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GM is involved in a number of technical apprenticeship and education programs that help in training new technicians for U.S. dealerships. Developing a technician takes an investment in time by both the candidate and the dealership. In order to accommodate GM dealerships' needs to hire the right people to perform a complex job, these development programs offer training that can be completed in varying time periods ranging from four days to two years.

Here's a look at the training and development programs available to GM dealerships.

GM START

The GM START (Service Technical Automotive Readiness Training) program helps aspiring technicians perform basic service repairs and

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Customer Care and Aftersales

GM Training Programs for Dealership Service Technician Candidates - continued from page 1

maintenance on customer vehicles. GM START is aimed at dealership employee technician candidates who aren't a good fit for opportunities presented through the ASE Education Foundation and GM ASEP. It's also of value to other dealership personnel, such as porters, service consultants, and parts consultants.

GM START features over 90 technical and non-technical self-paced courses. Learners' progress can be reviewed the same way as GM Service Technical College.

GM START offers dealers the opportunity to build upon their technician base, enabling learning when it is convenient. The main objective of GM START is to help dealers build their business and enhance customer satisfaction with more experienced, trained personnel.

Maintenance Inspection Technician

GM began offering the Maintenance Inspection Technician (MIT) learning path in 2013 to complement the existing Service Technician learning path and enable dealerships to develop their own technicians. MIT is intended for entry-level technicians and provides a way to transition to the professional technician job role.

Upon successful completion of the MIT learning path, a candidate could progress into the role of a Technician Apprentice. This path enables the individual to perform Included Maintenance.

Boot Camps

Boot Camps are for aspiring dealership employee technician apprentices who may have vocational out of shop experience but have not pursued post-secondary education in automotive technology. It's also perfect for technicians who want to sharpen a specific skill set through Instructor Led Training. The Boot Camps offer immersion in a single, hands-on topic; for example, Automatic Transmission Mechanical Fundamentals and Braking Systems Fundamentals.

ASE Education Foundation

Automotive Service Education (ASE) has designed a program that aligns schools, students, instructors, training managers, and employers in a universal system that meets the needs of dealerships and students. Non OE-specific automotive training programs for high school and college students who are interested in an automotive service technology career is offered at secondary and post-secondary schools across the U.S.

The ASE Education Foundation is a non-profit organization that evaluates and accredits entry-level automotive technology education programs against standards developed by the automotive service industry. It also develops career-readiness education for students that fuse local partnerships, rigorous standard-based education, workplace experience, and mentorship together.

Shifting Gears

Shifting Gears is a partnership between GM, the U.S. Army, and Raytheon Professional Services for soldiers transitioning out of the U.S. Army. It consists of a 12-week training program that provides eligible soldiers with the necessary skills to become service technicians at GM dealerships.

GM Technician Career Training

GM has partnered with Universal Technical Institute (UTI), a post-secondary technical school that offers a basic 51-week automotive training curriculum, to customize a 12-week, GM-specific curriculum for graduates of the basic program called GM Technician Career Training. The accelerated program offers specialized training on Chevrolet, Buick, GMC and Cadillac procedures, equipment and vehicles in order to prepare graduates to work immediately in GM dealerships with a skill set suited for entry-level work.

GM ASEP

The GM Automotive Service Educational Program (GM ASEP) is a joint effort between GM, GM dealers, ACDelco Professional Service Center Program Members, and select colleges across the United States, Canada, China, and Ecuador. Designed specifically for students interested in earning an Associate's degree in Automotive Technology (or similar), it incorporates advanced automotive technical training with a strong academic foundation of math, reading, and electronics. Participants develop both analytical and technical skills using GM products as part of their preparation for a career as a GM technician.

Students alternate between classes at over 50 colleges and universities in the U.S. and hands-on work experience at a sponsoring GM dealership or ACDelco Professional Service Center.

GM Service Technical College Web-Based Training

Two GM Web-Based Training (WBT) courses are available that focus on acquiring and developing technicians in the dealership.

