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| Work preparation sheet | | | |
| Name of part: Custom gear timed release | | Date: 12-10-2024 | Sheet No.: 1 OF 1 |
| Corresponding to drawing: 12112024-05-04 | | Made by: Ilya van den Brandt | |
| Part No.: 12112024-05-04 | Amount: 1 | Material: free-machining steel | |
| Starting dimensions material: 9mm x Ø50mm | | | |
| Machining sequence: | | | |
| **Process** | **Tools**  fixtures, tools and other aids | **Settings**  speed (V), number of revolutions (N), feed (f), depth of cut (t0) etc. | **Comments** |
| Clamp the stock in the chuck | Toolholder for 80 degrees insert | N=1000rpm  f=manual  t0=0.5mm | Insert the stock sticking out aprox 5mm |
| Straigth turning one side Ø50mm up to 4.5mm | Toolholder for 80 degrees | N=1000rpm  f=manual  t0 = 0.5mm | Until the diameter reaches 48mm |
| Chamfer the edges 0.5x45 degrees | Toolholder for 45 degrees insert | N=1000rpm  f=manual |  |
| Flip the stock |  |  |  |
| Clamp the stock in the chuck | Toolholder for 80 degrees insert | N=1000rpm  f=manual  t0=0.5mm | Insert the stock sticking out aprox 5mm |
| Straigth turning one side Ø50mm up to 4.5mm | Toolholder for 80 degrees | N=1000rpm  f=manual  t0 = 0.5mm | Until the diameter reaches 48mm |
| Chamfer the edges 0.5x45 degrees | Toolholder for 45 degrees insert | N=1000rpm  f=manual |  |
| Clamp the material Ø50mm face up | Milling bench |  |  |
| Find the center of the circle | Probe | Feature middle circle |  |
| Find places for 3 holes on a Ø37mm |  | Feature ? |  |
| Centerdrill the holes | Centerdrill and cutting fluid | N=1500rpm |  |
| Predrill Ø5mm THRU holes for M6 | Drill Ø5mm and cutting fluid | N=800rpm |  |
| Tapper M6 holes | Chuck for M6 insert | N=50rpm | Ask for supervisor? |
| Debur the holes | Countersink drill and cutting fluid | N=200rpm |  |
| Flip the material |  |  |  |
| Find the middle and 3 holes again | Probe | Feature middle circle |  |
| Debur the holes | Countersink drill and cutting fluid | N=200rpm |  |
| Clamp the material on its side 45 degrees to the left or right from one of the holes |  |  | Kind of hard to measure the exact degrees |
| Find the top most part and the middle of the material | Probe | Feature? |  |
| Centerdrill the hole | Centerdrill and cutting fluid | N=1500rpm |  |
| Predrill Ø3mm for M4x12mm | Drill Ø3mm insert and cutting fluid | N=800rpm |  |
| Tapper M4 hole | Chuck for M4 insert | N=50rpm | Ask for supervisor? |
| Debur the hole | Countersink drill and cutting fluid | N=200rpm |  |
| Clamp the material on its side 120 degrees to the left from the previous hole |  |  | Kind of hard to measure the exact degrees |
| Find the top most part and the middle of the material | Probe | Feature? |  |
| Centerdrill the hole | Centerdrill and cutting fluid | N=1500rpm |  |
| Predrill Ø3mm for M4x12mm | Drill Ø3mm insert and cutting fluid | N=800rpm |  |
| Tapper M4 hole | Chuck for M4 insert | N=50rpm | Ask for supervisor? |
| Debur the hole | Countersink drill and cutting fluid | N=200rpm |  |
| Clamp the material on its side 120 degrees to the left from the previous hole |  |  | Kind of hard to measure the exact degrees |
| Find the top most part and the middle of the material | Probe | Feature? |  |
| Centerdrill the hole | Centerdrill and cutting fluid | N=1500rpm |  |
| Predrill Ø3mm for M4x12mm | Drill Ø3mm insert and cutting fluid | N=800rpm |  |
| Tapper M4 hole | Chuck for M4 insert | N=50rpm | Ask for supervisor? |
| Debur the hole | Countersink drill and cutting fluid | N=200rpm |  |