



# Service Bulletin

Bulletin No.: 05-00-89-029E

Date: September, 2022

## INFORMATION

**Subject:** General Motors Dealership Critical Equipment Requirements and Recommendations

**Models:** 2023 and Prior GM Passenger Cars and Trucks

This bulletin has been revised to add the 2019–2023 Model Years, the first Important statement and update the information. Please discard Corporate Bulletin Number 05-00-89-029D.

**Important:** Service agents must comply with all International, Federal, State, Provincial, and/or Local laws applicable to the activities it performs under this bulletin, including but not limited to handling, deploying, preparing, classifying, packaging, marking, labeling, and shipping dangerous goods. In the event of a conflict between the procedures set forth in this bulletin and the laws that apply to your dealership, you must follow those applicable laws.

### Critical Equipment

As established in the Dealer Sales and Service Agreement, in addition to required essential service tools, the dealer agrees to provide such other tools and equipment as reasonably necessary to fulfill its responsibilities to properly diagnose and service General Motors vehicles. This bulletin is intended to provide General Motors dealerships with requirements and recommendations for service equipment that has been identified as critical equipment necessary to properly repair and maintain General Motors vehicles. The proper maintenance and/or replacement of existing equipment with General Motors approved equipment (available through GM Dealer Equipment) will ensure proper serviceability and contribute to improved customer satisfaction and dealer profitability.

### Equipment Maintenance

Regular maintenance and calibration is essential to assure the use of equipment results in high quality and satisfactory repairs. Most manufacturers recommend weekly or monthly cleaning and inspection of equipment with repair or replacement of worn or damaged parts as needed. Annual or semi-annual calibration of equipment is also recommended, depending on frequency of use. The manufacturer of your equipment will have specific recommendations and, in many cases, can provide inspection and calibration services.

### EV Service Equipment

**Important:** This technical service bulletin (TSB) can only be completed by certified repair facilities who have met all specific training, tool and equipment requirements pertaining to the vehicle Brand and Model serviced. Repairs must be performed by a technician who has successfully completed the required training.

**GM Requirements:** For all Electric General Motors vehicles with Electric propulsion, dealers are required to have all designated special service tools, equipment, and chargers in order to properly diagnose and repair electrification vehicles. Please refer to Service Bulletin # 22-NA-114 (U.S. Only). Dealers in Canada, please see the EV Readiness Guides available on the Marketing Hub under EV in Global Connect.

Reference [www.gmdesolutions.com](http://www.gmdesolutions.com) for all approved dealer equipment and specifications.

### Brake Equipment

#### GM Equipment Requirements\*

- Capable of producing rotor surfaces with less than 0.051 mm (0.002 in) assembled runout.
- Capable of producing rotor surfaces with less than 0.025 mm (0.001 in) lateral runout (as measured on the lathe arbor – bench lathe).
- Capable of producing flat surfaces (no dishing).
- Capable of producing rotor surfaces with less than 0.0076 mm (0.0003 in) thickness variation.
- Use secondary non-directional surface finishing tools.
- Capable of producing surface finish of 40 Ra (Roughness Average) or less (after secondary finish operation).
- All adapters, vibration dampeners, hardware and cutting inserts in good condition.
- Measure and document brake rotor original and refinished thickness.

- Use Essential Cleaning tools J-42450A and J-41013 to clean rotor hat and hub surfaces before rotor machining.
- Measure all brake drums prior to installation to ensure drum is not beyond maximum dimensions.
- Measure all brake rotors with a dial indicator and index that rotor on the hub to correct excessive lateral runout.
- Operators properly trained and ASE certified (U.S. only) in brake service.

Equipment meeting the requirements above supports procedures specified in the latest version of Service Bulletin Number 00-05-22-002 - Brake Service and Procedures. Essential tool CH- 47661 - Pro-Cut A10 and X15 Model Auto-Compensating On-Car Brake Lathes meet the requirements above and supports the latest versions of Service Bulletin Numbers 00-05-22-002 - Brake Service and Procedures and 03-05-23-005 - On-Car Brake Lathe for 2005-2013 Colorado and Canyon trucks.

#### GM Equipment Recommendations

- Positive Rake tool holders and bits
- One pass finishing
- Single spindle speed, single feed rate

### Tire Changers

#### GM Requirements

- Capable of servicing reverse mount wheels.
- Current design with operator protection features.
- Side-mounted or roller style bead breaking to reduce stress on wheel and tire.
- Upper and lower bead rollers for performing bead exercising to reduce Road Force.
- Ability to secure tire and rotate rim for 180 match mounting and indexing for Road Force.
- Center-style wheel clamping to prevent damage to rims.
- Protective devices which prevent damage during mounting and dismounting operations.
- Regulated air pressure to protect user and wheel assembly.
- Approved lubricant to avoid wheel slip and damage to tire and wheel.
- Run Flat capable without damage to wheel or tire.
- Operators properly trained and ASE certified (U.S. only) in wheel service.

#### GM Recommendations

- No metal contact at any point to the wheel including clamping jaws.
- Leverless tool head to help prevent damage to tire and rim.
- Flange-plate for protecting chrome-clad wheels.
- Tire Assembly Lifting System to prevent damage to tire and rim.
- Operators properly trained (desired) designs (Run Flat).

