was all that was available.

Due to the poor legibility of the reduced drawing sizes, original drafting quality, and reproducibility of the source documents, and also of the collective questionable veracity of revision status, a number of assumptions and even interpolations had to be made in the creation of the subject documentation package. While every attempt was made regarding the maintenance of technical correctness and completeness, I (Rio Benson), or Rio Benson Consulting, cannot warrant or guarantee the package’s accuracy or suitability for manufacture, and recommend its use be limited to only that of a source of interesting and historical information. This package is furnished free of charge, and the user must assume any and all liability in any connection with its use. The laws regarding intellectual property apply here. This documentation may be published and distributed freely as a complete package, without charge, provided nothing is altered in any way. Furthermore, this writing is an integral part of the package and must accompany it in any of its published forms. By the way, this package prints best on a tabloid (11 x 17 inch) printer, color or no. Only two sizes of drawing format were used, B (11 x 17) and D (22 x 34). The advantage of the D size is less format per drawing area. The D size printed on a tabloid sheet results in a half-size reproduction (half-size is not half a sheet; do your math) that is still quite legible for all but the legally blind.
All of the SolidWorks 2012 models and drawings created for this package are available from me, at riobenson@clear.net, for a small donation to help cover my expenses in materials, equipment, and time. While I will gladly assist anyone wishing it, technically, I am not in the habit of doing anyone’s work for them without some form of compensation.

The approach to the updated modeling and redrawing contained in this package was as follows:

1. Wherever possible, ‘turn-of-the-century’ machine shop methodology and technology was used in determining the design intent of the original documentation.
2. Otherwise, no attempt was made to arbitrarily change any dimensions or tolerances, however costly they would be to reproduce. There were, however, a few instances where the “original” dimensions were geometrically impractical to fabricate or were incorrect, thus dictating a change. Furthermore, the application of current drafting standards required some additional minor changes. Overall, and as an added benefit, the changes made should make the drawings more legible, logical, and easier to read.
3. Manufacturing technology in materials, heat treatment, and finishes have changed considerably in the past several years, thereby making virtually all of the “original” drawing notes obsolete. In fact most of the standards and specifications originally referred to have been obsoleted or superseded. As a result the remaining drawing notes, referring primarily to materials, heat treatment, and finish, have been standardized and updated to what is currently available and more practical from a manufacturing standpoint, in this package.
4. Some of the newer methods in drafting technology, such as Geometric Dimensioning and Tolerancing, and particularly that of True-Position Dimensioning, have been purposefully avoided in this effort. These were not available for the original design, nor were they necessary. The use of these practices becomes economically feasible only in high volume production applications where the technical expertise is available, and the purchase and deployment of expensive Coordinate Measuring Machines (CMM) and costly templates and gages can be justified. Seldom, if ever, are the tried and true bilateral tolerancing methods of the past insufficient to manufacture excellent parts. Case-in-point, the decades old M1911-A1 design, itself, using no Geometric Tolerancing, has had a success and longevity that is unmatched throughout all industry. Go figure! [BG]
5. No attempt was made to make these drawings DOD compliant. The driving intent here was to illustrate dimensional accuracy and functionality of the overall design. Markings, references to inspection of surface hardness, and other superfluous military requirements were omitted. The optional alternative designs were generally used since they represent improved or simplified fabrication methods.

In the creation of this documentation package, a number of issues became quite obvious and apparent: To begin with, it is doubtful the multitude of the very complex and intricate features found on the many parts of the M1911-A1 were present, or even necessary, in John M. Browning’s original design before Colt and the government got hold of it. This sort of complexity was just not his style, and moreover, is probably the result of too many cooks stirring the soup. The result is a firearm that may be too expensive to fabricate for today’s consumer market, without radical simplification. Hence, resulting “copies” of the M1911-A1 are now being produced by many very expert manufacturers, that when disassembled and measured would bear some differences to what is described in this package. For my money and in my opinion, the modern “copies” are often better weapons than the so-called “original”, and are probably closer to what John Browning originally intended. However, inadvertent tighter tolerances can and do defeat field use practicality.
DIA: 0.160 LB/INCH
DIRECTION OF HELIX: CCW
LOAD AT COMPRESSED LENGTH OF: 2.50 ± 0.400 LB
FREQUENCY: 0.500 LB
HOLE DIA INTO WHICH SPRING FITS FREELY: 0.109 MIN
ROD DIA OVER WHICH SPRING SLIDES FREELY: 0.279 MAX
TYPE OF ENDS: SQUARED & GROUND
FREE LENGTH: 0.593
ACTIVE COILS: 12.5
TOTAL COILS: 14.5

