

► BY HAILEY BRANSON

# Shop Novice

**A high school student working in a machine shop for a day offers this salute to machinists ... and the grease on their hands.**

I will admit, after growing up around my grandpa, a shop mechanic, that when I hear the word “shop” I instantly think of grease—lots of it. Though I grew up around it, and though I have never considered myself to be a prissy girl, as I drove to Larry’s Machine Shop in my hometown of Perry, Okla., to spend the day, I couldn’t help but stare at my fingernails and imagine them covered with grease. But the thought passed quickly. I pulled up to the shop, pulled my hair back and was ready to go.

I expected to get laughed at a bit during the day, but not first thing in the morning. I threw open the door, ready to get to work, and my ego was momentarily deflated when the shop’s administrative assistant, Pam Barber, and a gentleman sitting in the front office immediately roared with laughter and started clapping. I myself laughed as I donned a pair of safety goggles and was led into the shop. I thought I would stand back and watch, but they fully intended to teach me.

I was led like a lost puppy to the shop owner, Larry Jarrett, who, in turn, led me straight to a machine. He soon had me measuring parts without even questioning my ability to do so.

Once one part was measured, the machine was started and blue-hot shards of metal flew. Larry told me something comforting: One of those spirals of burning metal could hit me in the head and I would then reach up and pull out a big handful of hair.



Larry told me something comforting: One of those spirals of burning metal could hit me in the head and I would then reach up and pull out a big handful of hair.



Top photo: Cliff Palmer (left) and Danny Jarrett (right) teach author Hailey Branson how to run a Tarus drilling machine. Above: Owner Larry Jarrett shows Hailey Branson how to run the operating panel on a 40' gundrill.

## Working a Manual Lathe

As that part finished in the machine, I was led to Larry's son, Danny, who was working at one of the smaller manual lathes. I was taught how to cut the center hole for a drill bushing. I learned how machine work is incredibly precise. That huge shop, full of what to me looked like a giant jumble of machinery, exists to get each part finished down to an accuracy of 0.001!"

I did some of the measuring, and, since I have naturally shaky hands, I got to do it over, and over ... and over ... and over again. I just prayed I didn't get a finger cut off.

I thought the actual trimming down the lathe did on the part was intense, but I didn't think it took work to actually get the part to stay in place. It turned out there were four big metal jaws that held the round part, but they had to be tightened and loosened and adjusted just right to get the part to hold still. A gage was held next to a spinning wheel, but, since the part was not in there just right, the gage moved wildly and its needle jumped back and forth. My task was to get everything to be still.

I was given a big-metal-crowbar-looking-thing (the technical term) and was told to figure out which jaws had to be tightened, which ones had to be loosened and by how much. I was also told this was a fundamental aspect a machinist must learn. Again, I just prayed I didn't get a finger cut off.

Danny left me to answer a phone call. I thought I was doing well on my own. I strained and pulled on that crowbar thing so hard my face turned red, and those jaws were tight. I was working hard. I got greasy ... and I was proud.

But, I looked over and saw Danny and Pam standing in the window, laughing. Apparently, they had been discussing whether or not I knew what I was doing.

## Threading and Knurling Education

I was taught how to do threadmaking and knurling on the small lathe—and got my own piece of threaded, knurled metal for a keepsake. I had broken a nail. And my hands were stained with grease.

Before I left for lunch, I heard an incredible story. Though most people think "local" when they see a machine shop, small-town Larry's Machine Shop was involved in creating a tool that helped clear the wreckage at the World Trade Center after 9/11.

The shop was asked to make a drill bit adapter that would work on a drill bit being used to drill underneath the rubble. According to Danny, work

**Never in my life would I have imagined machine work to be so incredibly precise, technical and potentially dangerous.**



Hailey Branson learning how to mic and measure a part.

at the shop stopped to make the piece. It was given to an employee from Perry-based Charles Machine Works Inc. (which made the drill bit), who drove straight to New York. When asked how much it would cost, Larry's Machine Shop sent a bill that read, "No cost. It was an honor to help."

## Big Machines

After lunch, I was shown how the big machines work. And I was shown a sander that spun so quickly and harshly it threw sparks. Now I really, really didn't want to get a finger cut off.

My next half hour was spent with Jim Carr, who worked with a massive machine that could cut holes in a metal workpiece up to 6' tall x 4' wide. Next to the machine was a hole in the ground nearly the size of a bathtub containing what I had been watching out for all day—grease. And lots of it.

Jim and I chatted about tractor racing and I pushed a few buttons on the machine's CNC to make it run. As I was pushing buttons and feeling somewhat professional, I caught sight of a little yellow warning sign on the machine depicting a hand getting its fingers cut off. I really didn't want ... OK, you get the idea by now.

I checked out the enormous gundrilling machine and a few other machines before calling it a day. Never in my life would I have imagined machine work to be so incredibly precise, technical and potentially dangerous. In the day I spent with these men, I learned a great deal about hard work, machines and life. △

## About the author

Hailey Branson is an incoming freshman at the University of Oklahoma and plans to major in journalism. At the time this article was written, she was a high school senior. The article was first published in The Perry Daily Journal.