Diesel Power Unit

Maintenance and Operation

Introduction

This in-depth course on Course N Carry Diesel Power Unit Training covers all the fundamentals of operating a diesel engine, including how the cooling system, fuel system, air intake system, exhaust system, and lubricating oil system work and need to be maintained.

Participants can identify issues before they grow larger and cost more money by doing proper maintenance inspections. The sorts of maintenance programmes and routine inspections that participants should expect to perform are covered in this Course N Carry training session. The operation of diesel engines is also covered in this course, along with the ways in which the diesel cycle varies from other engine cycles.

After introducing a number of important diesel engine components, the training session covers shop safety and tools. Additionally, all facets of a contemporary diesel engine and related systems, such as engine management, exhaust gas recirculation (EGR), and sophisticated injection systems, will be covered in this Course N Carry Diesel Power Unit training course. Diesel knock is one of the engine issues that will be discussed.

The main points of this Course N Carry training seminar are:

- Fundamentals of diesel engine operation
- Function and operation of the diesel engine's primary parts as well as its auxiliary systems
- Engine management systems and modern injection systems
- The issues with a diesel engine's proper operation
- The best diesel engine maintenance procedures

Objectives

By the time this Course N Carry training seminar ends, you'll know how to:

- Recognise the way that diesel engines burn fuel.
- Update and consolidate knowledge of diesel engine and accessory components.
- Determine how various injection systems work and what their functions are.
- Know how to operate the current diesel engine management system.

- Understand the engine operation guidelines.
- Determine engine issues and fixes

Training Methodology

The training session on Course N Carry Diesel Power Unit will cover workshop fundamentals through interactive worked examples, multimedia visuals, video clips, and presentations. The participants' skills will be improved through group discussions. We'll present and talk about pertinent case studies. To improve the participants' maintenance abilities, a certain amount of time will be spent teaching them how to read and comprehend service manuals.

Organizational impacts

This Course N Carry training seminar will assist the organisation in the following ways:

- Increasing personnel skill levels to improve plant reliability
- Reducing emissions of pollutants through efficient functioning
- Increasing the equipment's efficiency
- Cutting down on repair costs and downtime
- Boosting worker and plant safety
- Gaining more proficiency in troubleshooting can save time and money.

Personal Imapct

The following are a few significant advantages for attendees of this Course N Carry Diesel Power Unit training seminar:

- Improving their foundational understanding of diesel engines
- Increasing one's capacity to address issues
- Improving their ability to adjust to evolving technology
- Gaining more proficiency in reading and comprehending service instructions
- Reducing expensive downtime by applying best practices in defect detecting methods and procedures
- Helping to maintain excellent plant safety records and compliance with emissions

Who should attend?

All personnel involved in the operation and maintenance of diesel power unitary targeted for this Course N Carry training session, which will also provide the following benefits:

- Engineers in Mechanical Systems
- Technicians in mechanics

- Operators and Supervisors
- Technicians in Environmental and Safety
- Leaders of Process Plant Shifts

Course Outline

Day 1

Fundamentals of the Diesel Engine

- Technique of Action
- Engines with two and four-strokes
- Engine Efficiency, Power Output, and Torque
- Working Environment
- Burning Process in Diesel Engines
- System for Fuel Injection
- Burning Chambers
- Fuels Other Than Diesel for Diesel Engines

Day 2

Parts of Diesel Engines and Auxiliary Systems

- Essential Elements of Diesel Engines
- Cooling and Lubrication Systems
- Turbochargers and supercharging
- Systems of Air Supply and Exhaust
- System Startup

Day 3

System for Injecting Diesel Fuel

- Injection System Functions
- Fuel-Injection Configurations
- Designs for Nozzles and Nozzle Holders
- Injector Unit System
- Pump Unit System
- Common-rail systems
- EGR Unit
- Engine Control System (EMS)

Day 4

Operation and Troubleshooting of Diesel Engines

- Pre-operational inspections
- Regular Monitoring and Observation of Operations
- Procedures for Shutdown
- Unusual Operating Situations
- Typical Issues with Diesel Engines
- Diesel Squeak
- Matrix Troubleshooting

Day 5

Maintenance of Diesel Engines

- Monitoring System for Diesel
- Diagrams of Vibration and Indicators
- Testing for Compression
- Test Benches for Fuel-Injection Pumps
- Programme for Preventive Maintenance
- Revision Maintenance
- Case Studies