IMPLEMENTING ATA SPEC 2000
CHAPTER 9
PERMANENT IDENTIFICATION

A COMPONENT MANUFACTURER’S PERSPECTIVE

David Meyer
• Became Aware Of The New ATA Spec 2000 Permanent Bar Code ID In 1994, Recognized The Benefits To Our Company & Industry
• Created An Internal Permanent Bar Code ID Team, Developed Concepts and Surveyed Customers With Sample ATA Format Nameplates
• Good Timing; We Were At The Same Time Implementing A Precision Laser Nameplate Engraving System
  • Real Time Processing, Electronic Interface To Config Data
  • Provided Bar Code Etching capabilities
• Created a Joint Team with Boeing and United Airlines to refine concept and test on a pilot basis.
• Defined a new method of product serialization that is non-repeating within cage code.
• Identified documentation changes required.
• Pilot production of the ATA format nameplates started on 9/27/94 on the FCC-702.
• Implementation has continued and a majority of Collins ATS products are compliant with the ATA Spec 2000 permanent bar code ID requirements.
• Laser Engraving System Used, Driven By Data From Configuration Data In SAP
• A Standard Format Two Piece Nameplate Utilized
  • One Piece Contains Mfr. Cage Code And Unique Serial #, Other Piece Contains Part Number…
    • Serial # And Mfr. Cage Code Piece Is Permanent
    • Part Number Piece Can Be Removed As Required
• Unique Non-Repeating Within Mfr. Cage Code, Product Serialization Is Required
PRODUCT WITH NAMEPLATE CONTAINING INFORMATION
INPUT BY MANUAL OPERATION
NAMEPLATE WITH INFORMATION INPUT BY MANUAL OPERATION
PRODUCT WITH ATA FORMAT PERMANENT BAR CODE ID
NAMEPLATE WITH ATA FORMAT
PERMANENT BAR CODE ID

1.25 inches

1.25 inches

2.20 inches
DEVELOPMENT OF 2D DATA MATRIX CAPABILITY

- Some of our products have very limited space and cannot fit conventional linear bar coded nameplates.
- The ATA spec now allows the use of 2D data matrix codes.
- The 2D application has been developed on our laser nameplate engraving system.
- Implemented use of an RVSJ DMx fixed station verifier to assure quality of the 2D codes.
- Nameplate format with 2D codes has been developed and are being implemented on products.
2D DATA MATRIX ATA FORMAT PERMANENT
BAR CODE ID

TCAS ANTENNA
TYPE NO. TRE-920 WT XX LB
DO-160B ENV. CAT. TSO C119a
COLLINS PNR 622-8973-XXX
Rockwell Collins, Inc.
Cedar Rapids, Iowa 52498-0001 USA

MFR 4V792 DMF 092001
SER XXXXX
MODS 1234567
891011121314 ABCDE
PRODUCT WITH INFORMATION INPUT BY MANUAL OPERATION
PRODUCT WITH ATA FORMAT 2D
BENEFITS OF PERMANENT BARCODE ID

• Improved Product Identification Process
  • Reduced Errors, Hand Stamping And Nameplate Scrap Eliminated, More Legible, Guidelines For Minimum Text Height Increased With ATA Spec.
• Unique Serialization Eliminates Problems Caused In Past With Repeating SN’s Within Similar Product Lines
• Provides A Method For Accurate Automated Data Entry: Shipping And Receiving Verification….
• Allows “Cradle To Grave” Tracking Of Products During Their Life, Thru Multiple Owners
• Review And Understand ATA Spec 2000 Chapter 9
  • Developed By The ATA Spec 2000 Shared Component Data Task Force
• Define Scope Of Project - Legacy & New Products
• Identify Potential Benefits To Your Organization
• ATA Spec 2000 Is Required By Your Customers
• Project Team Must Be Cross Functional - Production, Config. Mgmt, Engr, Service Support ….
• Involve Your Customers And Agencies (FAA…)
  • Pilot Project Involving Customers Are Effective
• Project Will Require “Out Of Box Thinking”
• There Are Many Alternatives For Marking/Identification, Your Solution Might Involve Several
• Developing Format Of Nameplate Was Difficult
  • Size And Location Of Nameplate Can Be A Challenge, Required Breaking Down Barriers
• Unique Serialization Method Must Take Into Account Legacy Products
  • Not Practical To Change Serial Numbers On Product In The Field
  • Must Provide Method To Easily Identify Units For Service Bulletin Installation
• Must Document Internal Procedures To Address Replacement Nameplate orders
  • Must Prevent Older Units With Non-unique Serial Numbers From Getting New ATA Spec 2000 Format Nameplates
STATUS UPDATE

- Multiple Lower Cost Laservall Laser Etching Systems Have Been Installed
  - Supports Cellular And Lean Manufacturing Concepts
- Business And Regional Air Frame Customer Has Now Requested Implementation Of ATA Spec 2000 2D Data Matrix Nameplates
  - Other Rockwell Collins Business Units Are Now Developing ATA Spec 2000 Nameplate Capabilities
- Permanent Unique Identification Of Products Is Only The Beginning
- Industry Wide Development Of A Method To Share Data On Products During Entire Lifecycle, Through Multiple Ownership Is Needed