



Thalie Waters shows off her 1974 Volkswagen Beetle, a hand-me-down from her father.



Waters' car restoration project began a year ago.

PHOTOS | Indrani Maitra

Pandemic fuels student interest in automechanics

By Indrani Maitra & Ellie Monday

Two years ago, Thalie Waters was painting cars for the Houston Art Car Parade. Now, she's building them every weekend.

The senior has committed to rebuilding every component of her father's 1974 Volkswagen Beetle, from reconstructing the engine to rewiring the dashboard.

"I go out into the shop when it's 100 degrees on a Saturday," Waters said. "I'm covered in grease and sweating, but it's my definition of fun because I always create something."

Waters started the year-long project by constructing the crankshaft, which is the backbone of the car's internal combustion engine.

"Engines are very annoying and finicky and don't want to work with you," Waters said. "I always have to be very careful with that, or it could ruin the entire project."

Putting the crankshaft and other parts – camshaft and lifters – into the engine casing requires precision and dexterity.

"It all has to be perfect," or the maneuver could mess up the engine, Waters said. The first time she and her dad attempted it, he dropped the crankshaft on the floor and "dented it beyond repair."

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The blunder involved the first of three crankshafts Waters tried to replace.

"It takes a lot of grit to build a car – it's very scientific and mechanical and just all-around a very arduous process."

After numerous setbacks, she is nearly finished.

Once she properly assembles the engine case and places it in the car, Waters will have a fully-functioning yellow Beetle.

"It's hard work, but that's really what contributes to the sense of accomplishment I feel whenever I complete something," Waters said. "I can't imagine how awesome it will feel once I actually get to drive her."

The pandemic's ongoing social limitations have fostered a burgeoning car culture – one that extends beyond aesthetics and consumerism and into its engineering complexities.

Garrett Young, also a senior, is repairing a Porsche 928 in suboptimal condition that he bought off eBay Motors for \$7,000. Young never intended to repair more than a few parts, but it caught on fire – twice. He decided that he had to take the initiative to restore it completely.

"I didn't realize it was very dangerous until I looked in my rearview mirror while I was trying to get a start, and

there was a bunch of white smoke billowing out from the battery," Young said. "After I used some guy's fire extinguisher, I was like, 'Yeah, I gotta fix this.'"

The collaboration catalyzed Young's newfound interest in car mechanics. He and some friends formed the Auto Club over the summer. One of the club officers, senior Duncan McLaren, credited Young and senior James Wang for spurring his interest in cars.

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"I started to ask questions about what I was driving and how I could make it better," McLaren said. "Now, we can sit down in an IHOP and talk for hours about cars."

The club leadership wants to make automobiles more accessible than the current paradigm.

"You don't need to be super technical to understand how cars generally function," McLaren said. "The main goal of the club is to spread awareness about how to do basic maintenance, because those are skills everyone deserves to know."

Wang is also a connoisseur of car parts and problems. For two years, he has nurtured a passion for auto maintenance. His first exposure to this niche sphere of car culture occurred when his father gave him a 2012 Harley-Davidson motorcycle, the quintessential symbol of the American road.

When Wang discovered that the motorcycle refused to start, he and his father decided to fix it themselves.

"My dad and I just started taking apart the spark plugs and the fuel injectors," Wang said. "Eventually we fixed the problem, and it was a really fun feeling."

There is a natural coalescence between auto-related hobbies and scientific classroom concepts. Wang's affinity for cars has culminated in his Engineering Capstone project, for which he is building a hybrid car.

"We actually just got our dirt bike engine field manual and our electric motor," Wang said. "It's cool getting to do my hobby in the classroom setting and also great that I have flexibility with whether I translate it more into a career, like auto-industry designing, or just keep it as a hobby. I enjoy it either way."

Complicated gender dynamics exist within

the auto-machine world. Car culture is often conflated with aggressive, hypermasculine archetypes, the most prominent example being the "alpha male" rhetoric found in automobile marketing.

"I grew up watching these ads where super buff men would trek up mountains in their giant cars or pick up women in fancy convertibles," Waters said. "There's this level of doubt that women can't do anything with cars except sit in them, because it takes so much force or strength."

Waters faces surprise and skepticism when others discover her weekend occupation.

"You want to hang out with other men in the dirt?" her grandparents said.

She remains unfazed.

"I'm building a car because it's fun," she said.

Only 12% of Auto Club members are female – an issue that club officers seek to rectify.

"Women have been so involved in automotive history for so long – it was a French woman who actually sparked the whole car revolution in 1889 – and yet it's still a niche scene," Young said.

Waters looks forward to that day when she will pull up into Senior Lot in her Beetle. "It's been a long road, but I've enjoyed it so much."

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