NOTES:

1. MANUFACTURE IAW TYPE 1, GRADE A, OF SAE AS 13572.
2. STRESS RELIEVE AT 450°F FOR 20 MINUTES AFTER FORMING.

MODEL SHOWN COMPRESSED FOR ASSEMBLY

DIA: 0.018
DIA: 0.104 ± 0.003
FREQUENCY: 0.593
ACTIVE COILS: 12.5
TOTAL COILS: 14.5
DIRECTION OF HELIX: CCW
LOAD AT COMPRESSED LENGTH OF: 2.50 ± 0.400 LB
FREQUENCY: 0.500 LB
HOLE DIA INTO WHICH SPRING FITS FREELY: 0.109 MIN
ROD DIA OVER WHICH SPRING SLIDES FREELY: 0.279 MAX

NOTES:

1. MATERIAL:
   WROUGHT: STEEL, 1018, ASTM A108.
   CAST: STEEL, IC-1020, ASTM A732.

MATERIAL: 1. WROUGHT

CAST:

NOTES:

MATERIAL: 1. STEEL, 1018, ASTM A108.
   CAST: STEEL, IC-1020, ASTM A732.

THIRD ANGLE

DO NOT SCALE DRAWING
PIN, BARREL LINK

DIMENSIONS ARE IN INCHES.
TOLERANCES PER DECIMAL PLACE:
.X = .05, .XX = .02, .XXX = .005, .XXXX = .0005

UNLESS OTHERWISE SPECIFIED [UOS]:
ANGLES = 45° ±5°
MACHINED FINISH = 63-125 µIN. .5
REMOVE ALL BURRS AND SHARP EDGES .02 MAX

2X .01±.02 X 45°±5°

QTY REQD PER NEXT ASSY = 1
FINISH:
MIL-STD-171

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Gastonia, North Carolina 28054
riobenson@clear.net

08/05/2010
PROJ: M1911-A1 REDUX
5013199

DATE PLOTTED: 5/22/2012
PAGE SIZE: B1
WEIGHT: 0.00 LBS
SHEET 1 OF 1
MODEL SHOWN COMPRESSED FOR ASSEMBLY

DIAMETER OF WIRE ........................................... .043
DIAMETER OF COIL (OD) ..................................... .430 ± .005
FREE LENGTH ................................................... (6.55)
ACTIVE COILS .................................................. 29
TOTAL COILS .................................................... 30
DIRECTION OF HELIX ...................................... CCW
LOAD AT COMPRESSED LENGTH OF ....................... 3.72 = 8.00 ± .50 LB
LOAD AT COMPRESSED LENGTH OF ....................... 1.81 = 13.55 ± .60 LB
SPRING RATE .................................................. (2.88 LB/INCH)
SOLID LENGTH ................................................. 1.375 MAX
TYPE OF ENDS ................................................. NOT SQUARED OR CLOSED
HOLE DIA INTO WHICH SPRING FITS FREELY ........... .448 MIN
ROD DIA OVER WHICH SPRING SLIDES FREELY ....... .336 MAX *
CRIMP ONE END OF COIL TO ......................... .326 +.000 -.010 ID
* EXCEPT FOR CRIMPED END.

NOTES:

1. MANUFACTURE IAW TYPE 1, GRADE A, OF SAE AS 13572.
2. STRESS RELIEVE AT 450°F FOR 20 MINUTES AFTER FORMING.
1. HELICAL COMPRESSION SPRING OF \( \phi \), 0.043 WIRE, .430 OD, .218 PITCH SHALL ENTER FOR A MINIMUM DISTANCE OF 1/4 COIL.

