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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Title: | | Drawing No.: | | | | | Rev. |
| **Gearbox Plate** | | **CNCM1005-L5/L6** | | | | | **0** |
| Machine: | | Program No.: | | | | | |
|  | | **O10068** | | | | | |
| Material Type: | Material Size: | | | | Material Bhn: | | |
| **6061 T6** | **½” x 4” x 6.13” plate** | | | | **100** | | |
| Programmer: | | | Operation(s): | | | | |
| **Stephane Drouin-Moreland** | | | **1** | of | | **1** | |

**Workholding Set-up**

|  |  |  |  |
| --- | --- | --- | --- |
| Workholding Device: | | | |
|  | | | |
|  | | | |
| **WCO: 54, 55** | **A: 0** | **B: .02 +/- .005** | **C: .02** |

**Workholding Instructions / Machine Settings:**

|  |
| --- |
| Datum C against the fixed jaw. |
| Adjust G54 Z by -.020 |
| Adjust G54 Y by -.020 |
| Be aware to remove the plate from the vice at the appropriate times when running. |
| Set Chamfer tool diameter offset to .1 (T12) |
| Set the wear offset for the spot drill to .05 and adjust to achieve the desired chamfer. |
| Use max 1/8” parallels, against the vise jaws. |
| Y(G55) = Y(G54) + 6.0, X(G55), Z(G55) = X(G54), Z(G54) |

**Tooling Information**

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| Tool Description: | | **3.0 CoroMill 245 6fl** | | | | | Operation: | | **Face** | |
| Manufacturer ID: | | **RA245-076R25-12M** | | | | | Insert ID: | | **R245-12 T3 E-AL H10** | |
| Holder Description: | | **C-Style Arbor (245 Face Mill)** | | | | | Holder ID: | | **AA305-40 25 051** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **03** | **03** | | **-** | **6** | **3247** | **175.33** | | **.02** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: | **Set as large tool** | | | | | | | | | |

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| Tool Description: | | **½ x ½ HSS 2fl End Mill** | | | | | Operation: | | **Various** | |
| Manufacturer ID: | | **Dormer 980 ½ x ½** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **Short ER32 Collet Chuck** | | | | | Holder ID: | | **Lyndex C4007-0032** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **05** | **05** | | **05** | **2** | **7500** | **61.5** | | **.25 Max** | | **.25 Max** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **¾ 90° Spot Drill** | | | | | Operation: | | **Spot drill** | |
| Manufacturer ID: | | **Dormer SPS90 ¾** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **Short ER32 Collet Chuck** | | | | | Holder ID: | | **Lyndex C4007-0032** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **06** | **06** | | **-** | **-** | **Table A** | **Table A** | | **-** | | **-** |
| Notes: | **Set wear offset to .05 and adjust to achieve the desired chamfer.** | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **37/64 HSS Jobber Drill** | | | | | Operation: | | **Drill rough .63 hole, Pocket start hole** | |
| Manufacturer ID: | | **Dormer R10** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **#2 Morse Taper Adapter** | | | | | Holder ID: | | **Lyndex C4004-0002** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **07** | **07** | | **-** | **-** | **648** | **7.9** | | **-** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **“C” Stub Drill** | | | | | Operation: | | **Drill bolt holes** | |
| Manufacturer ID: | | **Dormer R42** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **½” Precission Drill Chuck** | | | | | Holder ID: | | **Nikken CAT40-NPU13-10SU** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **08** | **08** | | **-** | **-** | **1547** | **12.07** | | **-** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **¼ HSS Reamer** | | | | | Operation: | | **Ream bolt holes** | |
| Manufacturer ID: | | **Dormer B901 ¼** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **Short ER32 Collet Chuck** | | | | | Holder ID: | | **Lyndex C4007-0032** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **09** | **09** | | **-** | **-** | **901** | **13.97** | | **-** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

**Tooling Information**

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| Tool Description: | | **5/16 Jobber Drill** | | | | | Operation: | | **Drill tapped holes** | |
| Manufacturer ID: | | **Dormer r10** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **½” Precission Drill Chuck** | | | | | Holder ID: | | **Nikken CAT40-NPU13-10SU** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **10** | **10** | | **-** | **-** | **1198** | **10.42** | | **-** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **3/8-16UNC-2B Tap** | | | | | Operation: | | **Drill .58 Hole** | |
| Manufacturer ID: | | **Dormer E027 3/8** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **Rigid Tapping Head** | | | | | Holder ID: | | **GS CAT40 #1-3.02”** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **11** | **11** | | **-** | **-** | **1171** | **7.9** | | **-** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **8mm CoroMill Plura Chamfering End Mill** | | | | | Operation: | | **Chamfer** | |
| Manufacturer ID: | | **R215.85-02000-AC30G 1620** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **Short ER32 Collet Chuck** | | | | | Holder ID: | | **Lyndex C4007-0032** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **12** | **12** | | **-** | **-** | **7500** | **30.0** | | **-** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **3/8 Dowel Pin** | | | | | Operation: | | **Simulate fixture** | |
| Manufacturer ID: | | **-** | | | | | Insert ID: | | **-** | |
| Holder Description: | | **Short ER32 Collet Chuck** | | | | | Holder ID: | | **Lyndex C4007-0032** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **13** | **13** | | **-** | **-** | **-** | **-** | | **-** | | **-** |
| Notes: | **Measure true radius of pin and Adjust code at indicated positions.** | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | | **Coromant Capto Fine Boring Head** | | | | | Operation: | | **Bore .63 hole** | |
| Manufacturer ID: | | **C4-391.37A-12 055B** | | | | | Insert ID: | | **TCGX-1.2(1.2)1-AL H10** | |
| Holder Description: | | **C4 Basic Holder** | | | | | Holder ID: | | **C4-A390.45-40 040** | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
| **14** | **14** | | **-** | **-** | **2094** | **11.73** | | **-** | | **-** |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |

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| Tool Description: | |  | | | | | Operation: | |  | |
| Manufacturer ID: | |  | | | | | Insert ID: | |  | |
| Holder Description: | |  | | | | | Holder ID: | |  | |
| T Code | H Code | | D Code | Teeth (z) | RPM (n) | Table Feed (vf) | | Cutting Depth (ap) | | Cutting Width (ae) |
|  |  | |  |  |  |  | |  | |  |
| Notes: |  | | | | | | | | | |
| Settings: |  | | | | | | | | | |