

FIRING PIN SPRING

SPRING ANALYSIS OUTPUT
27 Mar 1985

08:37:28

For:
ROUND MUSIC WIRE WITH PLAIN ENDS

OUTSIDE DIAMETER..... .400+/- .020
WIRE DIAMETER..... .053+/- .0004
HOLE DIAMETER..... .455
PIN DIAMETER..... .287
TOTAL TURNS..... 38.0
ACTIVE TURNS..... 38.0
FREE LENGTH..... 5.070+/- .093
SOLID HEIGHT..... 2.067+/- .016
WAHL CORRECTGION FACTOR... 1.23
SPRING RATE..... 7.14
DIA. CHANGE FL to SH..... .0032
MEAN DIAMETER..... .347
SPRING INDEX..... 6.55

STRESS AND LOAD:
LOAD AT 2.700in..... 16.931
EXPECTED LOAD VARIATION... 15.75 TO 18.12
STRESS AT 2.700in..... 123518.0
LOAD AT 2.270in..... 20.003
EXPECTED LOAD VARIATION... 18.60 TO 21.40
STRESS AT 2.270in..... 145928.4
FORCE TO SOLID..... 21.45
STATIC STRESS AT SOLID.... 156508.2
TOTAL STRESS AT SOLID..... 156508.2
ENERGY..... 7.94
TENSILE STRENGTH..... 298686.2
DESIGN STRESS AS 62%..... 185185.4
TOTAL STRESS AS
PERCENT OF TENSILE STRESS. 52.4

SPRING ANALYSIS OUTPUT
27 Mar 1985

08:39:19

For:
ROUND STAINLESS STEEL WIRE WITH PLAIN ENDS

OUTSIDE DIAMETER..... .400+/- .020
WIRE DIAMETER..... .053+/- .0004
HOLE DIAMETER..... .455
PIN DIAMETER..... .287
TOTAL TURNS..... 38.0
ACTIVE TURNS..... 38.0
FREE LENGTH..... 5.070+/- .093
SOLID HEIGHT..... 2.067+/- .016
WAHL CORRECTGION FACTOR... 1.23
SPRING RATE..... 6.52
DIA. CHANGE FL to SH..... .0032
MEAN DIAMETER..... .347
SPRING INDEX..... 6.55

STRESS AND LOAD:

LOAD AT 2.700in..... 15.459
EXPECTED LOAD VARIATION... 14.38 TO 16.54
STRESS AT 2.700in..... 112777.3
LOAD AT 2.270in..... 18.264
EXPECTED LOAD VARIATION... 16.99 TO 19.54
STRESS AT 2.270in..... 133239.0
FORCE TO SOLID..... 19.59
STATIC STRESS AT SOLID.... 142898.8
TOTAL STRESS AT SOLID.... 142898.8
ENERGY..... 7.25
TENSILE STRENGTH..... 256478.1
DESIGN STRESS AS 62%..... 159016.4
TOTAL STRESS AS
PERCENT OF TENSILE STRESS. 55.7

SPRING ANALYSIS OUTPUT
27 Mar 1985

08:38:31

For:

ROUND OIL TEMPERED WIRE WITH PLAIN ENDS

OUTSIDE DIAMETER..... .400+/- .020
WIRE DIAMETER..... .053+/- .0004
HOLE DIAMETER..... .455
PIN DIAMETER..... .287
TOTAL TURNS..... 38.0
ACTIVE TURNS..... 38.0
FREE LENGTH..... 5.070+/- .093
SOLID HEIGHT..... 2.067+/- .016
WAHL CORRECTGION FACTOR... 1.23
SPRING RATE..... 7.14
DIA. CHANGE FL to SH..... .0032
MEAN DIAMETER..... .347
SPRING INDEX..... 6.55

STRESS AND LOAD:

LOAD AT 2.700in..... 16.931
EXPECTED LOAD VARIATION... 15.75 TO 18.12
STRESS AT 2.700in..... 123518.0
LOAD AT 2.270in..... 20.003
EXPECTED LOAD VARIATION... 18.60 TO 21.40
STRESS AT 2.270in..... 145928.4
FORCE TO SOLID..... 21.45
STATIC STRESS AT SOLID.... 156508.2
TOTAL STRESS AT SOLID.... 156508.2
ENERGY..... 7.94
TENSILE STRENGTH..... 255117.6
DESIGN STRESS AS 62%..... 158172.9
TOTAL STRESS AS
PERCENT OF TENSILE STRESS. 61.3

SPRING ANALYSIS OUTPUT
27 Mar 1985

08:38:59

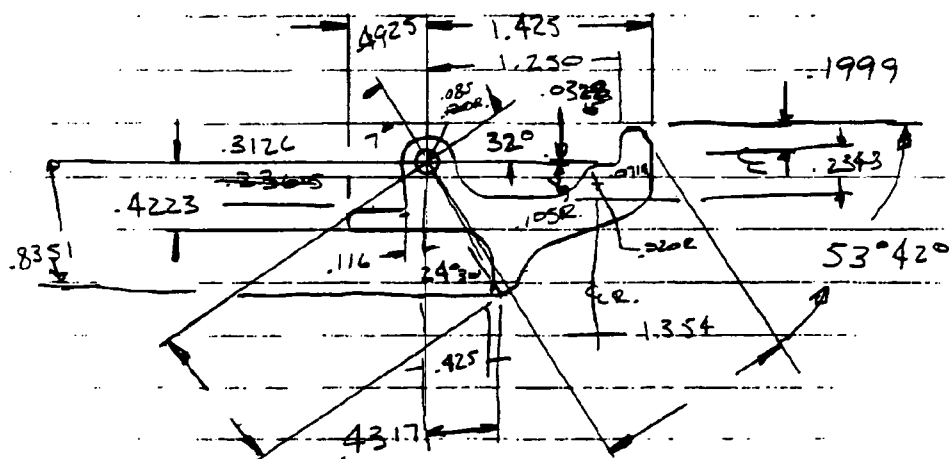
For:
ROUND HARD DRAWN WIRE WITH PLAIN ENDS

