

DIESEL HEAVY EQUIPMENT II (412)

412-304 Diesel Fuel Systems

Credits: 4

This course focuses on diesel fuel system designs and principles. Learners will analyze the basics of diesel fuel system injection pumps, injectors, and injection system operation, as well as the maintenance and troubleshooting of electronic fuel systems per OEM/NATEF standards. Learners will be able to perform diagnostic service and repairs on current medium and heavy diesel engine fuel systems within the trucking industry.

Aid Code: 32 - Two-year Technical Diploma.

Complete Course Listing

412-305 Advanced Safety Procedures

Credits: 1

This course will focus on OSHA, and safety within a shop setting. Learners will work towards and receive a certificate for crane training per OSHA training requirements. Knowledge gained will give the learner the ability to operate a crane and to work safely within a diesel shop as well as other diesel industry environments.

Aid Code: 32 - Two-year Technical Diploma.

Complete Course Listing

412-306 Diesel Engine Service Repair I

Credits: 3

This course is a continuation of the Engine Fundamentals course. Learners will apply their knowledge of diesel engine parts and functions to perform emissions tests (intakes and exhaust sensors) as well as troubleshoot electrical system issues. Learners will be able to perform these diagnostics to the level of EPA regulations and standards.

Aid Code: 32 - Two-year Technical Diploma.

Co-requisites: (070-308)

Complete Course Listing

412-307 Diesel Engine Service Repair II

Credits: 3

This course is a continuation of Diesel Engine Service Repair I. Learners will breakdown and put together complete diesel engine systems, applying knowledge of external parts and functions, while paying close attention to the internal parts and functions. Learners will be able to perform diagnostics on all systems combined, ensuring that intake and exhaust systems meet EPA standards and entire engine systems are rebuilt to full working capacity.

Aid Code: 32 - Two-year Technical Diploma.

Co-requisites: (070-308)

Complete Course Listing

412-308 NAETF Certification Review

Credits: 1

Applying the NATEF standards practiced throughout this program, this course is designed to prepare the learner for future ASE certifications while practicing in the field as a Diesel Technician.

Aid Code: 32 - Two-year Technical Diploma.

Pre-requisites: (412-349)

Complete Course Listing

412-310 Brake Service Fundamentals

Credits: 4

This course introduces the learner to current trucking industry braking systems. Using OEM/NATEF standards, learners perform diagnosis, service and repairs on air, hydraulic, manual, and electric parking brakes as well as antilock braking systems that include wheel-end procedures. Learners apply the fundamentals of braking systems to perform proper diagnostics and repairs to current diesel vehicles.

Aid Code: 32 - Two-year Technical Diploma.

Complete Course Listing

412-311 Truck Steering & Suspension

Credits: 4

This course focuses on the multiple steering and suspension systems used on current medium and heavy duty diesel vehicles. Using OEM/NATEF standards and specifications, students engage in proper inspection and repairs on leaf spring, solid rubber, air ride, torsion bar suspension, and power steering as well as manual steering units. Learners will be able to perform electronic alignment procedures and repair suspension as well as steering problems commonly found within the diesel trucking industry.

Aid Code: 32 - Two-year Technical Diploma.

Complete Course Listing

412-342 Electrical Systems Troubleshooting

Credits: 4

This course develops the learners' electrical troubleshooting skills. Learners analyze testing techniques for advanced electrical circuits using DVOM's and scan tools, and interpret results using OEM/NATEF standards. The learner will be able to perform advanced electrical diagnostics and repairs on current diesel vehicle electrical systems.

Aid Code: 32 - Two-year Technical Diploma.

Co-requisites: (070-341)

Complete Course Listing

412-347 Inspection & Maintenance Procedures

Credits: 4

This course focuses on performing state and federal Motor Vehicle Safety inspections to appropriate Department of Transportation (DOT) standards. Learners explore multiple system component identification, inspection procedures, maintenance procedures per OEM/NATEF, and DOT standards. Learners will be able to apply knowledge of current state and federal documentation, and inspection procedures, understanding the importance of these inspections and documents when entering the diesel industry.

Aid Code: 32 - Two-year Technical Diploma.

Pre-requisites: (412-349)

Complete Course Listing

412-349 Equipment Welding

Credits: 2

This course introduces the learner to the basic field of metals. Learner will engage in Shielded Metal Arc Welding (SMAW), Oxy-Fuel Cutting (OFC), and Gas Tungsten Arc Welding (GTAW). The learner will be able to perform the aforementioned basic welding techniques used in the diesel industry.

Aid Code: 32 - Two-year Technical Diploma.
Complete Course Listing