Optimizing Current Technician Production (VMVOC.018W) reviews how promoting and fostering a "production first" mindset and having the tools to support it will help increase efficiencies, employee and customer retention, and profitability. This will enable learners to utilize best practices around setting and tracking production goals, managing shop loading, and optimizing work schedules that decrease technician turnover.

Recruiting & Developing Technician Talent (VMVOC.018W2) explores how to increase shop capacity and gross profit. The course discusses each of three ways to build staff: use established GM training programs, recruit from outside, and develop technician talent from within.

Thanks to Heidi Korte

Diagnostic Tips for Battery DTCs

Some 2014-2016 Malibu models equipped with the 2.5L 4-cylinder engine (RPOs LKW, LCV) may have an illuminated Check Engine MIL and the following DTCs set in the Engine Control Module (ECM): P305F (Dual Battery Control Module Performance), P058B (Battery Monitor Module Current Monitoring Performance), and P058D (Battery Monitor Module Voltage Monitoring Performance).

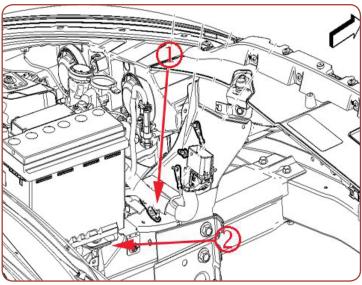
Depending on the DTC that is set, the cause may be:

- A loose ring terminal at the negative battery terminal
- Fretting or corrosion on female terminal pins in the 4-pin connector
- · A loose splice in the harness ground circuit
- A defective Dual Battery Isolation Module

DTC P305F

If DTC P305F is set, check the state of health of the auxiliary battery using the EL-50313 Midtronics GR8 Battery Tester/Charger. If the state of health of the batter is low, replace the battery.

If the state of health of the auxiliary battery is good, check ground resistance from the Dual Battery Isolation Module (DBIM) to G103. Wiggle the harness and negative battery terminal connections to look for varied resistance values.



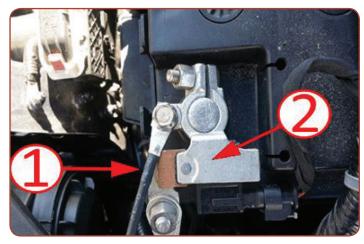
- 1. DBIM harness
- 2. Engine harness under main battery tray

If the resistance is greater than 0.5 ohms, or changes more than 1 ohm, inspect the ground connections and the splice in the harness about 1.5 feet from the connector end. Repair any poor connections.

If the resistance is less than 0.5 ohms, verify that the engine harness is not pinched underneath the main battery tray.

If none of these conditions are found, replace the DBIM. The DBIM is located on the fuse block assembly, which requires replacing the Battery Distribution Fuse Block and wiring harness connector.

DTCs P058B and P058D



- 1. Grounding ring for circuit 150
- 2. Battery Sensor Module

If DTCs P058B and/or P058D are set, check the orientation of the grounding ring for circuit 150 to the B110 Battery Sensor Module.



Reposition the terminal away from the sensor module.

If the ring is contacting the sensor module, reposition the terminal away from the sensor module and tighten the bolt to 44 lb.-in.

Also check ground resistance from the DBIM to G103. Wiggle the harness and negative battery terminal connections to look for varied resistance values.

If the resistance is greater than 0.5 ohms, or changes more than 1 ohm, inspect the ground connections and the splice in the harness about 1.5 feet from the connector end. Repair any poor connections.

If the resistance is less than 0.5 ohms, replace the Battery Distribution Fuse Block and wiring harness connector.

Refer to Bulletin #18-NA-367 for additional information and part numbers.

(Thanks to Calvin Kohring

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Vibration during Hard Acceleration

A vibration may be felt or a noise heard during hard acceleration on some 2015-2018 Colorado and Canyon models equipped with the 3.6L V6 engine (RPO LGZ) and 8L45 automatic transmission (RPO M5T).

