

HP T400 Simplex Color Inkjet Web Press: Service and Support



This is a lecture-style and hands-on course introducing the fundamentals of the HP T400 Simplex Color Inkjet Web. The course covers the basic operational procedures including safety and basic troubleshooting. This is a highly interactive course where participants will experience the operation of the press and learn to repair, and perform maintenance and troubleshooting of the HP T4XX Color Inkjet Web Press.



Course Title: HP T400 Simplex Color Inkjet Web Press: Service and Support

HP Product Number: H4K27

Category: Graphics/IHPS

Course Length: 15 Days

Delivery Language: English

To Order: Graphics Arts AMS Training at amsgraphicstraining@hp.com or 877-415-3222

Audience

- HP Field Service Engineers

Prerequisites

- HP Lockout / Tagout Training Course (course ID: SAH0452) Web-Based
- IHPS Web Press Support Tools and Processes Training Course (course ID: 00685886) Web-Based
- IHPS Technical Reference Resources Training Course (course ID: 00675874) Web-Based
- HP Electrical Safety for the Qualified Electrical Worker – Initial Training Course (course ID: 16738)
- Arch Flash Safety Webinar (grow@hp course ID: 00678508. Also available on IHPS e-Tools)
- Background in printing technology (traditional press operation, prepress, graphic design)
- Student must bring a Windows compatible laptop to class
- Experience working with high voltage equipment (480V)
- Experience working in electrical enclosures
- Understanding of the types and uses of electrical test equipment such as multi-meters
- Understanding of voltage, amperage, and resistance
- Understanding of electrical conductor and connector types and uses
- Ability to read and interpret electrical schematics and symbols
- Basic computer skills including installing programs and networking
- Basic plumbing skills including familiarity with tools, materials, fittings, sealants, valves, and safe practices
- Basic understanding of pneumatic systems including tools, materials, fittings, sealants, valves, and safe practices
- Ability to read and interpret pneumatic symbols and drawings

Course Objectives

By the end of this class you will be able to:

- List safety issues associated with the press in general and specific procedures.
- Describe the functions of components unique to the inkjet system such as ink storage and delivery, ink characteristics, the use of bonding agents, and print heads.
- Perform basic operational tasks such as startup/shutdown, loading/unloading paper rolls, webbing and tensioning the press, priming and replacing print heads.
- Complete scheduled maintenance procedures
- Perform maintenance and repair tasks
- Troubleshoot component level and system-wide issues
- Describe when and how to access additional support
- List safety issues associated with the press in general and specific procedures

Trained HP Color Inkjet Press Technicians will positively influence press reliability by:

- Reduce press down time by quickly and accurately diagnosing problems and finding solutions
- Enhance the longevity of press components by performing preventive maintenance tasks
- Improve overall performance and print quality

Course Outline

The course includes the following modules:

Week 1 Operator Course

Module 1: Welcome

- Class Logistics
- Course Materials
- Course Overview

Module 2: Safety Overview:

- E-stop locations and proper use
- General Safety Guidelines
- Personal protective equipment
- Press access
- Safe cleaning practices
- Visual checks for leaks
- Material Safety Data Sheets
- Ergonomic hazards
- Electrical hazards

Module 3: Printheads and Inks

- Printheads
- Inks
- Bonding Agent

Module 4: Operational Overview

- Major Components
- Paper Path
- Computer Systems
- Operator Controls

Module 5: Operator Controls

- Control Panel Locations
- Navigation
- Major Functions

Module 6: Tensioning

- Load Cells
- Operator Controls
- Automatic Tension Adjustment

Module 7: Basic Startup:

- Pre-startup safety checks
- Mechanical hazards
- Startup Procedures
- Calibration Procedures

Module 8: Basic Shutdown:

- Shutdown Procedures
- Powering Down

Module 9: Winders

- Loading/Unloading HP Winders

Module 10: Ink Delivery:

- Personal Protective Equipment
- Special Precautions for Bonding Agent
- Electrical hazards
- Handling Leaks
- System Overview
- Changing Ink Containers

Module 11: Printhead Handling

- Major components and functions
- Appropriate handling procedures
- Cleaning and storage

Module 12: Printhead Replacement

- Remove and replace
- Service routine

Module 13: Printhead Diagnostics

- Common printhead issues
- Locating faulty printheads from diagnostics
- Labeling faulty printheads for return

Module 14: In-line Process Control

- Accessing and using data from the In-Line Process Controller

Module 15: Support Services

- Accessing HP support services

Module 16: Preventive Maintenance

- Scheduled operator maintenance procedures
- Preventive maintenance system log
- Preventative maintenance reminders
- Accessing the scheduled maintenance and log pages

Module 17: Load and Configure a Print Job

- Job Submission Tool functionality
- Loading and configuring a job for printing
- Using the Job Reprint option
- Using the Variable Printing Speed Option

Module 18: Recap and Conclusion

- Self-Evaluation Checklists
- Learning Check
- Course Evaluation

Course Outline

Weeks 2-3: Repair and Maintenance

Module 1: Introduction

Module 2: Safety

- Locate E-Stops
- Place the press in a safe state
- Describe hazards and how to avoid injuries

Module 3: System Overview

- Identify electronic PCA boards and functions
- Describe data flows
- Describe major digital front end (DFE) components and functions

Module 4: Electrical Troubleshooting

- Electrical safety
- Lockout/tagout procedures
- Operating a digital volt meter
- Using electrical schematics
- E-Stop circuits on the press
- Locate the remote I/O connections on the press
- Indicator lights on system I/O ports
- Using telnet to reboot the press
- Using telnet to view the Press.log
- Using the Press Diagnostic system tests to troubleshoot
- Accessing the VNC screen

Module 5: Print Electronics System

- PCA boards
- Print data flow
- Troubleshooting PCA board level failures
- Troubleshooting print data communication failures
- Handling precautions for Fiber Optic cables
- Print encoder signal path
- Print encoder signal errors

Module 6: TCP/IP Networks

- Network components and functions
- Virtual Large Area Networks (VLANs)
- TCP/IP network topology
- Accessing and using network host tables
- Troubleshooting network connectivity issues

For more information:

Contact :

877-415-3222

Email address

amsgraphicstraining@hp.com

Module 7: Printbar Control and Servicing

- Service board and printbar assembly
- CAN bus communication
- Using Tera Term application to communicate with the service board
- Common servicing commands
- The seven states of a printbar
- Using LED lights to troubleshoot service boards
- Configuring a service board
- Using the PEC utility web page 9105
- Print Arch functions
- Pen to Paper Spacing

Module 8: Dryers

- Major components
- Dryer states
- WISH system
- Dryer VNC screen
- SCR event logs
- Troubleshooting tables
- Common repair procedures
- Lubricating blower bearings

Module 9: Compute Systems

- Major DFE components
- Sequoia Press Adapter

Module 10: Web Transport System

- Major components
- Troubleshooting
- Load cell calibration
- Web Guide system
- Troubleshooting and repairing HP winders

Module 11: Ink Delivery System

- Recommended PPE and associated hazards
- Ink delivery path
- Operator controls
- Aerosol system
- Flow sensor adjustment
- Bulk ink filter replacement
- Diaphragm pump repair

Module 12: Inline Process Controller

- Hardware and software systems
- Using schematic drawings
- Theory of operation
- Camera alignment
- Flat field adjustment
- Common problems

Module 13: Conclusion

- Self-Evaluation Checklists
- Learning Check
- Course Evaluation

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