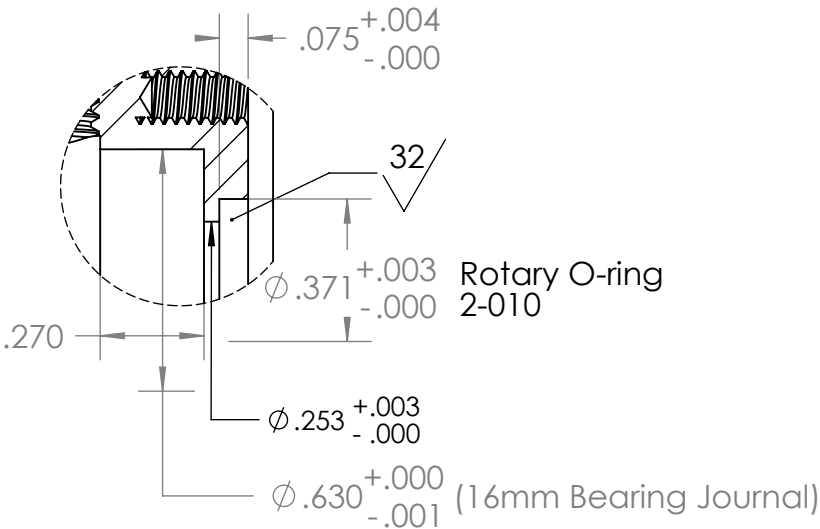
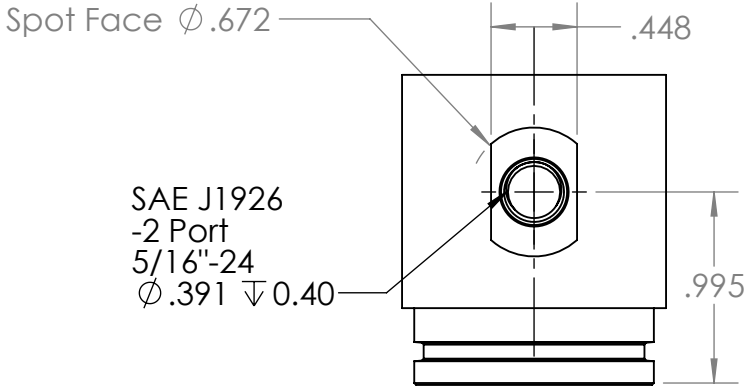
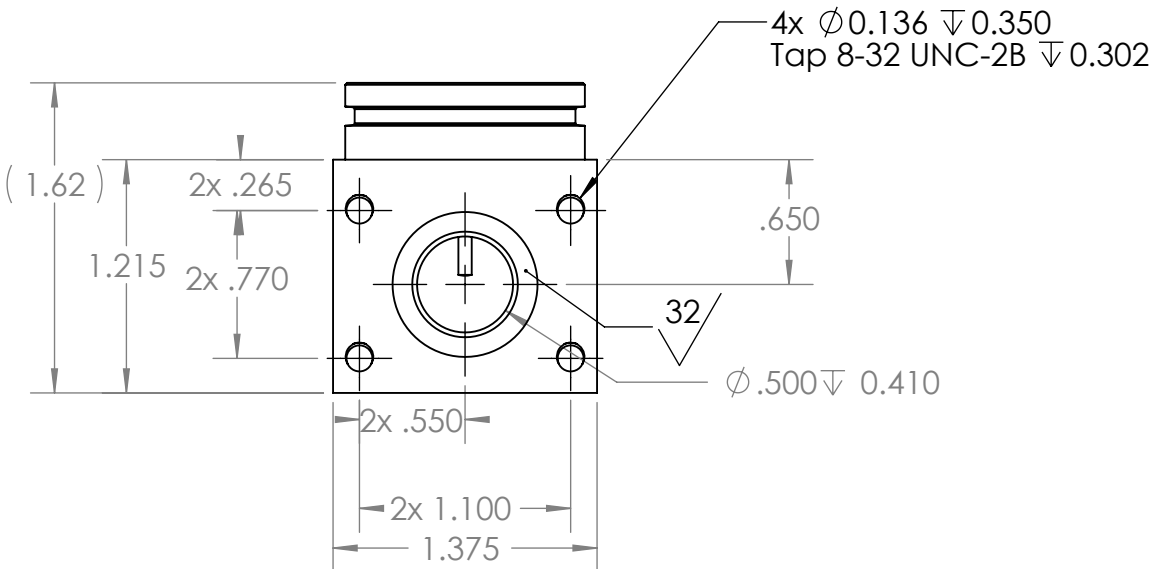
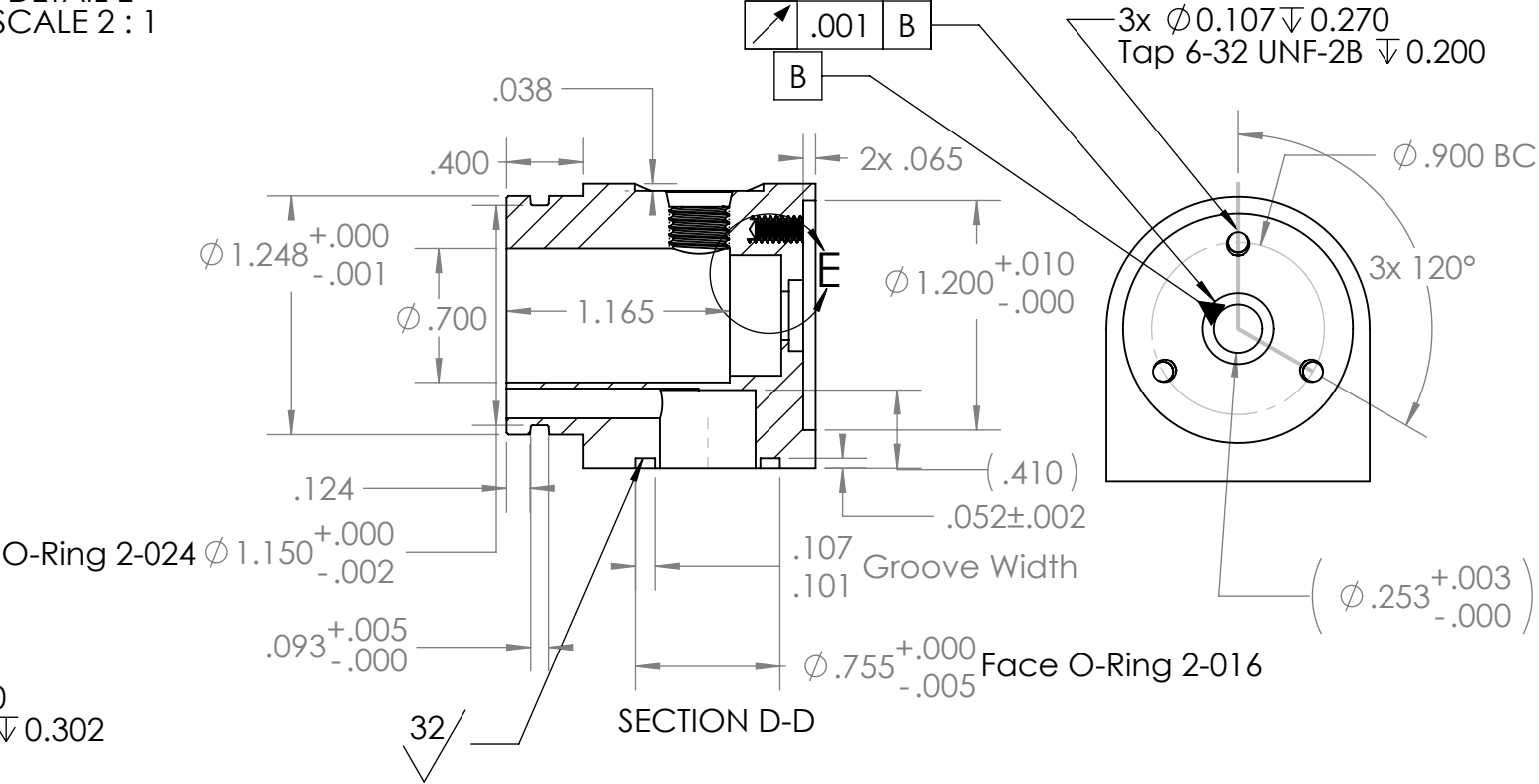
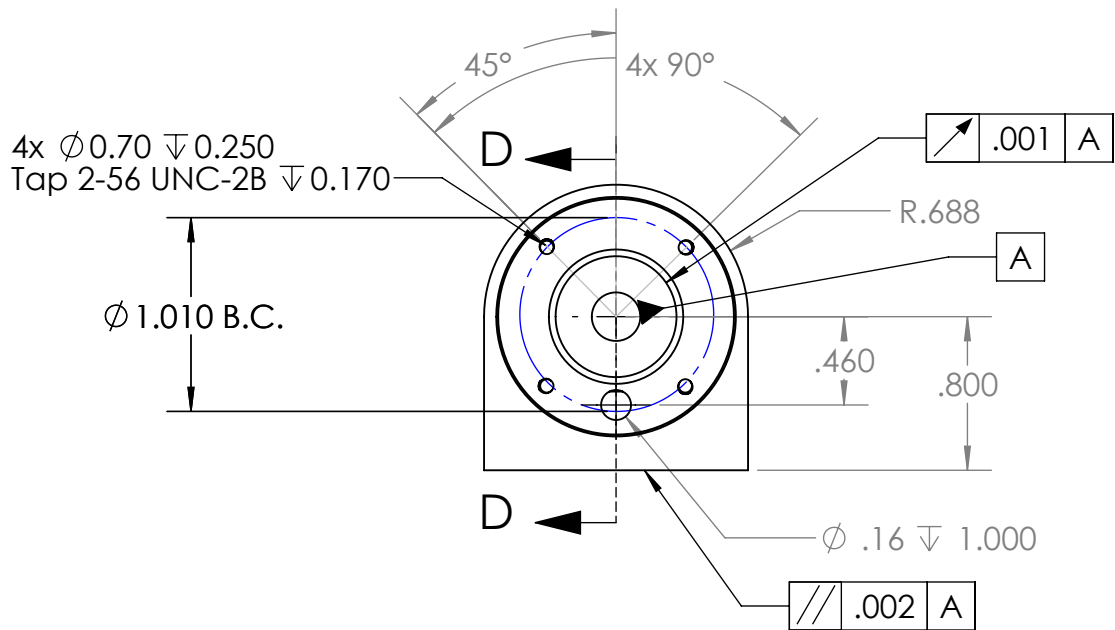


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| REVISIONS |      |                                                                                                                                                      |         |          |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|
| ZONE      | REV. | DESCRIPTION                                                                                                                                          | DATE    | APPROVED |
| D-6       | A    | Added SAE Port to top                                                                                                                                | 5/1/11  | BH       |
| B-6       | B    | Added .188 dia. hole                                                                                                                                 | 7/21/11 | BH       |
|           | C    | Changed port from -4 to -2 and moved it back; changed 4040 to 2-56; decreased depth of 1/2 hole in bottom; decreased wire pass thru diameter to .156 | 7/8/13  | BH       |
|           | D    | Decreased Spot Face diam. to raise SAE2 port on top. Added Concentric and parallel specs                                                             | 1/27/14 | BH       |



DETAIL E  
SCALE 2 : 1



NOTES:

|                                                                                       |                               |                                                                                                           |                          |                   |                           |
|---------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------|-------------------|---------------------------|
| 1                                                                                     | 2                             | P-201091-11                                                                                               | CS Actuator Encoder Body | MBARI             | Black Delrin              |
| ITEM NO.                                                                              | QTY.                          | Part Number                                                                                               | DESCRIPTION              | Vendor            | MATERIAL                  |
| BILL OF MATERIALS                                                                     |                               |                                                                                                           |                          |                   |                           |
