

Automotive Service Technician

Maintenance Edits – Errata Sheet 2026

Revisions are organized by **module**, **page**, **change type** and **change made** for quick reference.

These modules were selected for targeted revision because they required the most significant updates.

Notice: All reasonable efforts have been made to ensure that this document is accurate, reliable, and free from error; however, there may be instances where information contained herein is not error-free.

Program	Automotive Service Technician - Period 2	Jump to Period: → Period 2 Change Details
Guide Alignment	Apprenticeship and Industry Training (AIT)	
Total Changes	89 changes across 9 modules	
Change Date	July 15, 2026	

Change Overview

Module (Click modules below to jump to details)	Changes	Focus of Changes
→ 090201aA/B – Engines: Parts A and B	19	Updated engine theory and fuel-system terminology; clarified diesel content and engine service procedures
→ 090201bA/B/C – Internal Engine Components: Parts A, B and C	26	Updated piston, ring, bearing, and connecting rod content; clarified inspection, installation, and service procedures
→ 090201dA/B – Valve Trains: Parts A and B	27	Updated camshaft, lifter, and valve train content; expanded VVT, cylinder deactivation, and inspection procedures
→ 090201j – Heating, Cutting, and Gas Metal Arc Welding	14	Expanded oxyfuel equipment, safety, and GMAW technique content; updated PPE, respiratory protection, and terminology
→ 090205b – Charging Systems	3	Expanded aftermarket dual-generator diagnostic and service guidance; updated the related activity and answer key

Change Type Legend

Change Type	Meaning
Assessment	A self-test item, question, answer key, or related term was corrected.
Calculation Correction	A numeric conversion or calculation was corrected.
Compliance	Content was revised to better reflect applicable standards or industry practice.
Content Clarification	Wording or explanation was revised for accuracy, clarity, or consistency.
Figure Update	An image or figure was updated for clarity or relevance.
Formatting	Content formatting was revised for accuracy or consistency.
Scope	Content was added, removed, or adjusted to better fit trade training.
Terminology	A term was replaced, clarified, or made consistent.

Period 2 Change Details

090201aA - Engines: Parts A		
Page(s)	Change Type	Changes Made
6	Figure Update	Corrected the diesel engine image and caption reference so a compression-ignition diesel engine is not described as a spark-ignition engine.
8, 9	Content Clarification	Revised CNG and LPG comparison wording to clarify emissions, storage pressure, and fuel-system differences without relying on fixed emission-reduction values.
11	Compliance	Clarified engine rotation terminology so left/right references and rotation direction follow standard industry viewpoint.
14	Content Clarification	Revised the Atkinson/Miller cycle explanation for clarity and accuracy.
15, 17	Content Clarification	Standardized diesel compression ratio information and updated the diesel auto-ignition/kindling temperature explanation for accuracy and consistency.
17	Content Clarification	Revised the diesel/gasoline comparison charts to use more appropriate compression ratio ranges, update maximum pressure timing, and replace the air/fuel ratio comparison with thermal efficiency.
36	Scope	Removed the locomotive displacement-per-cylinder example so the content stays focused on automotive service training.
46	Scope	Removed the methanol engine reference so fuel-system examples stay focused on technologies commonly encountered in North American automotive service.
53	Calculation Correction	Corrected the temperature conversion for aluminum parts: 200 °C is 392 °F, not 400 °F.
8, 46	Content Clarification	Clarified the difference between bi-fuel and dual-fuel engine terminology so related fuel-system examples are consistent across the module.
090201aB - Engines: Parts B		
Page(s)	Change Type	Changes Made
4	Content Clarification	Clarified block deck resurfacing wording to state that machining can retard valve timing on OHC engines due to the changed camshaft-to-crankshaft relationship.
6–9	Content Clarification	Expanded cylinder deglazing and honing guidance, including hone types, crosshatch technique, lubrication, material removal limits, and cylinder cleaning after honing.
10–17	Content Clarification	Clarified cylinder boring, repair sleeve, honing, and surface finish guidance.
32	Content Clarification	Clarified the procedure for removing connecting rod caps on crankshafts with shared connecting rod journals to reduce the risk of connecting rod twisting damage.
43–46	Content Clarification	Reorganized crankshaft and bearing installation steps and clarified Plastigage, thrust-bearing alignment, and main bearing installation wording.
47–49	Content Clarification	Clarified piston and connecting rod installation guidance, including piston ring compressor use, piston orientation, rod-bearing clearance checks, and connecting rod side clearance.
53	Content Clarification	Expanded cylinder head fastener guidance to emphasize following OEM thread preparation, lubricant, sealant, and anti-seize requirements.
55	Content Clarification	Clarified valve lifter installation guidance to note that new lifters may not always need to be filled with oil before installation and that manufacturer procedures should be followed.