When under acceleration at speeds of 48–52 mph (77–83 km/h), the driveline angles may become extreme during axle wind-up, resulting in a 2nd-order vibration. To adjust the angle, install a tapered shim between the axle and leaf spring.

Before installing the shim, check that the vehicle trim heights are within specification, there are no aftermarket modifications on the vehicle that may affect driveline working angles, and there are no signs of accident damage that may affect the



C-clamp attached to each end of the leaf spring.

position of the drive axle, axles, propeller shaft support bearing (if equipped) or the transmission or transfer case (if equipped).

In addition, inspect the condition of the leaf springs, mount bushings, mounting hardware, suspension structure, propeller shaft u-joints, and transmission mounts for any damage or excessive wear.

To install the shim, raise the vehicle and, using a hydraulic jack stand, support the rear axle. Apply tension to each end of the leaf spring using a C-clamp.

Next, remove the lower shock absorber nut and remove the rear spring anchor plate. Lower the hydraulic jack stand slightly in order to slide the 2° shim under the spring and the bolt up through the hole in the spring.

Remove the center bolt from the leaf spring pack. Install the tapered shim and the supplied bolt up through the spring. Torque the nut to 100 Nm (74 lb.-ft.) + 130°. Install the rear spring anchor plate.



Slide the shim under the spring.

TIP: The

thicker side of the shim goes toward the front of the vehicle to bring the pinion nose down.

If the vibration is improved, test for any brake-induced shudder by applying moderate braking at 45 mph (72 km/h) and noting any vibration at approximately 28–30 mph (45–48 km/h). If there is objectionable brake-induced shudder, remove the 2° shim and install the 1° shim.

Refer to Bulletin #18-NA-356 for additional information and part numbers.

() Thanks to Kevin Minor

Service Technician Enrollment in the 2019 Mark of Excellence Program

The Mark of Excellence program (U.S.) has recognized the achievements of GM dealership personnel for more than 20 years. With over 90 percent of GM dealerships enrolled in the Mark of Excellence pro-

gram, there are over 95,000 dealership personnel in the program who are working toward a variety of rewards.



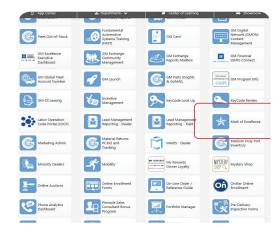
The 2019 Mark of Excellence program runs from January 3, 2019 through January 2, 2020. In the 2019 program, service personnel have the opportunity to win a combination of earnPOWER points, service medallions, and Certified Service apparel as well as attend nationwide Service Award banquets and trips to Detroit.



Mark of Excellence medallion

For service technicians to enroll in the 2019 program, dealers must elect to participate in the Service Technician program by June 30, 2019. Service technicians also must be enrolled by June 30, 2019.

Service technicians cannot be enrolled in



Mark of Excellence app icon

the 2019 program until their dealership enrolls in the Service Technician program. There is an additional enrollment fee for the Service Technician program.

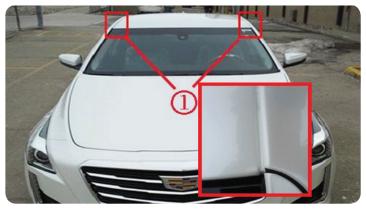
For more information about the 2019 Mark of Excellence program, select the Mark of Excellence app on the GM GlobalConnect App Center.

Thanks to Diana Sancya

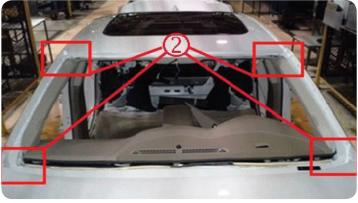
Front Roof Wind Noise or Water Leak

A wind noise condition or a water leak at the front of the roof or top of the windshield may be found on some 2014-2019 ATS and CTS models. If the water leak is present, water may run down the interior A-pillar to the front floor footwell.

