



Field Training

100XP P&H Drill Systems Maintenance

Course Duration

4 days

Target Audience

Electricians, Mechanics, Technicians and Engineers who will service and maintain P&H Mining Blasthole Drill.

Course Objectives

Upon completion of this course the student will be able to:

- Identify and explain the purpose of all the major Systems and components.
- Demonstrate proficiency in reading, interpreting and use mechanical and electrical schematics.
- Understand and describe maintenance and service procedures for main systems.
- Conduct failure analysis.
- Explain the inter-relationship of the drill systems.

Description

This course introduces the student to the operation and maintenance of the P&H Blasthole Drill. It focuses on critical knowledge and skills required in supporting current production models of the P&H Blasthole Drills.

The topics include Main systems and components, operation, maintenance troubleshooting and service. Maintenance and troubleshooting concepts are analyzed in a team environment, allowing the student to gain knowledge based on real world problems and experience.

Main Concepts

- Machine Intro and Overview
- Machine Systems
- Power Unit
- Main Air
- Main hydraulics
- Auxiliary Hydraulics
- Rotary System
- Hoist/Pulldown System
- Rotary Carriage
- Mast
- Undercarriage
- Propel Systems
- Electrical and Control
- System Maintenance and Service

Course Location

Customer Location

Prerequisites

Students should have a basic knowledge of fluid power concepts, electronics and computers.

It is also suggested that students complete the Systems overview and machine overview eLearning modules prior to coming to the course.

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Monday	Tuesday	Wednesday	Thursday
<p>Introduction</p> <ul style="list-style-type: none"> • Review of Agenda • Material Review • Schematics Symbols • Main Motions • Machine Systems <p>Main Air System</p> <ul style="list-style-type: none"> • System Overview • Main Air System (Start Up) • Main Air System Oil Circulation <p>Lunch</p> <ul style="list-style-type: none"> • Main Air System Compression • Main Air System Control • Main Air System Air Production • Maintenance and Troubleshooting <p>Q&A</p>	<p>Main Hydraulic System</p> <ul style="list-style-type: none"> • System Overview • Schematics Reading • Closed Circuit • Hydraulic Tank • Hydraulic Pumps • Hydraulic Propel Motors • System Control • Propel System • Maintenance and Troubleshooting <p>Lunch</p> <p>Auxiliary Hydraulics</p> <ul style="list-style-type: none"> • System Overview • Schematics • Open Circuit • Pump • Valve Banks • VB1 • VB2 • VB3 • Low Pressure Circuit • Auto Leveling • System Relief • Maintenance and Troubleshooting <p>Q&A</p>	<p>Rotary System</p> <ul style="list-style-type: none"> • Rotary Carriage • Rotary Motors • System Control • Speed • Maintenance and Troubleshooting <p>Hoist/Pulldown</p> <ul style="list-style-type: none"> • Rotary Carriage • Pulldown Motors • System Control <p>Lunch</p> <ul style="list-style-type: none"> • Speed • Maintenance and Troubleshooting <p>Mast</p> <ul style="list-style-type: none"> • Inspection and Maintenance <p>Q&A</p>	<p>Undercarriage</p> <ul style="list-style-type: none"> • Sideframes • Equalizer • Axle • Adjustments • Inspection and Maintenance <p>Pipe Handling</p> <ul style="list-style-type: none"> • Pipe Racks • Breakout Wrench • Winch <p>Lunch</p> <p>Electronics and Control</p> <ul style="list-style-type: none"> • PLC/SLC • GUI • Panels • Cabinets • Cables • Motors • Maintenance and Troubleshooting <p>Q&A</p> <p>Review & Assessment</p> <p>Rap up</p>