

Mitigate the Shortage of Trained Automotive Service Technicians With an In-House Mentoring and Training Program

Projected demand for new entrant technicians:	85,827¹
Graduates of postsecondary automotive programs:	36,742²
Projected annual shortage of trained technicians:	49,085

Annual Estimate for 2020

Prepared September 2020 by
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<https://gearhead.school>

The Trained Technician Shortage

In 2017, the TechForce Foundation³ began extensive research into the supply of postsecondary automotive technician completers and demand for new entrant automotive technicians. The results were published in the following reports.

- Technician Demand Report⁴ (October 2017)
- Technician Supply Report⁵ (June 2018)
- Transportation Technician Supply & Demand Report⁶ (December 2018)
- Transportation Technician Supply & Demand Report⁷ (2020 Report)

These reports produced hard numbers that proved what many in the automotive service industry already knew. There is a real and significant shortage of trained automotive techs entering the automotive service industry.

While there are many factors that drive this statistic, a major factor was a 50% drop in annual program enrollment. This is attributed primarily to a strong economy and job market.⁸

Traditional Automotive Education Tracks Are Being Challenged

The reality is the automotive service industry needs more than twice as many trained technicians than current postsecondary programs can produce. Many organizations and industry leaders are currently addressing how to increase the number of automotive graduates from postsecondary programs; however, this shortfall is likely to continue for the foreseeable future.

To make up the 36,000 per year shortage of trained technicians, the traditional automotive education tracks would need to double their graduates. This is an unrealistic goal and additional non-traditional programs will likely be needed to meet the demand.

Filling the Shortfall

The 49,000 per year trained technician shortfall is being filled by technicians with little or no formal education in the automotive service industry. They are typically young and have a real passion for working on cars. They are contributing to the workload in the service bays every day and the automotive service industry would have a hard time functioning without them.

There was a time in the automotive service industry when an automotive technician could have a relatively successful and rewarding career with little or no formal education. However, that era ended years ago with the introduction of technologies such as:

- Advanced Emission Controls
- Anti-Lock Brake Systems (ABS)
- Electronic Stability Control (ESC)
- Controller Area Networks (CAN)
- Advanced Driver Assistance Systems (ADAS)

The Downside to Working Under Trained Technicians

With the current shortage of trained automotive technicians, automotive service facilities often find it necessary to employ untrained or undertrained technicians. This practice challenges an automotive service business in at least the following ways.

Matching Work to a Technician's Skill Set

When working under trained technicians there is always the challenge of issuing work that matches the technician's limited skill set. This often results in several technicians working on the same repair order to complete all the necessary diagnostics and repairs. In some cases, an undertrained tech may try to take on some work from a repair order that should be performed by a higher trained technician.

Higher Potential of Damage to Expensive Electronic Systems

Prior to the use of advanced computer controls on virtually every electrical system on an automobile, it was rare for a technician to damage a car's electrical system while performing service or diagnostic work. However, network wires now run right beside power and ground wires inside the same sheath and most components are now controlled by a transistor inside a control module. With current cars, applying a power or ground to the wrong wire terminal has the potential to damage expensive control modules.

Guaranteed Job Obsolescence

With the ever-increasing rate of new technologies being introduced into the automotive service industry, a technician that is under trained and is not engaged in ongoing upgrade training is on a track to obsolescence. This is also a problem, with seasoned trained technicians that stop training towards the end of their career. They too are starting on a path to their own obsolescence.

Employee Morale

Working in the automotive service industry as an undertrained, entry-level service technician is a tough position. Employees that get stuck in this position without an opportunity to get training and move up often become disgruntled employees. They often

have a negative effect on other company employees and collectively (with other disgruntled techs in the industry) the entire industry.

In-House Training and Mentoring Programs

In 2020, the automotive service industry is faced with unprecedented training challenges and unprecedented challenges call for unprecedented solutions. It is now time for independent repair shops to develop and implement in-house training and mentoring programs. It will be more challenging for single repair shops than shops that are part of a group or franchise; however, failing to address this issue will have a negative effect on a shop's sustainability and ability to grow.