NOTES:

- 0.02, LBS
- 5013201
- 2:1 SCALE
- DATE PLOTTED: 5/22/2012
- THIRD ANGLE FINISH:
  - MIL-STD-171

INTERPRET DRAWING IAW ANSI Y14.5M -1994

TOLERANCES PER DECIMAL PLACE:
- .X = \( \pm 0.05 \)
- .XX = \( \pm 0.005 \)
- .XXX = \( \pm 0.0005 \)
- .XXXX = \( \pm 0.00005 \)

UNLESS OTHERWISE SPECIFIED (UOS):
- DIMENSIONS ARE IN INCHES
- TOLERANCES PER DEGREE PLACE
- ADD \( +0.00 \) OR \( -0.00 \)
- ADD \( +0.01 \) OR \( -0.01 \)
- ADD \( +0.02 \) OR \( -0.02 \)
- ADD \( +0.03 \) OR \( -0.03 \)
- ADD \( +0.04 \) OR \( -0.04 \)
- ADD \( +0.05 \) OR \( -0.05 \)
- ADD \( +0.10 \) OR \( -0.10 \)
- ADD \( \pm 0.00 \) OR \( \pm 0.01 \)
- ADD \( \pm 0.02 \) OR \( \pm 0.03 \)
- ADD \( \pm 0.04 \) OR \( \pm 0.05 \)
- ADD \( \pm 0.10 \) OR \( \pm 0.15 \)

- DO NOT SCALE DRAWING
- REMOVE ALL BURRS AND SHARP EDGES MAX
- CONSULTING CONSULTING CONSULTING CONSULTING
- 12345678
- 8 7 6 5 4 3 2
- QTY REQD PER NEXT ASSY = 1
- STEEL 1018
- Drians Blynn
- PLUG, RECOIL SPRING

CONSULTING CONSULTING CONSULTING CONSULTING
- PROJ: M1911-A1 REDUX
- NAME: R Benson
- DATE: 08/30/10
- SCALE: 2:1
- SHEET 1 OF 1
- WEIGHT: 0.02 LBS
- REV:
MODEL IS SHOWN COMPRESSED FOR ASSEMBLY

DIA METER OF WIRE ......................................................... .026
DIA METER OF COIL (OD) .................................................. .207 ± .005
FREE LENGTH ............................................................... (1.70)
ACTIVE COILS ............................................................... 38
TOTAL COILS ............................................................... 40
DIRECTIONS OF HELIX .................................................. OPTIONAL
LOAD AT COMPRESSED LENGTH OF ................. 1.36 = 1.030 ± .135 LB
SPRING RATE .............................................................. (3.0 LB/INCH)
SOLID LENGTH ............................................................. 1.066 MAX
TYPE OF ENDS .............................................................. SQUARED AND GROUND
HOLE DIA INTO WHICH SPRING FITS FREELY .... .219 MIN
ROD DIA OVER WHICH SPRING SLIDES FREELY .... 150 MAX *
CRIMP ONE END OF COIL TO ......................... .135 +.010 -.000 ID

* EXCEPT FOR CRIMPED END.

NOTES:
1. MANUFACTURE IAW TYPE 1, GRADE A, OF SAE AS 13572.
2. STRESS RELIEVE AT 450°F FOR 20 MINUTES AFTER FORMING.
**MATERIAL:**
WROUGHT; STEEL, 4140, ASTM A108
AUSTENITIC GRAIN SIZE 6 OR FINER.
CAST: STEEL, IC 4140, ASTM A732.

**NOTES:**
1. MATERIAL:
   WROUGHT; STEEL, 4140, ASTM A108;
   AUSTENITIC GRAIN SIZE 6 OR FINER.
   CAST: STEEL, IC 4140, ASTM A732.
SPHER R.16

