

# On the Line

## The Dynamics of Automotive Service Veteran Technicians Adapt Well to New Technology

While visiting a shop, I listened as a young technician rambled on about the new technology and jokingly added how the older techs needed to retire. He claimed they were not as receptive to new technology and change; therefore they couldn't keep up. My thoughts were considerably different. This tech-savvy newcomer cannot appreciate the changes the seasoned techs have had to deal with in their automotive careers. They are battle hardened, as they have participated in and adjusted to many changes and they will continue to thrive in this high-tech market.

Over the years technology has changed the way we troubleshoot and perform automotive repairs. The independents have always survived those changes, in spite of any apprehension, as those changes were better for technicians, shop owners, the industry and the environment.

Consider the changes our veteran technicians have participated in and you can be the judge as to their ability to adjust:

### 1) **Conventional drum to disc brakes.**

Once they performed a few disc brake jobs they became comfortable and confident in servicing the systems and favored them over the drum arrangement. And then came the Anti-Lock Braking System (ABS) with its challenges, especially bleeding procedures to remove aerated fluid, and troubleshooting illuminated ABS lights with stored trouble codes and symptom diagnostics.

2) **Point sets and condensers were replaced with electronic ignition.** Introducing electronics to the automobile resulted in many performance related issues. There was a learning curve for the manufacturers of these components and making the circuits compatible with the environment. The driveability issues were many, as heat, cold and vibration issues had to be dealt with. Transient voltage interference and its effect on the electronics was a major issue.

3) **Carburetors to fuel injection.** Many were concerned that the demise of the carburetor would cost the shop a loss of parts and labor generated from carburetor overhauls. Instead, the fuel injection replacement components and necessary cleanings surpassed the profits lost on carburetor overhauls.

4) **The transition to fuel injection** involved Throttle Body Injection, Port Fuel Injection and Gasoline Di-

rect Injection, each with its own challenges. Gasoline Direct Injection requires periodic intake and combustion chamber cleanings to minimize the formation of carbon deposits, which can promote performance related issues or engine damage.

5) **Computer controlled vehicles,** computer program updates and the ability to re-program computers to correct performance issues has become a common procedure.

6) **The absence of spark plug wires** replaced by the coil on plug arrangement, whereby each spark plug is fitted with its own ignition coil.

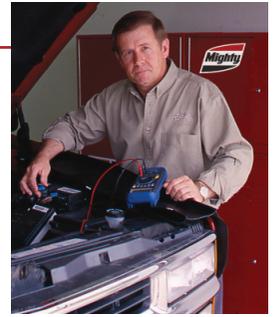
7) **Active Fuel Management,** whereby some cylinders are dropped during certain driving conditions to improve fuel economy. This system has posed many challenges for the technician in the form of performance concerns, unfavorable exhaust noise and excessive oil consumption on some applications, prompting a piston and ring replacement at approximately 50K miles.

8) **Spark plugs that can last 100K miles,** extended life oil and filter changes, and 150K mile antifreeze have resulted in changes in vehicle service requirements.

9) **Tire pressure monitoring systems (TPMS)** to improve tire life, increase fuel economy and the safety of the occupants. TPMS has created challenges for the tire industry.

The seasoned technician has seen a lot of changes and has made a lot of adjustments to accommodate the changing technology. And with this comes a whole new program under the title of preventative maintenance that can eliminate the failure of many costly components. Fluid flushes, fluid replacements, and carbon removal are only some of the services that should be performed to prevent costly repairs. Identify your customers' needs based on severe or normal driving conditions.

Ask your Mighty Rep for their assistance in waiting room material to better educate your customers of the needed services. And he has some excellent training material for the technicians.



By Larry Hammer  
Technical Services