A comprehensive in-house training program should include all of the following points:

Dedicated Training Coordinator

Ultimately a shop should dedicate a Master Tech as the "Training Coordinator".

Some of the key points in the job description should be:

- This should be a salaried position, which is the approach that Toyota took with their new "Service Quality Specialist" position.⁹
- Performs regular evaluations on the shop's ability to diagnose and service current and emerging technologies. This encompasses not just employee training, but also includes, service information systems, specialty tools, scan tools, and other diagnostic equipment needs.
- Maintains a system that documents each technician's training records, industry certifications, strengths/weaknesses, and a plan for upcoming training.
- The Training Coordinator would focus on new employees for training and mentoring needs but is ultimately responsible for all technician's training and mentoring needs.

Source and Procure Training

The Training Coordinator should source and procure training that meets the needs of each technician's personal training plan.



Automotive Essentials Course

Overview

Gearhead School specifically developed the “Automotive Essentials Course” to help mitigate the shortage of trained technicians. The training focuses on all the essential skills and knowledge needed to enter the automotive service industry as an informed apprentice.

All training delivered by Gearhead School is developed and supported by a professional automotive educator. Instructor support is provided over several platforms, such as email, phone, and Zoom video meetings

Online Delivery

The Automotive Essentials Course is accessed online through a browser on either a desktop computer or mobile platform. The content is sorted into 50+ topic specific lessons that contain text, pictures, illustrations, video, and links to professional resources.

Student Progress and Tracking

Each lesson starts with a video, from the instructor, that provides an overview of the lesson’s content. Each lesson is marked “Complete” after the lesson video has been completed and a lesson assessment is completed.. The overall progress of each student is tracked and is available to the student and the instructor.

Purchase Options

Individuals

- The Automotive Essentials Course is available for online purchase by individuals on the Gearhead School website.

Corporate

- Options are available to purchase seats in bulk at corporate pricing.

- A training portal is also available for a training director to purchase seats in bulk and issue them out to employees. The portal also includes the ability to track the progress of students.

Gearhead School Management



Grant Swaim has spent his entire career in the automotive service industry. The first twenty years as an independent automotive shop owner, and the last twenty years as an automotive educator.

In 2020 Grant launched Gearhead School to address the severe shortage of trained automotive technicians entering the automotive service industry. His focus is on the approximately 40,000 techs that enter the industry each year with little if any formal training.

Grant's lifelong career in the automotive service industry is highlighted as follows:

- 20 Years Owner of an Independent Honda Repair Shop
- 6 Years Independent Automotive Trainer (Honda OBD II / Driveability)
- 16 Years Full-Time Instructor with NC Community College System
- Published Author
 - *Technology Guide for Today's Automotive Technician*
 - ISBN 978-0-9841015-0-4 (out of print)
- B.S. Career and Technical Education

For More Information: <https://gearhead.school/about-us/>

References

- 1 “Transportation Technician Supply & Demand 2020 Report” TechForce Foundation.

Industry Demand For Trained Automotive Techs

Projections (a)	2018	2019	2020	2021	2022	2023	2024
New Positions	10,100	25,477	7,891	0	(8,049)	3,944	3,983
+Replacement Positions	74,700	77,171	77,936	77,936	77,156	77,538	77,925
Total New Entrant Demand	84,800	102,649	85,827	77,936	69,107	81,482	81,908
Prior New Entrant Demand	94,851	77,886	70,049	68,677	68,366		

- 2 “Transportation Technician Supply & Demand 2020 Report” TechForce Foundation.

Postsecondary Automotive Completers for 2018. This is the last data available, but based on a long downward trend in completers, this should be a close representation.

Postsecondary Automotive Completions by Sector 2017-18 (a)		
Sector	#Institutions	Auto Completions
Public, 4-year or above	81	3,420
Private not-for-profit, 4-year or above	12	717
Private for-profit, 4-year or above	2	161
Public, 2-year	547	21,936
Private not-for-profit, 2-year	4	111
Private for-profit, 2-year	33	7,582
Public, less-than 2-year	71	868
Private not-for-profit, less-than 2-year	4	83
Private for-profit, less-than 2-year	22	1,864
Grand Total	776	36,742

(a) Source: IPEDS database. Completions from first major, Automobile/Automotive Mechanics Technology/ Technician programs, bachelor's and associate's degrees as well as certificates below the B.A. level. Preliminary data. <https://nces.ed.gov/ipeds/datacenter/login.aspx>

3 The TechForce Foundation

Mission Statement:

To champion students to and through their education and into careers as professional technicians.