Ø.157 +.000

Ø.182 +.000

.786 +.000

+.002

-.008

60° +5°

60° -5°
PIN, HAMMER STRUT

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REVISION HISTORY

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DRAWN BY: RIO BENSON

DATE PLOTTED: 5/22/2012

PROJ: M1911-A1

5013207
MODEL IS SHOWN COMPRESSED FOR ASSEMBLY

DIAMETER OF WIRE ............................................. 0.045
DIAMETER OF COIL (OD) ........................................ 0.273 ± 0.000 - 0.003
FREE LENGTH .................................................. (2.156)
ACTIVE COILS .................................................. 19.5
TOTAL COILS .................................................. 21.5
DIRECTION OF HELIX ........................................... CCW
LOAD AT COMPRESSED LENGTH OF ...................... 1.312 = 22.0 ± 2.0 LB
LOAD AT COMPRESSED LENGTH OF ...................... 1.062 = 29.5 ± 2.0 LB
SPRING RATE .................................................. (27.69 LB/INCH)
SOLID LENGTH .................................................. 0.968 MAX
TYPE OF ENDS .................................................. CLOSED, SQUARED & GROUND
ROD DIA OVER WHICH SPRING SLIDES FREELY .... 0.174 MAX*
CRIMP BOTH END COILS TO ............................... 0.160 +0.008 -0.000 ID

*EXCEPT FOR CRIMPED ENDS: CHECK AT A STAGE OF MANUFACTURE OR BY CUTTING OFF CRIMP IN SAMPLE.

NOTES:
1. MANUFACTURE IAW TYPE 1, GRADE A, OF SAE AS 13572.
2. STRESS RELIEVE AT 450°F FOR 20 MINUTES AFTER FORMING.
**CAP, MAINSPRING**

**DATE PLOTTED:** 5/22/2012

** mature to 5013209**

**TITLE:**

**DRAWN BY:**

**REVISED BY:**

**APPROVED BY:**

**DO NOT SCALE DRAWING**

**MATERIAL:**

**DIMENSIONS ARE IN INCHES.**

**SCALE:** 4:1

**WEIGHT:** 0.01 LBS

**TITLE BLOCK**

**REVISION HISTORY**

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<td>A</td>
<td>ADDED MISSING Ø .279 DIMENSION</td>
<td>11/07/2010</td>
<td>R Benson</td>
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**NOTES:***

- **FINISH:**
  - R1.174 ±.000 - .005
  - R .010 ± .00

- **HEAT TREAT:**
  - CASE DP .003-.005
  - RH C 48-52

- **TOLERANCES PER DECIMAL PLACE:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **ANGLES:**
  - 90°

- **SPHER R .030 + .015 - .000**

- **SPHER R .000 ± .000**

- **.142 ± .006 .000**

- **.020 ± .000**

- **.174 ± .000 - .005**

- **.279 ± .000 - .003**

- **.03 X 45° ± 5.00°**

- **R .020 MAX**

- **R .010 ± .00**

- **.065 ± .010 - .000**

- **.142 ± .006 .000**

- **.174 ± .000 - .005**

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**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

- **UNLESS OTHERWISE SPECIFIED [UOS]:**

  - **DIMENSIONS ARE IN INCHES.**
  - **TOLERANCES FOR DECIMAL PLACES:**
    - .X = .05
    - .XX = .02
    - .XXX = .005
    - .XXXX = .000

  - **MACHINED FINISH = 63-125 µIN.**

**REV**: 08/31/2010 MIL-STD-171

**DATE OF NEXT ASSY:**

- **08/31/2010**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**

**MATERIAL:**

- **ASTM A108**
- **STEEL 1117**

**UNLESS OTHERWISE SPECIFIED [UOS]:**

- **DIMENSIONS ARE IN INCHES.**
- **TOLERANCES FOR DECIMAL PLACES:**
  - .X = .05
  - .XX = .02
  - .XXX = .005
  - .XXXX = .000

- **MACHINED FINISH = 63-125 µIN.**
MODEL SHOWN COMPRESSED FOR ASSEMBLY

DIAMETER OF WIRE ........................................... (.026)
INSIDE DIAMETER (ID), FREE, NOT LESS THAN ....... .091
OUTSIDE DIAMETER (OD), SOLID, NOT MORE THAN .149
FREE LENGTH (APPROX) .................................... .708
ACTIVE COILS ................................................. (11)
TOTAL COILS .................................................. (13)
DIRECTION OF HELIX ....................................... CW
LOAD AT COMPRESSED LENGTH OF ................. .550 = 5.7 ± .5 LB
LOAD AT COMPRESSED LENGTH OF ................. .456 = 8.5 ± .7 LB
SOLID LENGTH ................................................ .364 MAX
TYPE OF ENDS ................................................. PLAIN (OPEN ENDS, NOT GROUND)
HOLE DIA INTO WHICH SPRING FITS FREELY ........ .152 MIN
REDUCE ID OF LAST COIL ON BOTH ENDS TO ....... .085 + .000 -.010

