

| 1  | A         | B                                             | C                                             | D                                    | E                                             | F                                            | G                                    | H                                                  | I                                                  | J                                               |
|----|-----------|-----------------------------------------------|-----------------------------------------------|--------------------------------------|-----------------------------------------------|----------------------------------------------|--------------------------------------|----------------------------------------------------|----------------------------------------------------|-------------------------------------------------|
| 2  | Housing # | Engagement<br>Screw Hole Gage<br>Pin Diameter | Engagement Screw<br>Hole Gage Pin<br>Diameter | Engagement<br>Screw Hole<br>Diameter | Engagement<br>Screw Hole<br>Vertical Position | Engagement<br>Screw Hole<br>Lateral Position | Engagement<br>Screw Hole<br>Position | Trigger Pull<br>Screw Hole<br>Gage Pin<br>Diameter | Trigger Pull<br>Screw Hole<br>Gage Pin<br>Diameter | Trigger Pull<br>Screw Hole<br>Vertical Position |
| 3  | Method    | Gage Pin                                      | Gage Pin                                      | MV                                   | MV                                            | MV                                           | Calculated                           | Gage Pin                                           | Gage Pin                                           | MV                                              |
| 4  | Nominal   |                                               | 0.120                                         | 0.120                                | 0.925                                         | 0.1475                                       | 0.006                                |                                                    | 0.120                                              | 0.835                                           |
| 5  | Plus      |                                               | 0.001                                         | 0.001                                | 0.003                                         | 0.003                                        | 0.000                                |                                                    | 0.001                                              | 0.003                                           |
| 6  | Minus     |                                               | 0.001                                         | 0.001                                | 0.003                                         | 0.003                                        | 0.006                                |                                                    | 0.001                                              | 0.003                                           |
| 7  | 1         | .120+                                         | 0.1202                                        | 0.1209                               | 0.9251                                        | 0.1449                                       | 0.0053                               | .119+                                              | 0.1192                                             | 0.8334                                          |
| 8  | 2         | .120+                                         | 0.1202                                        | 0.1209                               | 0.9225                                        | 0.1455                                       | <b>0.0065</b>                        | .1195+                                             | 0.1197                                             | <b>0.8291</b>                                   |
| 9  | 3         | .120+                                         | 0.1202                                        | 0.1205                               | 0.9248                                        | 0.1464                                       | 0.0022                               | .119+                                              | 0.1192                                             | <b>0.8307</b>                                   |
| 10 | 4         | .120+                                         | 0.1202                                        | 0.1209                               | 0.9233                                        | 0.1470                                       | 0.0036                               | .119+                                              | 0.1192                                             | <b>0.8263</b>                                   |
| 11 | 5         | .120+                                         | 0.1202                                        | 0.1206                               | 0.9238                                        | 0.1480                                       | 0.0027                               | .119+                                              | 0.1192                                             | <b>0.8317</b>                                   |
| 12 | 6         | .120+                                         | 0.1202                                        | 0.1206                               | 0.9232                                        | 0.1449                                       | <b>0.0064</b>                        | .119+                                              | 0.1192                                             | <b>0.8294</b>                                   |
| 13 | 7         | .120+                                         | 0.1202                                        | 0.1204                               | 0.9243                                        | 0.1461                                       | 0.0032                               | .119+                                              | 0.1192                                             | 0.8326                                          |
| 14 | 8         | .120+                                         | 0.1202                                        | 0.1208                               | 0.9244                                        | 0.1448                                       | 0.0055                               | .119+                                              | 0.1192                                             | 0.8320                                          |
| 15 | 9         | .120+                                         | 0.1202                                        | 0.1201                               | 0.9237                                        | 0.1474                                       | 0.0025                               | .119+                                              | 0.1192                                             | <b>0.8309</b>                                   |
| 16 | 10        | .120+                                         | 0.1202                                        | 0.1205                               | 0.9237                                        | 0.1474                                       | 0.0026                               | .119+                                              | 0.1192                                             | 0.8328                                          |
| 17 | 11        | .120+                                         | 0.1202                                        | 0.1206                               | 0.9222                                        | 0.1463                                       | <b>0.0060</b>                        | .119+                                              | 0.1192                                             | <b>0.8304</b>                                   |
| 18 | 12        |                                               |                                               |                                      |                                               |                                              |                                      |                                                    |                                                    |                                                 |
| 19 | 13        | .120+                                         | 0.1202                                        | 0.1204                               | 0.9243                                        | 0.1447                                       | 0.0059                               | .119+                                              | 0.1192                                             | <b>0.8316</b>                                   |
| 20 | 14        | .120+                                         | 0.1202                                        | 0.1205                               | 0.9225                                        | 0.1463                                       | 0.0055                               | .119+                                              | 0.1192                                             | 0.8324                                          |
| 21 | 15        | .120+                                         | 0.1202                                        | 0.1204                               | 0.9244                                        | 0.1492                                       | 0.0035                               | .119+                                              | 0.1192                                             | 0.8325                                          |
| 22 | 16        | .120+                                         | 0.1202                                        | 0.1208                               | 0.9225                                        | <b>0.1438</b>                                | <b>0.0090</b>                        | .119+                                              | 0.1192                                             | 0.8352                                          |
| 23 | 17        | .120+                                         | 0.1202                                        | 0.1205                               | 0.9233                                        | 0.1446                                       | <b>0.0066</b>                        | .119+                                              | 0.1192                                             | <b>0.8293</b>                                   |
| 24 | 18        | .120+                                         | 0.1202                                        | 0.1206                               | 0.9243                                        | 0.1457                                       | 0.0039                               | .119+                                              | 0.1192                                             | <b>0.8319</b>                                   |
| 25 | 19        | .120+                                         | 0.1202                                        | 0.1205                               | 0.9242                                        | 0.1474                                       | 0.0016                               | .119+                                              | 0.1192                                             | <b>0.8293</b>                                   |
| 26 | 20        | .120+                                         | 0.1202                                        | 0.1207                               | 0.9242                                        | 0.1461                                       | 0.0033                               | .119+                                              | 0.1192                                             | <b>0.8317</b>                                   |
| 27 | 21        | .120+                                         | 0.1202                                        | 0.1204                               | 0.9237                                        | 0.1461                                       | 0.0038                               | .119+                                              | 0.1192                                             | 0.8322                                          |
| 28 | 22        | .120+                                         | 0.1202                                        | 0.1207                               | 0.9238                                        | 0.1471                                       | 0.0026                               | .119+                                              | 0.1192                                             | 0.8377                                          |
| 29 | 23        | .120+                                         | 0.1202                                        | 0.1208                               | 0.9241                                        | <b>0.1444</b>                                | <b>0.0064</b>                        | .119+                                              | 0.1192                                             | <b>0.8316</b>                                   |
| 30 | 24        | .120+                                         | 0.1202                                        | 0.1208                               | 0.9240                                        | 0.1455                                       | 0.0045                               | .119+                                              | 0.1192                                             | <b>0.8311</b>                                   |
| 31 | 25        | .120+                                         | 0.1202                                        | 0.1209                               | 0.9243                                        | 0.1454                                       | 0.0044                               | .119+                                              | 0.1192                                             | 0.8321                                          |
| 32 | Average   |                                               | 0.1202                                        | 0.1206                               | 0.9238                                        | 0.1460                                       | 0.0045                               |                                                    | 0.1192                                             | 0.8316                                          |
| 33 | SD        |                                               | 0.0000                                        | 0.0002                               | 0.0008                                        | 0.0013                                       | 0.0018                               |                                                    | 0.0001                                             | 0.0022                                          |
| 34 | MAX       |                                               | 0.1202                                        | 0.1209                               | 0.9251                                        | 0.1492                                       | 0.0090                               |                                                    | 0.1197                                             | 0.8377                                          |
| 35 | MIN       |                                               | 0.1202                                        | 0.1201                               | 0.9222                                        | 0.1438                                       | 0.0016                               |                                                    | 0.1192                                             | 0.8263                                          |
| 36 | Range     |                                               | 0.0000                                        | 0.0009                               | 0.0029                                        | 0.0054                                       | 0.0074                               |                                                    | 0.0005                                             | 0.0114                                          |
| 37 |           |                                               |                                               |                                      |                                               |                                              |                                      |                                                    |                                                    |                                                 |
| 38 |           | OHL                                           | = over high limit                             |                                      |                                               |                                              |                                      |                                                    |                                                    |                                                 |
| 39 |           | ULL                                           | = under low limit                             |                                      |                                               |                                              |                                      |                                                    |                                                    |                                                 |
| 40 |           |                                               |                                               |                                      |                                               |                                              |                                      |                                                    |                                                    |                                                 |
| 41 |           |                                               |                                               |                                      |                                               |                                              |                                      |                                                    |                                                    |                                                 |
| 42 |           |                                               |                                               |                                      |                                               |                                              |                                      |                                                    |                                                    |                                                 |