Vision Statement:

To harness the collective resources for the transportation industry to develop tomorrow's workforce of qualified technicians by:

- Increasing awareness & enthusiasm for the profession;
- Providing resources to help access quality education for those with financial need;
- Connecting future techs and industry through mentorship and career development opportunities.

TechForce Foundation Links

[Homepage](#) | [Twitter](#) | [YouTube](#) | [Linkedin](#)

4 Technician Demand Report (October 2017) [Download PDF](#)

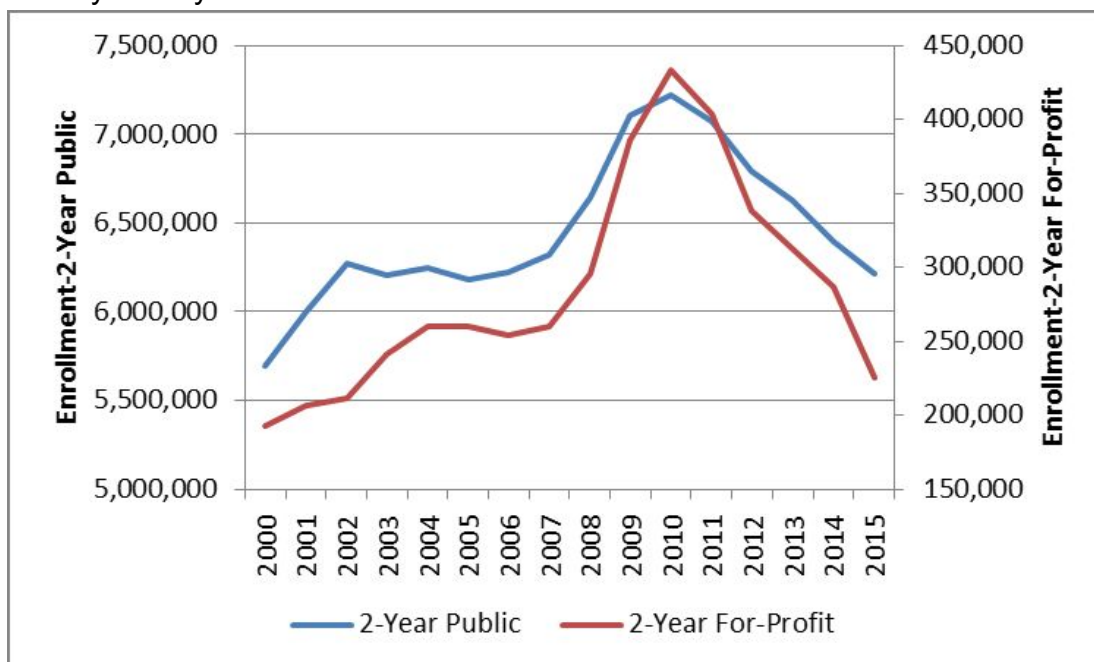
5 Technician Supply Report (June 2018) [Download PDF](#)

6 Transportation Technician Supply & Demand Report (December 2018) [Download PDF](#)

7 Transportation Technician Supply & Demand Report (2020) [Download PDF](#)

8 “Technician Supply Report” TechForce Foundation, June 26, 2018

The Cyclicity of Fall Enrollment—2 Year Public and 2 Year For-Profit



- 9 This is the approach that Toyota is piloting in its dealerships. They added a new level called, “Service Quality Specialist”. A Service Quality Specialist must be certified as a Toyota Master Technician (TMT). This is also a salaried position so they can mentor and coach other technicians. They must also monitor the quality of work the technicians do.

This was revealed by Jill Saunders (Curriculum Developer, Toyota Motor Sales, North America) during “The Road to Great Technicians - Roundtable Discussion” held at the 2018 AAPEXedu show and recorded for the [Remarkable Results Radio Podcast \(383\)](#)