NOTES:
1. MANUFACTURE IAW TYPE 1, GRADE A, OF SAE AS 13572.
2. STRESS RELIEVE AT 450°F FOR 20 MINUTES AFTER FORMING.
SECTION A-A
SCALE 6:1

SEE NOTE 1

NOTE:

1. 11 CONTOURED GROOVES EQUALLY SPACED AT 5° AND CENTERED ABOUT CENTERLINE. GROOVES ARE CONTOURED ALONG BOTH THE R.500 AND R.188 SURFACES.
NOTES:
1. THE 3D MODELING OF THIS COMPONENT IS AS ACCURATE AS THE CAD SOFTWARE WILL REASONABLY ALLOW. WHILE THE DIMENSIONS ARE BELIEVED TO BE CORRECT, THE ACTUAL PART MAY VARY VISIBLY SOMEWHAT FROM THAT SHOWN.

REV. DESCRIPTION DATE APPROVED

TUBE, MAGAZINE
THIRD ANGLE PROJECTION

SCALE: 2:1

PROJECT: M1911-A1 REDUX
DATE PLOTTED: 5/23/2012

 tube, steel
MATERIAL:

ELECTROLESS NICKEL PLATE IAW ASTM A519

WEIGHT: 0.11 LBS

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UNLESS OTHERWISE SPECIFIED [UOS]: DIMENSIONS ARE IN INCHES. TOLERANCES: PER DECIMAL PLACE: .X = .05, .XX = .02, .XXX = .005, .XXXX = .0005; ANGLES = .5

FINISH:
MATCH RADIUS TO SIDE ON BOTH SIDES

REVIEW DESCRIPTION DATE APPROVED

SECTION B-B
VIEW A-A
SECTION C-C
SECTION D-D

2X .63 ± .01

MATCH RADIUS TO SIDE ON BOTH SIDES

BELIEF SHOWN EXAGGERATED; MAKE MINIMUM

VIEW A-A

SECTION C-C

VIEW A-A

SECTION B-B

SECTION D-D
NOTES: (UNLESS OTHERWISE SPECIFIED)

1. RECESS SHOWN ARE NONFUNCTIONAL, AND ARE PERMITTED WITHIN REASONABLE LIMITS FOR STABILITY OF THE MOLDED PRODUCT.

2. MATERIAL: MOLDING PLASTIC IAW ASTM D5548, PHENOLIC, TYPE CFI-20. COLOR: NO. 20045, 20059 OR 20062 OF TABLE II, FED STD NO. 595; SEMI-GLOSS BROWN.

3. CHECKERING IS 20° DIAGONAL DIAMOND, 90° GROOVES, ON CENTER TO CENTER ON THE DIAGONAL.
SECTION A-A

TUBE, PLUNGER

UNLESS OTHERWISE SPECIFIED (O.S.), DIMENSIONS ARE IN INCHES; TOLERANCES PER Decimal Place.

MATERIAL: STEEL 1018

QTY REQ'D PER NEXT ASSY = 1

UNLESS OTHERWISE SPECIFIED, ALL BURRS AND SHARP EDGES .02 MAX, MACHINED FINISH = 63-125 µIN.

ANGLES = ± .0005

HEAT TREAT: PARA 5.3.1.2

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DATE PLOTTED: 5/23/2012

SCALE: 4:1

WEIGHT: 0.00 LBS
SECTION B-B
SCALE 4 : 1

DETAIL A
SCALE 4 : 1

STOP, SLIDE

REV
DESCRIPTION
DATE
APPRVD

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SPHER R.11

R.100

.365+.000-.007
.256+.000-.005
.2005+.000-.020
.042+.000-.005

R.03

(1.088)

3°

.990+.004-.000

.010

.010

.006

R Benson

DRAWN BY:

