



Delta Design LEVEL 1 Training: *Operator's Product Operation and Overview*

PROGRAM GOALS: Students will validate their understanding of the class topics covered, at end of this section, by appropriate Task Validation Signature acknowledgment form notation.

Quiz/Task validations and student evaluation of sections covered in the training program are available to management.

PREREQUISITES: Good English language and reading skills

TRAINING SESSION: MONDAY

Introduction and Class Description

- Introduce pupils and instructor introduction, along with class purposes, discussion topics, and program administration
- Provide customer support information and present training documentation
- Disseminate student background quiz: Delta Design provides a student background gathering quiz for training discussion details

Product Overview

- Review product purpose and general assembly function with specific product, component operational requirements
- Discuss functions and specifications, noteworthy aspects, and options including kits

Nomenclature, Locations and Functions

- Introduce all major and many minor assemblies and identify components and address related adjustment concerns

TUESDAY

Review

- Monday activity topics and skills

Operator Interface

- Discuss all CRT aspects with class hands on student exercises

Kit Changeover

- Hands-on operator mechanical kit changeover exercises with related CRT programming

Troubleshooting

- Hands-on problem diagnosis activity



Delta Design LEVEL 2 Training: ***Advanced Tool Use & Specialized Troubleshooting Overview***

PROGRAM GOAL: Pupils perform exercises designed to familiarize them with overall mechanical operation of the handler by individual investigation of the product mechanical and pneumatic operational aspects.

Students validate their understanding of the class topics covered, at end of this section, by appropriate Task Validation Signature acknowledgement form notation.

PREREQUISITES: The completion of the Delta Operators Product Overview and Operations training program, or equivalent understanding and 30 days work related experience.

TRAINING SESSION: MONDAY

Introduction and Class Description

- Pupils and instructor introduction
- Introduction of class purpose, discussion topics, and program administration
- Customer support information and training documentation presentation
- Student background quiz: Delta Design provides a student background gathering quiz for training discussion details

Product Overview

- Review product purpose and general assembly function with specific product, component operational requirements
- Discuss key assembly functions and specifications, noteworthy aspects, and options, including kit

Nomenclature, Locations and Functions

- (Re)introduce all major and many minor assemblies and identify components and address related adjustment concerns

TUESDAY AND WEDNESDAY

Review

- Nomenclature review
- Instructor demonstration: troubleshooting procedure flowchart

Control Screens

- Lecture and interactive exercises on location and function of each UI control screen key

Temperature Calibration

- Temperature calibration procedure demonstration with student reenactment

Mechanical Considerations

- Discuss common mechanical considerations
- Functional assembly investigation
 - Students perform removal, installation, alignment and adjustment of major and minor functional assemblies
- Introduce the relationship between the mechanical and electrical/program operation.
- Preventative Maintenance
 - Discuss noteworthy preventative maintenance considerations including Delta-recommended solvents, lubricants, tools and cautions
 - Hands-on exercises in adjustments, alignments, and preventative maintenance procedures

Delta Design LEVEL 2 Training: *Advanced Tool Use & Specialized Troubleshooting Overview*

- Dedicated Kits
 - Discuss dedication kit standards and review specifications
 - Perform a mock dedication changeover

THURSDAY

Review

- Nomenclature review
- Instructor demonstration: troubleshooting procedure flowchart

Encoder Considerations

- Discuss theory of motor, encoder, and circuit board function as well as encoder operational concerns
- Discuss effective use of CRT screens for encoder standardization of mechanical positions and perform motor assembly positioning exercise
- Perform kits setup exercise for encoder motor or component drive
- Perform diagnostics control exercise to move a device through the machine to enhance understanding of each component, sensor, and assembly
- Diagnose and fix mechanical problems as class exercise

FRIDAY

Troubleshooting Evaluation

- Full-day exercise for students to identify, isolate, solve, and repair programming and mechanical problems using trained concepts, procedures, and tools
 - Root cause solutions are timed in isolation and identification
 - Root cause identification and related discovery time is graphed with averages may be provided to management
 - Quizzes/tasks' validation covering information presented in the training program is addressed after every topic

Delta Design LEVEL 3 Training: Advanced Tool Use & Specialized Troubleshooting Overview

PROGRAM GOAL: Provide product background and specifics to support the 20% of the general service expected activities, not already covered in the Level 2 program.

This advanced program can be specialized per customer requests: Preventative Maintenance considerations, Electronics, Tool or Fixture usages, Ionizer, etc.

Students will validate their understanding of the class topics covered, at end of this section, by appropriate Task Validation Signature acknowledgement form notation.

Quiz/task validations and student evaluation of sections covered in the training program are available to management.

PREREQUISITES:

If the class is not at a basic level of understanding, a daily review will be provided. This review time allocation will influence other program activities.

TRAINING SESSION: Following is a generic schedule for this training; classes would be modified to emphasize customer-requested specific training goals. Details are presented as requested, upon class scheduling.

MONDAY

Introduction and Class Description

- Pupils and instructor introduction
- Introduction of class purpose, discussion topics, and program administration
- Student background quiz: Delta Design provides a student background gathering quiz for training discussion details

Nomenclature, Locations and Functions

- Handler and component specifications and operational requirements
- Student exercise to review terminology, component locations, function and adjustment understanding evaluation
- Instructor demonstration of electrical problem isolation and identification via the advocated procedure
- Review as required by class level

TUESDAY AND WEDNESDAY

Basic Review

- Nomenclature review
- Instructor demonstration of electrical and mechanical troubleshooting procedure with documentation usage (if required)
- Student participation and team exercises using troubleshooting procedure flowchart

Mechanical Considerations

- Students participate in hands-on exercises emphasizing mechanical considerations:
 - Common mechanical considerations, adjustments and preventive maintenance considerations
 - Mechanical and electrical interaction adjustments of transitions, hard stops, and vacuum generator sensitivity

Delta Design LEVEL 3 Training: *Advanced Tool Use & Specialized Troubleshooting Overview*

- Removal, installation, and related adjustments of mechanical assemblies
- Mechanical operation familiarity
- Relationship between the mechanical and electrical/program operation
- Advanced system tool setup and alignment
- Production operational short cut adjustment procedures
- Advanced mechanical consideration aspects as required/requested
- Review as required by class level

THURSDAY

- Instructor demonstration of electrical and mechanical troubleshooting procedure with documentation usage
- Student participation and team exercises using troubleshooting procedure flowchart
- Electrical documentation usages including drawings, schematic, troubleshooting aids
- Demonstration of engineering terminal tool and software applications with custom commands (program download, data gathering, tester interface information)
- Class troubleshooting exercises on mechanical problems

Encoder Considerations

- Advanced discussions on theory of motor, encoder, circuit board, and programming interaction for motor assembly positioning
- Students participate in hands-on exercises emphasizing encoder considerations:
 - Basic motor encoder setup
 - Diagnostics control for moving a device through the machine
 - Advanced motor setup using the terminal and related custom commands

FRIDAY

Troubleshooting Evaluation

- Full-day exercise for students to identify, isolate, solve, and repair programming, mechanical and electrical problems using trained concepts, procedures, and tools
 - Root cause solutions are timed in isolation and identification
 - Root cause identification and related discovery time is graphed with averages may be provided to management
 - Student work in rotating pairs per root cause problem isolation