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Automotive Engines: Diagnosis, Repair, Rebuilding

By Tim Gilles



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This complete textbook provides detailed content on the theory of operation, diagnosis, repair, and rebuilding of automotive engines. In addition to essential technical expertise, the text helps users develop the skills and knowledge they need for professional success, including critical thinking and awareness of key industry trends and practices. The text emphasizes universal repair techniques and case histories based on real-world scenarios to prepare users for careers in the field. Instructor resources include lesson plans, customizable lab sheets that address NATEF Standards, a customizable test bank with questions based on chapter content, presentations in PowerPoint, and more. Now updated with new, full-color images and information on the latest trends, tools, and technology--including hybrid engines and high-performance components--AUTOMOTIVE ENGINES: DIAGNOSIS, REPAIR, REBUILDING, Seventh Edition, is the ideal resource for automotive programs who want a complete teaching package for their Engines course.



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Editorial Review

Review

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Measurement. Camshaft and Engine Performance. Checking Camshaft Timing. Camshaft Phasing, Lobe Centers, and Lobe Spread. Variable Valve Timing. Active Fuel Management/Displacement on Demand. Power and Torque. Measuring Torque and Horsepower. Dynamometer Safety Concerns. Study Questions. ASE-Style Review Questions.

About the Author

Tim Gilles has authored or co-authored several textbooks and has been active in professional associations for many years. He was president and a board member of the California Automotive Teachers (CAT), a board member and election committee chair of the North American Council of Automotive Teachers (NACAT), a member of the California Community College Chancellor's Trade and Industry Advisory Committee, and education committee chair for the Santa Barbara Chapter of the Independent Automotive Professionals Association. Mr. Gilles has also served several terms as a board member of the Santa Barbara Automotive Service Council and is active in industry associations such as AERA, The Automotive Repair Coalition, and IATN, including delivering presentations at numerous conferences. He was an automotive teacher for 38 years and is professor emeritus in the Automotive Technology Department at Santa Barbara City College. Mr. Gilles holds the industry certifications of ASE Master Automotive Technician and ASE Master Engine Machinist.

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