DATE PLOTTED: 5/23/2012

PROJ: M1911-A1

HEIGHT: .02 LBS

DATE: 09/06/2010

MIL-STD-171

12345678

8 7 6 5 4 3 2

CONSULTING

NAME

STOP, SLIDE

REV
DESCRIPTION
DATE
APPRVD

PROJ. M1911-A1

SIZE

DRAWN BY

REVISION HISTORY

DRAWN BY

REVIEWED BY

APPROVED BY

NAME

DATE

06/28/2010

RS Benson

PAGE: 2

SHEET 1 OF 1

SECTION B-B
SCALE 4 : 1

RIO BENSON CONSULTING
1467 Georgeanna Drive
Gastonia, North Carolina 28054
riobenson@clear.net
SECTION A-A

SECTION B-B

NOTES:
1. MATERIAL:
   WROUGHT: STEEL, 4140, ASTM A108;
   CAST: STEEL, IC-4140, ASTM A732.
   AUSTENITIC GRAIN SIZE 6 OR FINER.
NOTES:

1. MATERIAL: STEEL, 1144, ASTM A108; AUSTENITIC GRAIN SIZE 7 OR FINER.

DETAIL F
SCALE 8:1

SECTION C-C
SCALE 6:1

SECTION B-B
SCALE 6:1

SECTION A-A
SCALE 6:1

BREAK EDGE 0.03 X 45° ALL AROUND

BEND DIRECTION

AFTER PROTECTIVE FINISH

AUSTENITIC GRAIN SIZE 7 OR FINER.
NOTES:

1. MATERIAL: STEEL, 1144, ASTM A108;
   AUSTENITIC GRAIN SIZE 7 OR FINER.
NOTES:

1. MATERIAL: STEEL 1144, ASTM A108; AUSTENITIC GRAIN SIZE 7 OF FINER.
MATERIAL: 1. WROUGHT STEEL, 4140, ASTM A108; AUSTENITIC GRAIN SIZE 6 OR FINER.

NOTES:

1. MATERIAL: STEEL, 4140, ASTM A108; AUSTENITIC GRAIN SIZE 6 OR FINER.
2. CAST STEEL, IC4140, ASTM A732.

DISCONNECTOR

WEIGHT: 0.00 LBS SHEET 1 OF 1

PROJECT: M1911-A1 REDUX

QTY REQD PER NEXT ASSY = 1

RIO BENSON RIO BENSON RIO BENSON RIO BENSON

DATE PLOTTED: 5/25/2012

THIRD ANGLE PROJECTION

DISCONNECTOR 6008603
SCALE: 6:1

REVDWG/PART NO.


NAME riobenson@clear.net

DO NOT SCALE DRAWING

PARA 5.3.1.2

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MIL-STD-171

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UNLESS OTHERWISE SPECIFIED [UOS]:

DIMENSIONS ARE IN INCHES.

TOLERANCES:  PER DECIMAL PLACE:

.X = .05, .XX = .02, .XXX = .005, .XXXX = .0005;

ANGLES = .5

FINISH:

HEAT TREAT:

RH C 43.5-50

CONSULTING CONSULTING CONSULTING CONSULTING

REMOVE ALL BURRS AND SHARP EDGES .02 MAX.

SEE NOTE 1, MACHINED FINISH = 63-125 µIN.
NOTES:

1. MATERIAL:
   WROUGHT: STEEL, 1018, ASTM A108.
   CAST: STEEL, IC1020, ASTM A732.
NOTES:

1. MANUFACTURE IAW TYPE 1, GRADE A, OF SAE AS13572.
2. STRESS RELIEVE AT 450°F FOR 30 MINUTES AFTER FORMING.
NOTES:

1. MATERIAL: WROUGHT STEEL, 1117, ASTM A108.
   CAST STEEL, IC1117, ASTM A732.

2. THIS DIMENSION OCCURS ONLY AT PRECISE ANGLE AND LOCATION SHOWN FOR SECTION B-B CUTTING PLANE IN PARENT VIEW.


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THE INFORMATION CONTAINED IN THIS DRAWING IS PROPRIETARY AND CONFIDENTIAL:

MATERIAL:

- STEEL, IC1117, ASTM A732.
- WROUGHT STEEL, 1117, ASTM A108.