### Wheel Balancers

Hunter Engineering RFE13GM Road Force Balancer

#### GM Requirements\*

- Unit must be a computerized model.
- Capable of static and dynamic wheel balance modes.
- Ability to measure Road Force utilizing force wheel loading to 1,250 pounds.
- Ability to measure radial and lateral runout accuracy to 0.002 in (0.051 mm).
- Self-calibrating with user calibration functions.
- Cones and adapters in good working order to ensure wheel protection.
- Two-plane dynamic with accuracy to 0.01 ounce (0.28 g).
- Laser-assisted correction weight placement with accuracy to 512 positions, +/- 0.35°.
- Capable of balancing flangeless wheels, with adhesive weights.
- Ability to perform 180 MatchMount utilizing Road Force form measurement standard.
- Local printout capable.
- Operators properly trained and ASE certified (U.S. only) in wheel service.

\*Equipment meeting the requirements above supports procedures specified in the latest version of Service Bulletin Number 00-03-10-007 – Shake/Vibration in Steering Wheel, Floor, Seat at Highway Speeds on Smooth Roads (Diagnose/Balance Tires/Wheels).

#### GM Recommendations

- Additional weight storage trays
- Flange-plate for protecting chrome-clad wheels.

### Alignment Equipment

#### GM Requirements

- Computerized four wheel alignment system.
- Computer capable of printing before and after alignment reports.
- Racking system must have jacking capability.
- Racking system must be capable of level to 1/16" (1.59 mm).
- Appropriate wheel stops and safety certification.
- Wheel clamps capable of attaching to 20" or larger wheels.
- Racking capable of accepting any GM Passenger car or Light Duty Truck.
- Computer capable of time and date stamp printout.
- Operator properly trained and ASE Certified (U.S. only) in alignment.

#### GM Recommendations

- Racking should have front and rear jacking capability.
- Build in turn plates and slip plates

## High Pressure Leak Detector

### GM Requirement - GE- 52250 PowerSmoke High Pressure Leak Detector (RLD950178)

Specifically engineered to test the integrity of turbo, boosted, high pressure automobile systems.

## Diagnostic Battery Tester

### GM Requirement – EL-52800 Diagnostic Charge Battery Station (XTQEL52800)

All-in-one battery station that performs battery diagnostics using the latest technology. Produces Warranty Codes.

## A/C Service Equipment

### R-134a - GE-48800 Cool Tech Refrigerant Recovery/Recharge Machine

- For all General Motors vehicles with R-134a Refrigerant, A/C Refrigerant Recovery/Recharging Machine GE-48800 is available for service. GE-48800 is SAE J2788 compliant and meets GM requirements. SAE J2788 does not require GM Dealers to replace ACR2000 units. Refer to the latest version of Bulletin 08-01-38-001 for additional information.

### R-1234yf - GE-50300A Refrigerant Recovery/Recycle/Recharge Machine

- For all General Motors vehicles with R-1234yf Refrigerant, A/C Refrigerant Recovery/Recycle/Recharging Machine GE-50300 is required for service. GE-50300 is SAE J2843 compliant and meets GM requirements. Refer to the latest version of Bulletin 12-01-37-001 for additional information.

### R-1234yf - GM ACX2286 R1234yf AC Service Machine (RTI4608046600)

- For all General Motors vehicles with R-1234yf Refrigerant, A/C Refrigerant Recovery/Recycle/Recharging Machine ACX2286 is an approved equipment option and alternative to the GE-50300 above required for service. ACX2286 is SAE J2843 compliant and meets GM requirements. Refer to the latest version of Service Bulletin # 12-01-37-001 for additional information.

## Emission Packages

### GM Requirements:

- Meet state/provincial certification requirements
- Properly maintained

### GM Recommendations:

- Wide wheelbase and weight limit to facilitate most vehicles
- Upgradeable to handle other grades of emissions tests (ASM, RG240, IG240, BAR1, etc.)
- High-speed, inertia and horsepower capabilities
- Maximum safety features such as locking wheel chocks, roll covers, and vehicle restraining systems
- Operator properly trained and ASE Certified (U.S. only) in emission service

## Service Department Computers

### GM Requirements:

- Recommend one (1) laptop for each technician performing service programming and vehicle diagnostics, otherwise, one for every two technicians
- Recommends one (1) Multiple Diagnostic Tool (MDI 2) for every Techline PC
- Recommends one (1) battery maintainer for every two (2) Multiple Diagnostic Interface (MDI) tools in use
- Recommends use of Tripp-Lite Keyspan USB to Serial adapter (Model: USA - 19HS) for computers without serial ports

To view a current United States (US) specification, go to [www.gmdesolutions.com](http://www.gmdesolutions.com). Select the tab titled: Techline IT Solutions and GMIT Standards. In Canada, refer to "General Motors Dealer Infrastructure Guidelines" located within GlobalConnect in the Dealer Security & Information Technology App.

### Enterprise Grade PC Specifications

PCs that are not enterprise grade are considered "non-supported hardware." Unlike a home grade PC, an enterprise or commercial PC is specifically configured for use in a **enterprise network environment**. PCs in this class have components designed and supported for use in a network environment. Additionally, they have greater life cycle stability due to "designed-in" serviceability. Techline applications will not function properly on typical non-enterprise grade hardware.

**Important:** ALL Processors below the Intel Core i series plus AMD, Celeron, Pentium and Atom processors are NOT compatible with Techline software.

