TECHNICAL EDUCATION ACADEMY

School of Engineering

COURSE PROGRAMME

000686

MECH069 - Diagnose and Rectify Vehicle Engine and Component Faults



Learn from the Best in the Business!

Course overview

Duration: 5 days / 40 hours · Intermediate level

Why take this course

The Diagnose and Rectify Vehicle Engine and Component Faults (Inspecting and Diagnosing Faults of Light and Heavy Vehicle Engines) training programme is a comprehensive, hands-on course designed to equip automotive professionals with the skills and knowledge necessary to troubleshoot, diagnose, and repair complex engine systems. Spanning five intensive days, this programme delves into the critical aspects of vehicle diagnostics, empowering participants to effectively address mechanical, electrical, electronic, hydraulic, and fluid system faults.

The training emphasizes a structured, methodical approach to diagnostics, starting with workplace safety and preparation, ensuring participants are well-versed in personal protective equipment and safe workspace protocols. Through a series of detailed modules, learners will master the use of advanced diagnostic tools, systematic testing techniques, and fault analysis methods. Participants will also gain insights into interpreting technical data and understanding the intricate interplay of vehicle engine components, enabling precise identification of faults.

Practical exercises and real-world scenarios form the core of the programme, ensuring participants develop the confidence to dismantle, assess, and rectify faulty components. They will also learn to perform adjustments and replacements to meet both operational and legal standards. The course concludes with a focus on post-repair testing and reporting, highlighting the importance of documenting diagnostic processes and adhering to professional timelines.

Tailored for automotive technicians, service engineers, fleet maintenance personnel, and apprentices, this training ensures attendees leave with actionable skills to enhance their performance in modern automotive environments. By the end of the programme, participants will be able to safely and efficiently restore engine systems to optimal functionality, contributing to improved vehicle reliability and customer satisfaction.

Who it is for and how it helps

This course is designed for the following participants:

Automotive Technicians involved in diagnosing and repairing vehicle engines and components.

Service Engineers responsible for maintaining and troubleshooting engine systems in workshops or field environments.

Fleet Maintenance Personnel handling the upkeep of commercial or industrial vehicle fleets.

Automotive Apprentices in the early stages of their careers seeking to specialize in vehicle engine diagnostics and repair.

Technical Trainers who need to deepen their understanding of diagnostic techniques to teach others effectively.

Course overview — continued

What you will learn

- Identify and implement safety measures, including personal protective equipment and safe workspace preparation, to minimize risks during diagnostic and rectification activities.
- Prepare, test, and use diagnostic tools and specialized equipment for analyzing engine mechanical, electrical, and hydraulic systems.
- Analyze and interpret vehicle technical data, including schematics and diagnostic test results, to identify system deviations and faults.
- Employ systematic diagnostic techniques to accurately locate and assess faults in engine systems.
- Assess dismantled components and sub-assemblies for repair or replacement based on manufacturer specifications.
- Perform rectification activities, including adjustments and component replacements, to ensure systems meet operational specifications.
- Verify that repaired or replaced components conform to operational and legal requirements, including road safety regulations.
- Use appropriate methods to test and validate the performance of rectified systems
- Accurately record diagnostic findings, repairs, and additional faults, and report to relevant stakeholders following workplace procedures
- Complete diagnostic and rectification tasks within agreed timescales, minimizing delays and ensuring efficient operations

Programme instructor



Elsayed Absi

A highly experienced Mechanical Maintenance Leader, Reliability Specialist, and Technical Trainer with more than 35 years of international experience in the oil and gas industry, working across Nigeria, Egypt, Yemen, and Syria with major Oil and Gas Companies like ExxonMobil, Total, Shell, Spie. Throughout his career, he has held senior technical and leadership roles in maintenance management, reliability improvement, preventive maintenance optimization, shutdown planning, rotating equipment, and field operations support.

He brings deep practical knowledge of mechanical systems, maintenance strategies, spare parts management, SAP/CMMS, root cause failure analysis, inspection planning, and equipment integrity. His professional background combines both hands-on field expertise and strategic maintenance leadership, making his teaching highly practical, industry-focused, and relevant to real working environments.

Alongside his engineering and maintenance career, he has extensive experience as a classroom trainer and on-the-job instructor, where he developed training materials, prepared assessments, coached technicians and engineers, and supported workforce competence development. He is passionate about sharing knowledge with students and helping them build a strong technical foundation, understand real industrial practices, and develop the confidence needed for successful careers in mechanical maintenance and engineering.

His teaching approach focuses on linking theory with practical application, with special attention to safe working practices, troubleshooting, preventive maintenance, rotating equipment, hydraulic and pneumatic systems, and maintenance planning.

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Participant ratings

Programme evaluation based on participant feedback

Overall programme rating — 4.5 / 5

Clarity of learning objectives	**4.7 / 5**
Confidence in applying knowledge and skills	**4.8 / 5**
Achievement of learning objectives	**4.8 / 5**
Relevance of content to job tasks	**4.8 / 5**
Suitability of difficulty for the level of preparation	**4.7 / 5**
Increase in knowledge	**4.8 / 5**
Skills development	**4.8 / 5**
Willingness to recommend the programme to colleagues	**4.8 / 5**

24 responses

Joining the programme

Contact the Academy and quote course code 000686 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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