DIMENSIONS ARE IN INCHES.

TOLERANCES: PER DECIMAL PLACE:

- .X = .05
- .XX = .02
- .XXX = .005
- .XXXX = .0005

ANGLES = .5°

FLATTEN CRESTS .010 + .000/- .004

GROOVES, .040 PITCH X 90° FLATTEN CRESTS .010 +.000/- .004

.016 X 45° BEFORE GROOVES

SECTION B-B

SECTION C-C

SECTION A-A
NOTES:

1. MATERIAL: STEEL, 1144, ASTM A311; AUSTENITIC GRAIN SIZE 8 OR FINER.

2. HEAT TREATMENT: HEAT LARGE PIN END 1450 TO 1500°F. OIL QUENCH. TEMPER 20 MINUTES AT HEAT TO RH C 48-52. LEAVE LONG PIN SOFT OR SOFTEN LONG PIN ONLY, SUFFICIENT FOR DRILLING.
TRIGGER ASSEMBLY

NOTES:
1. REFINISH, IF NECESSARY AFTER CRIMPING, IAW PARA 5.3.1.2 OF MIL-STD-171.

CRIMP THESE TWO AREAS SUFFICIENT TO LOCK PAD TO BOW WITHOUT PERCEPTIBLE MOVEMENT TO EACH OTHER AFTER CRIMPING.

5153127
PAD, TRIGGER

5153126
BOW, TRIGGER

FLUSH

.432

.03
NOTES:

1. FABRICATED FINISH EXCEPT AS NOTED.

2. MATERIAL:

- WROUGHT STEEL, 1117, ASTM A108.
- CAST STEEL, IC1117, ASTM A732.

- HEAT TREAT: CASE DP .003-.005
- RH C 48-52

- TOLERANCES:
  - .X = .05, .XX = .02, .XXX = .005, .XXXX = .0005
  - ANGLES = ±.5°

- DIMENSIONS ARE IN INCHES.
- WEIGHT: 0.07 LBS SHEET 1 OF 1

PROJECT: M1911-A1 REDUX
MATERIAL: WROUGHT STEEL, 1117, ASTM A108.
MIL-STD-171 QTY REQD PER NEXT ASSY = 1


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UNLESS OTHERWISE SPECIFIED [UOS]: DIMENSIONS ARE IN INCHES.
TOLERANCES:  PER DECIMAL PLACE: .X = .05, .XX = .02, .XXX = .005, .XXXX = .0005
ANGLES = ±.5°

FABRICATED FINISH EXCEPT AS NOTED.

SAFETY, GRIP
THIRD ANGLE PROJECTION
SCALE: 3:1

SECTION A-A
SCALE 3 : 1
R.184 +.000
-.008

R.156 +.000
-.005

\( \varphi \) .2045 +.0010
-.0000

\( \varphi \) .17 \times 60^\circ

BOTH SIDES

.278

AUSTENITIC GRAIN SIZE 7 OR FINER.

1. MATERIAL: STEEL, 1045, ASTM A576;
NOTES:
1. MATERIAL:
   WROUGHT, STEEL, 4150, ASTM A576;
   CAST, STEEL, IC4150, ASTM A732.
   AUSTENITIC GRAIN SIZE 6 OR FINER.

   FINISH:
   MACHINED FINISH = 63-125 µIN.

   REMOVE ALL BURRS AND SHARP EDGES .02 MAX.

   HEAT TREAT:
   RH C 43.5-50

   UNLESS OTHERWISE SPECIFIED [UOS]:
   DIMENSIONS ARE IN INCHES.
   TOLERANCES:  PER DECIMAL PLACE:
   .X = .05, .XX = .02, .XXX = .005, .XXXX = .0005;
   ANGLES = ±.5

   WEIGHT: 0.01 LBS

   DO NOT SCALE DRAWING

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   SEE NOTE 1

   PAR. 5.3.1.2

   MATERIAL:
   1. STEEL, 1.958, ASTM 4786; GRAIN SIZE 6 OR FINER.
RIFLING SHALL CONSIST OF 6 EQ SP GROOVES HAVING A CCW HELIX OF 1 TURN IN 16 INCHES.

