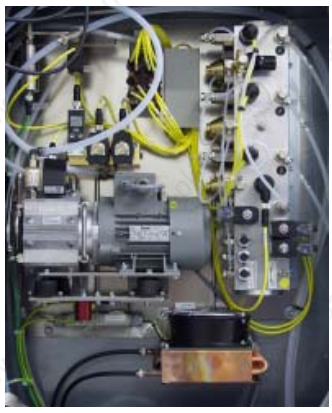
TRUMPF

TruLaser 5030 Maintenance - II



COURSE DESCRIPTION

This is the second course in TRUMPF's two-part TruLaser 5030 Maintenance training course series. This course focuses on maintenance tasks of mechanical components. The goal of this course is to provide students with essential knowledge and skills for performing proper maintenance on mechanical and electrical components such as the RF generator, gas mixer and pallet changer. Upon completion of this course, students will be able to perform all required maintenance and troubleshoot common machines problems ensuring peak machine performance.

PREREQUISITES

TRUMPF TruLaser 5030 Maintenance – I

COURSE DURATION

5 days

OBJECTIVES

- Demonstrate electrical and RF safe work practices when performing service on TRUMPF machines.
- Discuss gas-mixing theory.
- Perform maintenance tasks in the gas cabinet and troubleshoot gas problems.
- Understand RF theory.
- Identify the RF generator and its various subassemblies.
- Identify maintenance tasks for the RF generator.
- Troubleshoot RF problems.
- Identify TASC 3 and its role in laser control.
- Troubleshoot TASC 3 problems.
- Troubleshoot DIAS 4 with diagnostic LEDs and the 7-segment display.
- Identify maintenance tasks for the pallet changer and troubleshoot pallet changer problems with truth tables.
- Perform schematics reading.
- Practice troubleshooting safety circuit problems with schematics.

CUSTOMER SERVICES

TRULASER PRODUCT TRAINING COURSE

www.rgbautomatyka.pl

TRUMPF

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- Demonstrate RF and electrical safe work practices when performing maintenance on TruLaser 5030.
- Introduction to gas mixer, vacuum pump, and frequency converter
  - Gas mixer adjustments
  - Vacuum pump and valve blocks
  - Troubleshooting gas problems
  - Troubleshooting frequency converter problems
- Introduction to RF theory and RF subassemblies
  - Controller unit
  - Driver stage
  - Stage components
  - HV power supply unit
- Maintenance tasks for each RF subassembly
- Troubleshooting RF generator problems
- Introduction to the TASC 3
  - Analyzing the functions of various circuit boards
  - Role of TASC 3 in laser control
  - Troubleshooting TASC 3 problems
- Introduction to DIAS 4
  - Distance sensors
  - Reference curves
  - Troubleshooting frequent DIAS 4 errors
- Pallet changer operation
  - Major pallet changer components
  - Pallet changer truth tables on the I/O page
  - Repair and recovery
  - Troubleshooting pallet changer problems
- TRUMPF schematics
  - Identifying schematic symbols
  - Identifying major sections in TRUMPF schematic manuals
  - Following a signal through the schematics
- Troubleshooting the safety circuit
  - Safety circuit locations
  - Troubleshooting safety circuit problems with schematics