

Part Name: Piston		Drawing Number: 03			
Revision No.: 1		Planner: JOEL DAVIS			
Material: Aluminium		Comments:			
Operation No.	Description	Machine	Speed (rpm)	Time (min)	Risk Assessment
301	Inspect dimensions of material	Vernier callipers, micrometer	N/A	2	Little to no risk
302	Face all surfaces for surface finish of 1.6	Centre lathe, cutter	270	4	<ul style="list-style-type: none"> Parts moving at high speeds, rotating objects, swarth flying off the lathe, sharp objects/parts. Wear eye protection and tie down loose clothing/hair.
303	Use a centre lathe to cut material to a height of 80mm	Centre lathe, cutter, Vernier callipers	270	10	<ul style="list-style-type: none"> Parts moving at high speeds, rotating objects, swarth flying off the lathe, sharp objects/parts, hot materials. Wear eye protection and tie down loose clothing/hair.
304	Inspect dimensions of material	Vernier callipers, micrometer	N/A	2	Little to no risk
305	Turn connecting rod diameter to 10mm with a length of 68.5mm using centre lathe	Centre lathe, cutter, Vernier callipers	270	15	<ul style="list-style-type: none"> Parts moving at high speeds, rotating objects, swarth flying off the lathe, sharp objects/parts, hot materials. Wear eye protection and tie down loose clothing/hair.
306	Inspect dimensions of material	Vernier callipers, micrometer	N/A	2	Little to no risk
307	Turn o-ring groove to a height of 3.5mm with diameter 27.5mm, 4mm from the top surface	Centre lathe, cutter, Vernier callipers	270	15	<ul style="list-style-type: none"> Parts moving at high speeds, rotating objects, swarth flying off the lathe, sharp objects/parts, hot materials. Wear eye protection and tie down loose clothing/hair.
308	Drill a 6mm diameter hole, 10mm from the bottom surface	Hole punch and drill press	1500	5	<ul style="list-style-type: none"> Parts moving at high speeds, swarth flying off the drill, hot materials, sharp point on drill bit, rotating objects.

					<ul style="list-style-type: none"> ● Wear eye protection and tie down loose clothing/hair.
309	Deburr edges	File	N/A	5	<ul style="list-style-type: none"> ▪ Use the file steadily and carefully with a firm grip to avoid it striking your body or collisions. ▪
310	Inspect dimensions of the job	Vernier callipers, micrometer	N/A	2	Little to no risk

References

- [1] Sydney Institute of TAFE – ESC. ‘Student Background Notes for Basic Machining Operations’, 2008, Section 6, page 20.
- [2] R. Girling. ‘Drill Press Speed Chart’. Retrieved from <http://www.raygirling.com/dpspeed.htm#twistbit>.