090201aB - Engines: Parts B

Page(s)	Change Type	Changes Made
76	Assessment	Revised self-test wording and answer key alignment, including updated questions for engine liners, die-cast mould material, dye checking, and related cylinder block content.

090201bA - Internal Engine Components: Part A

Page(s)	Change Type	Changes Made
2	Formatting	Corrected booklet wording to state that Internal Engine Components is presented as a three-part module.
13–15	Scope	Restored or expanded friction bearing content, including bearing spread, bearing crush, crush relief, locating devices, and bearing clearance.
38	Content Clarification	Clarified balance shaft content to note that balance weights may be mounted in the cylinder block or built into a special oil pump housing.
53	Terminology	Removed incorrect and redundant crankshaft grinding size list items so the repair grind examples only include standard undersize increments.
60	Scope	Removed stroker-engine content from the journal rebuilding section so crankshaft service content stays focused on routine automotive service.

090201bB - Internal Engine Components: Part B

Page(s)	Change Type	Changes Made
2	Formatting	Corrected booklet wording to state that Part B is the second booklet in the three-part module.
4–5	Content Clarification	Revised piston function and operating-condition wording, including updated diesel and gasoline combustion temperature and pressure ranges.
7–14	Content Clarification	Reorganized piston design content around automotive piston components, including the head, crown, valve reliefs, ring grooves, ring lands, skirt, pin bore, thrust faces, and related features.
14–16	Content Clarification	Updated piston material content for modern automotive applications, including aluminum-silicon alloys, forged aluminum, forged steel, and hypereutectic aluminum.
16–20	Scope	Added piston manufacturing and expansion-control content, including casting, forging, piston shape, heat control, and skirt design.
21–23	Scope	Revised piston cooling content to focus on splash and spray oil cooling and removed circulation and shaker cooling methods.
24–32	Content Clarification	Reorganized and expanded piston ring content, including ring types, coatings, Napier rings, molybdenum-face rings, identification, and installation/orientation guidance.
32	Content Clarification	Expanded piston ring storage guidance to address bending, twisting, improper stacking, and excessive force.
36	Content Clarification	Added powdered metal connecting rods to the connecting rod material discussion.
42–43	Content Clarification	Revised connecting rod fastener, bearing, service, and handling guidance to emphasize manufacturer procedures, torque-to-yield fastener replacement, and proper storage.
44–46	Assessment	Updated the Objective Five and Objective Six activities and answer keys, including questions on piston material, compression ring shape, and connecting rod/cap matching.

090201bC - Internal Engine Components: Part C

Page(s)	Change Type	Changes Made
2	Formatting	Corrected booklet wording to identify Part C as the final booklet in the three-part module.
3–16	Content Clarification	Clarified piston and connecting rod inspection and measurement wording, including piston defects, piston clearance, piston pin inspection, and out-of-round terminology.
21–25	Content Clarification	Clarified piston and connecting rod removal guidance, including BDC positioning, piston-cooling nozzle cautions, bearing storage, and rod/cap matching.
26–30	Terminology	Changed ring cleaning terminology from ring lands to ring grooves and clarified the used-ring scraper procedure.
30	Assessment	Expanded Objective Eight Activity and answers with questions on ridge removal, bearing handling, and bead-blasting pressure.
33	Content Clarification	Revised piston ring side-clearance guidance and removed unclear keystone ring groove wording.
39–45	Content Clarification	Clarified piston and connecting rod installation guidance, including ring gaps, bearing lubrication, piston-cooling nozzle cautions, and side clearance.
45	Content Clarification	Added connecting rod bearing clearance guidance, including direct measurement and Plastigage methods.
46	Assessment	Expanded Objective Nine Activity and answers to include bearing clearance and Plastigage.
47–56	Assessment	Revised self-test wording, answer choices, and answer key alignment.

090201dA - Valve Trains: Part A

Page(s)	Change Type	Changes Made
3–7	Content Clarification	Clarified camshaft construction wording, including camshaft components, eccentrics, and auxiliary drives.
10–14	Content Clarification	Reorganized camshaft lobe content, including lift, duration, overlap, and camshaft timing effects.
15–17	Content Clarification	Added overhead camshaft examples for shim-and-bucket adjustment and hydraulic buckets.
20	Scope	Replaced the heavy-duty shell-bearing example with overhead camshaft bearing content more relevant to automotive applications.
21–23	Content Clarification	Added camshaft thrust plate inspection and measurement guidance.
24–34	Content Clarification	Reworked camshaft follower content into a lifter section, including solid, hydraulic, flat, and roller lifters.
35–44	Content Clarification	Reorganized rocker arm content, including rocker arm followers, rocker arm ratio, valve bridges, pushrods, and valve covers.
47–49	Content Clarification	Clarified camshaft functions, accessory drives, and camshaft failure wording.
54	Content Clarification	Corrected valve overlap wording to clarify its effect on low-speed performance, emissions, and peak power.