OUTSIDE DIAMETER..... .400+/- .020
WIRE DIAMETER..... .053+/- .0004
HOLE DIAMETER..... .455
PIN DIAMETER..... .287
TOTAL TURNS..... 38.0
ACTIVE TURNS..... 38.0
FREE LENGTH..... 5.070+/- .093
SOLID HEIGHT..... 2.067+/- .016
WAHL CORRECTGION FACTOR... 1.23
SPRING RATE..... 7.14
DIA. CHANGE FL to SH..... .0032
MEAN DIAMETER..... .347
SPRING INDEX..... 6.55

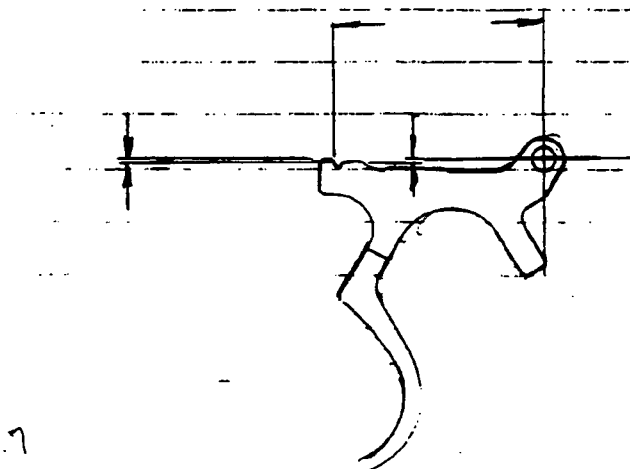
STRESS AND LOAD:
LOAD AT 2.700in..... 16.931
EXPECTED LOAD VARIATION... 15.75 TO 18.12
STRESS AT 2.700in..... 123518.0
LOAD AT 2.270in..... 20.003
EXPECTED LOAD VARIATION... 18.60 TO 21.40
STRESS AT 2.270in..... 145928.4
FORCE TO SOLID..... 21.45
STATIC STRESS AT SOLID.... 156508.2
TOTAL STRESS AT SOLID.... 156508.2
ENERGY..... 7.94
TENSILE STRENGTH..... 244633.3
DESIGN STRESS AS 62%..... 151672.7
TOTAL STRESS AS
PERCENT OF TENSILE STRESS. 64.0

7.00
275
425

4626 - E.T. Pr. 4



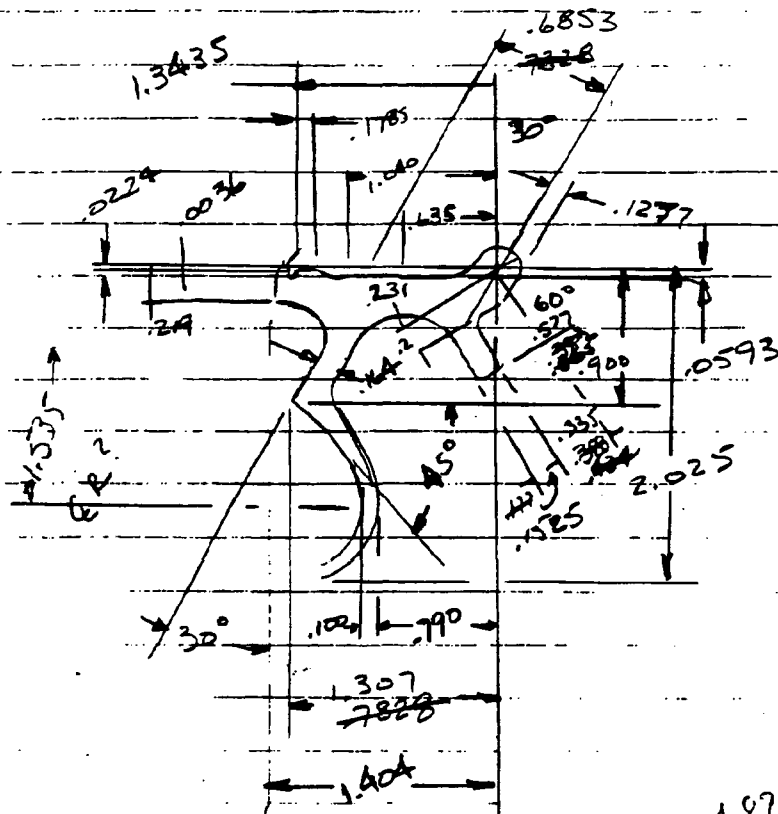
26 8



7

6435
4628
178

70
135
35



560
383
177

442 1.337
1.142
1.164

4875
335
152