The wind noise or water leak may be due to pinholes, cracks or voids in the forward roof ditch laser braze area, the upper windshield flange seam, or lower corners of the windshield opening.



Possible laser braze water leak areas



Possible windshield opening flange seam water leak areas

Forward Laser Braze Area Sealing

Inspect the forward laser braze area and water test the roof ditch and upper windshield area on the affected side of the vehicle.

Begin with a clean and dry front laser braze area. Remove the windshield garnish molding and perform a water leak test on the forward laser braze and upper windshield area using a water hose without a nozzle attached.

Flood the area for up to five minutes while observing the interior A-pillar for any evidence of water running along the pillar.



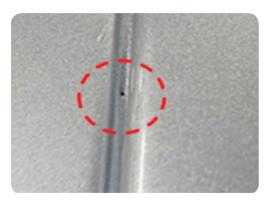
Water leak test on the forward laser braze and upper windshield

If a water leak is detected, inspect the roof laser braze for any pinholes or cracks. The small pinholes or cracks may be more difficult to see on darker color finishes.

Seal any holes or cracks using Kent Automotive High-Tech Seam Sealer or equivalent with the proper touch-up paint color. Avoid anv build-up of seam sealer within the ditch. Wipe away any excess sealer with a light amount of solvent on a shop rag or paper towel. The solvent will help the sealer flow into the hole or



Observe the interior A-pillar for any evidence of water.



Pinhole in roof laser braze

crack. Water test the repaired area again and inspect the interior Apillar for any visible water leak.

Windshield Sealing

If a water leak is still present after sealing the roof laser braze area, remove the windshield.

TIP: When removing the windshield, the tether clip at the lower portion of the garnish molding is not reusable and must be replaced every time the molding is removed.

On the affected side, check the upper windshield flange seam at the end of the laser braze as well as the lower corner flange seam for any signs of pinholes, voids or cracks. Seal any holes or seams as needed following the sealing procedure and reinstall the windshield.



1. Upper windshield flange seam at the end of the laser braze

Refer to Bulletin #18-NA-362 for additional information and part numbers.

(S) Thanks to Megan Brobeck

^{2.} Lower corner flange seam

Power Liftgate Assist Actuator Replacement

Some 2017-2018 Escalade, Tahoe, Suburban, and Yukon models may require replacement of the power liftgate assist actuator.

Prior to replacing the power liftgate assist actuator, verify the liftgate actuator grommet is properly seated to the sheet metal with no gaps. Any gap between the grommet and the sheet metal could result in water intrusion into the liftgate.

To check the retention of the liftgate actuator grommet, pull down on each of the four corners of the grommet individually to see if the clip is secured to the sheet metal or if the grommet pulls away easily. Also visually inspect or feel the entire lip seal of the grommet to check for proper seating.

Any grommet issues that are found that may have resulted in water intrusion should be noted on the job card or a Field Product Report should be submitted.

() Thanks to Hassan Abdallah





- 1. Properly seated grommet
- 2. Gap between the grommet and sheet metal

Low Oil Light Illuminated on CTS 2.0L Models

The Low Oil Light may be illuminated on some 2014-2019 CTS models equipped with the 2.0L 4-cylinder engine (RPO LTG).

If the Low Oil Light is on, it may be due to the oil level sensor wiring harness clip installed incorrectly, which may cause the harness to become too long and contact the driveshaft.

Check the wiring harness at the point of contact with the driveshaft. Repair the harness if necessary and apply a double layer of Woven Polyester Electrical (PET) tape to all contact points of the harness.

Also check the positioning of the harness clip. The original routing of the harness has the clip installed from the bottom. Reposition the harness clip



Reposition the harness clip from the top down.

from the top down. Verify that there is proper clearance between the harness and the driveshaft.

Thanks to Megan Brobeck

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TEEH LINK

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