|    | K                                      | L                                              | M                                      |
|----|----------------------------------------|------------------------------------------------|----------------------------------------|
| 1  | B                                      | F                                              | B                                      |
| 2  | Trigger Pull<br>Screw Hole<br>Diameter | Trigger Pull<br>Screw Hole<br>Lateral Position | Trigger Pull<br>Screw Hole<br>Position |
| 3  | MV                                     | MV                                             | Calculated                             |
| 4  | 0.120                                  | 0.1475                                         | 0.006                                  |
| 5  | 0.001                                  | 0.003                                          | 0.000                                  |
| 6  | 0.001                                  | 0.003                                          | 0.006                                  |
| 7  | 0.1204                                 | 0.1451                                         | 0.0057                                 |
| 8  | 0.1209                                 | <b>0.1432</b>                                  | <b>0.0146</b>                          |
| 9  | 0.1205                                 | 0.1468                                         | <b>0.0087</b>                          |
| 10 | 0.1204                                 | 0.1476                                         | <b>0.0174</b>                          |
| 11 | 0.1201                                 | 0.1464                                         | <b>0.0069</b>                          |
| 12 | 0.1202                                 | 0.1450                                         | <b>0.0123</b>                          |
| 13 | 0.1206                                 | 0.1459                                         | 0.0058                                 |
| 14 | 0.1202                                 | <b>0.1434</b>                                  | <b>0.0102</b>                          |
| 15 | 0.1201                                 | 0.1472                                         | <b>0.0082</b>                          |
| 16 | 0.1210                                 | 0.1472                                         | 0.0044                                 |
| 17 | 0.1201                                 | 0.1464                                         | <b>0.0096</b>                          |
| 18 |                                        |                                                |                                        |
| 19 | 0.1203                                 | 0.1452                                         | <b>0.0082</b>                          |
| 20 | 0.1201                                 | 0.1465                                         | 0.0056                                 |
| 21 | 0.1209                                 | 0.1465                                         | 0.0053                                 |
| 22 | 0.1202                                 | 0.1461                                         | 0.0028                                 |
| 23 | 0.1199                                 | 0.1472                                         | <b>0.0115</b>                          |
| 24 | 0.1202                                 | 0.1457                                         | <b>0.0071</b>                          |
| 25 | 0.1210                                 | <b>0.1442</b>                                  | <b>0.0132</b>                          |
| 26 | 0.1205                                 | 0.1476                                         | <b>0.0066</b>                          |
| 27 | 0.1209                                 | 0.1454                                         | <b>0.0070</b>                          |
| 28 | 0.1203                                 | 0.1464                                         | 0.0057                                 |
| 29 | 0.1208                                 | 0.1457                                         | <b>0.0077</b>                          |
| 30 | 0.1210                                 | 0.1473                                         | <b>0.0079</b>                          |
| 31 | 0.1201                                 | 0.1458                                         | 0.0035                                 |
| 32 | 0.1204                                 | 0.1460                                         | 0.0082                                 |
| 33 | 0.0003                                 | 0.0012                                         | 0.0036                                 |
| 34 | 0.1210                                 | 0.1476                                         | 0.0174                                 |
| 35 | 0.1199                                 | 0.1432                                         | 0.0028                                 |
| 36 | 0.0010                                 | 0.0044                                         | 0.0146                                 |
| 37 |                                        |                                                |                                        |
| 38 |                                        |                                                |                                        |
| 39 |                                        |                                                |                                        |
| 40 |                                        |                                                |                                        |
| 41 |                                        |                                                |                                        |
| 42 |                                        |                                                |                                        |