| Shop / Q.C.                                                                           |                               | UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                |                          |                   | APPROVALS DATE            |
| Inspector                                                                             |                               | 1 PLACE DIM ±1/16                                                                                         | 2 PLACE DIM ±.02         | 3 PLACE DIM ±.005 | ANGLES ±1°                |
| Shop Foreman                                                                          |                               | 1. DIMENSIONS ARE IN INCHES                                                                               |                          |                   | DRAWN B. Hobson 5/1/11    |
| Engineer                                                                              |                               | 2. DIMENSION LIMITS HELD AFTER PLATING.                                                                   |                          |                   | ENGINEER B. Hobson 5/1/11 |
|                                                                                       |                               | 3. REMOVE BURRS AND SHARP EDGES .015 MAX.                                                                 |                          |                   | CHECKED                   |
|                                                                                       |                               | 4. MACHINED FILLET RADII .0150-.030.                                                                      |                          |                   | PROJECT NO. 901110        |
| NEXT ASSY Description                                                                 | NEXT ASSY Number              | 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005                                       |                          |                   | PROJECT Tethys LRAUV      |
|                                                                                       | A-200711-138                  | 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE. |                          |                   |                           |
| Application                                                                           |                               | DO NOT SCALE DRAWING                                                                                      |                          |                   | WEIGHT 0.09lb.            |
| Monterey Bay Aquarium Research Institute                                              |                               |                                                                                                           |                          |                   |                           |
| MBARI                                                                                 |                               |                                                                                                           |                          |                   |                           |
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| Moss Landing, CA 95039                                                                |                               |                                                                                                           |                          |                   |                           |
| PH: (831) 775-1700                                                                    |                               |                                                                                                           |                          |                   |                           |
|  |                               |                                                                                                           |                          |                   |                           |
| TETHYS - LRAUV                                                                        |                               |                                                                                                           |                          |                   |                           |
| CS LDA Encoder Body                                                                   |                               |                                                                                                           |                          |                   |                           |
| P-201091-11                                                                           |                               |                                                                                                           |                          |                   |                           |
| SIZE B                                                                                | DWG. NO.                      | REV. D                                                                                                    |                          |                   |                           |
| SCALE 1:1                                                                             | CAD FILE: MECH ENG ON TORNADO | SHEET 1 OF 1                                                                                              |                          |                   |                           |