TDC) IAW SAE AMS2438, AFTER SURFACE POLISHING.

5. FINISH: THIN DENSE CHROME COATING (ARMOLoy)

6. MACHINED FINISH + EXCEPT AS NOTED.

1. DIAMETERS AT MUZZLE SHALL NOT BE GREATER THAN THOSE AT BREECH.

3. MATERIAL: STEEL, 4150; ASTM A-108; AUSTENITIC GRAIN SIZE 5 OR FINER.

4. HEAT TREATMENT: AUSTEMPER TO RH C 53 TO 56.5.

ALL DIMENSIONS APPLY AFTER HEAT TREATMENT.

5. FINISH: THIN DENSE CHROME COATING (ARMOLoy TDC), IAW SAE AMS2438, AFTER SURFACE POLISHING.

NOTES:

MACHINED FINISH + EXCEPT AS NOTED.

DIAMETERS AT MUZZLE SHALL NOT BE GREATER THAN THOSE AT BREECH.

MATERIAL: STEEL, 4150; ASTM A-108; AUSTENITIC GRAIN SIZE 5 OR FINER.

HEAT TREATMENT: AUSTEMPER TO RH C 53 TO 56.5.

ALL DIMENSIONS APPLY AFTER HEAT TREATMENT.

FINISH: THIN DENSE CHROME COATING (ARMOLoy TDC), IAW SAE AMS2438, AFTER SURFACE POLISHING.

NOTES:

MACHINED FINISH + EXCEPT AS NOTED.

DIAMETERS AT MUZZLE SHALL NOT BE GREATER THAN THOSE AT BREECH.

MATERIAL: STEEL, 4150; ASTM A-108; AUSTENITIC GRAIN SIZE 5 OR FINER.

HEAT TREATMENT: AUSTEMPER TO RH C 53 TO 56.5.

ALL DIMENSIONS APPLY AFTER HEAT TREATMENT.

FINISH: THIN DENSE CHROME COATING (ARMOLoy TDC), IAW SAE AMS2438, AFTER SURFACE POLISHING.
NOTES:

1. PEIN OVER PIN END TO FILL HOLE CSK, BOTH SIDES, TO FIRMLY RIVET TUBE TO BASE. GRIND SMOOTH, FLUSH WITH TUBE. 2 PLACES.

2. GRIND PROTRUDING TUBE FLUSH WITH BASE ON 3 SIDES.
PROJECT: M1911-A1 REDUX

QTY REQD PER NEXT ASSY = 1

RIO BENSON

DATE PLOTTED: 5/25/2012

STOCK, LH, PLASTIC

RC10090501

SCALE: 2:1

REVDWG/PART NO.

TITLE:

NAME

DATE

THIRD ANGLE PROJECTION

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WEIGHT: 0.02 LBS

DATE

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B A B

CONSULTING CONSULTING CONSULTING CONSULTING

NOTES:

(UNLESS OTHERWISE SPECIFIED)

1. RECESSES SHOWN ARE NONFUNCTIONAL AND ARE PERMITTED WITHIN REASONABLE LIMITS FOR STABILITY OF THE MOLDED PRODUCT.

2. MATERIAL: MOLDING PLASTIC IAW MIL-M-14; PHENOLIC, TYPE CFI25; COLORED NO. 30045, 20059 OR 20062 OF TABLE II, FED STD NO. 595; SEMI-GLOSS BROWN.

3. CHECKERING IS 21° DIAGONAL DIAMOND, 96° GROOVES, 0.06 CENTER TO CENTER ON THE DIAGONAL.

DIMENSIONS ARE IN INCHES.

TOLERANCES: PER DECIMAL PLACE:

.X = .05, .XX = .02, .XXX = .005, .XXXX = .0005;

ANGLES = ±.5

FINISH:

ROUGH: .250

MACHINED FINISH = 63-125 µIN.

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Gastonia, North Carolina 28054

riobenson@clear.net

DO NOT SCALE DRAWING

SEE NOTE 1

SEE NOTE 2

SEE NOTE 3

REVISION HISTORY

ZONE REV DESCRIPTION DATE APPROVED

STOCK, LH, PLASTIC

BC10090501
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