|    | A | B |                      | D | E | F | G | H | I | J |
|----|---|---|----------------------|---|---|---|---|---|---|---|
| 43 |   |   |                      |   |   |   |   |   |   |   |
| 44 |   |   | E:\Solidworks Files\ |   |   |   |   |   |   |   |
| 45 |   |   | XR100 SPL Trigger A  |   |   |   |   |   |   |   |
| 46 |   |   |                      |   |   |   |   |   |   |   |

**Cell:** D2

**Comment:** Jim Ronkainen:  
For reference only.

**Cell:** G2

**Comment:** Jim Ronkainen:  
Hole was drilled and tapped on production fixture. Dimensional results will be fed back to production. Use parts as-is and note any unusual behavior.

**Cell:** J2

**Comment:** Jim Ronkainen:  
Vertical position of this hole is not critical to function. The slight increase in the trigger spring's moment arm with respect to the trigger pivot is insignificant and can be dialed out with the adjustment of the trigger pull force. Its is OK to use the parts as-is.

**Cell:** M2

**Comment:** Jim Ronkainen:  
Hole was drilled and tapped on production fixture. Dimensional results will be fed back to production. Most variation is in the vertical direction, which is of no consequence. Use parts as-is and note any unusual behavior.

**Cell:** L8

**Comment:** Jim Ronkainen:  
This part has the worst deviation of all the parts. The Solidworks layout shows that there is still more than 0.0135" clearance between the major diameter of the screw and the side plate under worst case conditions. All parts are OK to use as-is.

**Cell:** A18

**Comment:** Jim Ronkainen:  
The trigger housing using rear spacer number 12 was lost in Ilion during processing.

|   |                                                                                    |   |
|---|------------------------------------------------------------------------------------|---|
|   | B                                                                                  | C |
| 2 |   |   |
| 3 |  |   |
| 4 | E:\Solidworks Files\                                                               |   |
| 5 | XR100 SPL Trigger A                                                                |   |
| 6 |                                                                                    |   |