090201dA - Valve Trains: Part A		
Page(s)	Change Type	Changes Made
63–69	Scope	Moved the “Valve and Camshaft Timing” and “Variable Valve/Camshaft Timing” sections from Part A, Objective Four, to Part B, Objective Five, where they now appear as “Valve and Camshaft Timing” and an expanded “Variable Valve Timing” section.
70–74	Assessment	Updated Objective Four activity and answer key to match the revised camshaft drive content.
090201dB - Valve Trains: Part B		
Page(s)	Change Type	Changes Made
2	Terminology	Added a note clarifying the technical use of “retard” in timing references.
3–14	Scope	Expanded Variable Valve Timing content, including camshaft timing, cam phasers, variable valve lift, i-VTEC, Valvetronic, and VVT component operation.
12–13	Content Clarification	Clarified how VVT can support internal EGR through valve overlap.
13–14	Content Clarification	Clarified vane-type actuator and oil control solenoid wording.
15, 67	Assessment	Revised Objective Five Activity and answers to align with the expanded VVT content.
16–19	Scope	Expanded cylinder deactivation content, including ECM control, collapsed lifter operation, fuel/spark disabling, and diesel aftertreatment context.
19, 67	Assessment	Revised Objective Six Activity and answers to align with the expanded cylinder deactivation content.
20–25	Terminology	Revised camshaft follower terminology to camshaft lifter terminology where appropriate.
23–29	Content Clarification	Clarified camshaft inspection guidance, including spalling, fuel pump lobe inspection, and serviceability.
30–39	Content Clarification	Reorganized lifter inspection content and added hydraulic lifter plunger inspection guidance.
38–39, 68	Assessment	Revised Objective Seven Activity and answers to align with the updated camshaft and lifter inspection content.
40–46, 68	Assessment	Revised Objective Eight Activity and answers to align with the updated valve train drive inspection content.
47–51, 69	Assessment	Revised Objective Nine Activity and answers to align with the rocker arm, rocker shaft, and pushrod inspection content.
52–65	Content Clarification	Clarified VVT diagnosis content, including oil supply, mechanical/electrical inspection, cold-start rattle, and metallic debris concerns.
62, 69	Assessment	Revised Objective Ten Activity and answers to align with the updated VVT diagnosis content.
63–70	Assessment	Revised self-test wording, answer choices, and answer key alignment.

090201j - Heating, Cutting, and Gas Metal Arc Welding

Page(s)	Change Type	Changes Made
1–2	Formatting	Reworked the Rationale section from bullets into paragraph format; content coverage is unchanged.
3	Terminology	Retitled the objective from "Overview of Welding and Cutting Equipment" to "Overview of Cutting and Welding Equipment."
3–22	Scope	Expanded oxyfuel equipment and safety content, including cylinders, regulators, hoses, torches, flashback protection, and flame types.
29	Scope	Added a new "Oxyfuel Hazards and Malfunctions" section covering backfires, burnbacks, and flashbacks.
32	Scope	Added "Set-Up of Oxyfuel Equipment" and "Leak Detection Fluids" content to the oxyfuel handling procedures.
37	Scope	Added a "Welding Technique" subsection to the GMAW handling procedures.
45–51	Scope	Added a new "Work Lead Connection" subsection to the GMAW components content.
52	Content Clarification	Relocated the "Wire Feeder Troubleshooting" content to follow the voltage/wire feed speed discussion.
55	Scope	Added a new "Corrective Measures Using Welding Techniques" section covering electrode angle, inclination, and extension.
59	Scope	Added "Required PPE for GMAW Welding" and "How to Select the Correct PPE" content.
61	Terminology	Replaced "Welding Glasses" with "Cutting Glasses."
61–68	Scope	Added a new "Filter Plate Shades" subsection to the welding helmets and lenses content.
69–76	Scope	Condensed "Respiratory Protection" content, removing the separate breakdown of air-purifying, airline, SCBA, and emergency escape respirator types.
76	Scope	Removed the "Quick Summary Checklist: Full PPE for Welding."

090205b - Charging Systems

Page(s)	Change Type	Changes Made
38	Content Clarification	Expanded the guidance for diagnosing aftermarket dual-generator systems, including how to locate service information, when to involve the installer, and how to test systems with non-standard voltage.
39	Assessment	Revised Objective Four Activity, Question 3. Answer choice b was replaced with a clearer incorrect option, while answer d now instructs the learner to test the factory system, obtain service information for the aftermarket system, and perform basic tests as required.
80	Assessment	Updated the Question 3 answer key to match the revised correct answer on page 39.