



PERTECNCA'S

AUTOMOTIVE MOTOR MECHANIC TRAINING BROCHURE



Practical training



Post training assistance

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AUTOMOTIVE MOTOR MECHANIC TRAINING

The Automotive Motor Mechanic Training Program is designed to equip trainees with the essential skills and knowledge required to diagnose, repair, and maintain a wide range of motor vehicles. This comprehensive program covers everything from basic engine components to advanced diagnostic techniques, ensuring that participants are well-prepared to work on modern vehicles. Ideal for aspiring mechanics, this course blends theoretical knowledge with hands-on practical training.

What you'll learn?

- Fundamentals of automotive engines and components.
- Detailed study of motor mechanics and repair techniques.
- Diagnostic procedures using modern tools and equipment.
- Electrical and electronic systems in motor vehicles.
- Engine tuning and performance optimization.
- Brake, transmission, and suspension systems maintenance.
- Troubleshooting common vehicle problems.
- Safety protocols in automotive repair workshops.

Course summary:

This training program is tailored for individuals seeking a career as a motor mechanic in the automotive industry. The course covers a broad spectrum of motor vehicle systems, from engine repair to electrical diagnostics, providing a solid foundation in motor mechanics. Through a combination of classroom instruction and hands-on workshops, trainees will gain the skills necessary to perform routine maintenance and complex repairs on a variety of vehicles.

Key Takeaways:

- Expertise in diagnosing and repairing motor vehicle engines.
- Proficiency in using diagnostic tools for troubleshooting.
- Comprehensive understanding of vehicle electrical and mechanical systems.
- Practical experience in automotive repair and maintenance.

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Course syllabus:

Module 1: Introduction to Automotive Mechanics

- Overview of motor vehicle systems.
- Basic principles of automotive engines.
- Key components of motor vehicles and their functions.
- Importance of routine maintenance and inspections.

Module 2: Engine Components and Functionality

- Detailed study of engine parts: pistons, cylinders, crankshafts, etc.
- Understanding engine cycles: intake, compression, power, and exhaust.
- Methods for inspecting and maintaining engine components.
- Practical session: Disassembling and reassembling engine parts.

Module 3: Diagnostic Procedures

- Techniques for diagnosing common engine problems.
- Use of diagnostic tools: OBD scanners, multimeters, etc.
- Identifying issues in fuel, ignition, and exhaust systems.
- Practical session: Conducting engine diagnostics using modern tools.

Module 4: Electrical and Electronic Systems

- Overview of vehicle electrical systems: battery, starter, alternator, etc.
- Basics of automotive electronics: sensors, ECUs, wiring.
- Diagnosing and repairing electrical faults in motor vehicles.
- Practical session: Troubleshooting and repairing electrical systems.

Module 5: Brake and Suspension Systems

- Understanding brake systems: disc, drum, ABS.
- Maintenance and repair of brake components: pads, rotors, calipers.
- Overview of suspension systems: shock absorbers, struts, springs.
- Practical session: Servicing brake and suspension systems.

Module 6: Transmission and Drivetrain Systems

- Basics of manual and automatic transmissions.
- Understanding clutches, gearboxes, and differentials.
- Diagnostic techniques for transmission issues.
- Practical session: Repairing and maintaining transmission systems.

Module 7: Engine Tuning and Performance

- Techniques for engine tuning: timing, fuel-air mixture, etc.
- Understanding performance upgrades: turbochargers, exhaust systems.
- Methods for improving fuel efficiency and engine power.
- Practical session: Tuning engines for optimal performance.

Module 8: Vehicle Servicing and Maintenance

- Steps for performing a complete vehicle inspection.
- Routine maintenance procedures: oil changes, filter replacements, etc.
- Importance of service intervals and record-keeping.
- Practical session: Conducting full vehicle servicing.

Module 9: Real-World Applications and Fieldwork

- Hands-on repair projects in a real-world automotive workshop.
- Collaboration with experienced mechanics on complex repair tasks.
- Fieldwork: Participating in routine servicing and diagnostics in a working garage.
- Practical session: Real-world maintenance and repair projects.

Module 10: Preventive Maintenance Techniques

- Importance of preventive maintenance in vehicle longevity.
- Developing maintenance schedules for different vehicle types.
- Implementing checks for early detection of potential issues.
- Practical session: Creating and following a preventive maintenance plan.

Module 11: Evaluation and Certification

- Comprehensive assessment of theoretical knowledge and practical skills.
- Written exams covering automotive mechanics principles and procedures.
- Practical exams on diagnosing, maintaining, and repairing motor vehicles.
- Certification upon successful completion of the course.
- Opportunities for advanced training in specialized automotive systems.

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Practical training:

- Engine Diagnostics: Using diagnostic tools to identify engine issues.
- Component Repair: Hands-on repair of engine components.
- Electrical Systems: Troubleshooting and repairing vehicle electrical issues.
- Brake and Suspension Systems: Maintenance and repair techniques.
- Transmission Systems: Understanding and servicing transmissions.
- Vehicle Servicing: Performing complete vehicle inspections and servicing.
- Fieldwork: Real-world automotive repair projects.
- Safety Practices: Implementing safety protocols in the workshop.

Career scope:

Upon completing the Automotive Motor Mechanic training course, graduates can explore career opportunities in various sectors, including:

- Automotive Mechanic
- Vehicle Service Technician
- Engine Specialist
- Automotive Electrician
- Workshop Supervisor
- Fleet Maintenance Technician
- Diagnostic Technician
- Service Advisor
- Automotive Engineer
- Garage Owner



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