

A Weapon System's Understanding of the DoD UID Policy

“Some Basic Truths from Lessons Learned by the CH-47”



Chris Sautter
Rotorcraft Systems Engineering & Simulation Center
University of Alabama-Huntsville
256 824 6147
chris.sautter@uah.edu

Just another Sling Load

*UID is not about Marking
Parts.*

*UID is about “Intelligent
Data”.*

Marking Parts costs Money!

*Marking Parts yields No ROI
Today!*



UID Policy Means Process Change!

- Marking Parts.
 - Legacy
 - New
- Capture Error Free Data.
 - DoD Registry
 - Dynamic Service Databases
- Transforming Information Systems.
 - Maintenance
 - Supply
 - Transportation

Goals of UID Policy

- Provide Globally Unique ID.
- Provide Asset Valuation.
- Provide Cornerstone to Total Life Cycle Management.
 - Serialized Item Management.
 - Total Asset Visibility across Enterprise.

Implementing the UID Policy

“To implement a policy establishing a strategic imperative for uniquely identifying tangible items relying to the maximum extent practical on international standards and commercial item markings and **while not imposing unique government data requirements.**”

What does this mean?

Army SNT - DA Form 2410

| COMPONENT REMOVAL AND REPAIR/OVERHAUL RECORD | | | | | | REQUIREMENT CONTROL SYMBOL | |
|--|-------------|---|------------------------------|--|--------------------------------------|------------------------------------|----------------------------|
| For use of this form, see DA PAM 738-751; the proponent agency is DCSLOG | | | | | | CSGLD-1052(R3) | |
| SECTION I - IDENTIFICATION | | | | | | | |
| CONTROL NUMBER 624882 | | 1. NOMENCLATURE Engine Gas Turbine | | 2. NSN 2840-01-070-1003 | | 3. PART NUMBER 6035T00G01 | |
| 4. SERIAL NUMBER GEE306591 | | 5. CAGE CODE 99207 | 6. NO. OF PREV O/Hs CC | 7. TIME SINCE LAST INST (HRS) 350 0 | 8. TIME SINCE NEW (HRS) 2766 2769 | 9. TIME SINCE OVERHAUL (HRS) CC | 10. FAILURE CODE 317 99 |
| 1. POS 1 | 12. HSF | 13. METER HRS | 14. WUC 0A | 15. COMPONENT CUMULATIVE COUNT/HOURS | | | |
| | | | | a. LCF 1 | b. LCF 2 | c. TTI | d. OP HRS |
| 16. APU SSN | 17. APU HRS | 18. APU SSO | 19. VERSION | 1 0 4 9 | 7 3 2 3 | 8 3 0 | 2 7 9 |
| | | | | + 0 4 7 | 7 3 + 7 | 8 + 8 | 2 7 6 |
| SECTION II - REPAIR/OVERHAUL/GAIN | | | | | | | |
| 20. REMOVED FROM (NOMEN NHA) | | | 21. NSN (NHA) | | | 22. PART NUMBER (NHA) | |
| 23. SERIAL NUMBER (NHA) | | 24. HOURS (NHA) 1385 | | 25. NHA CUMULATIVE COUNT/HOURS | | | |
| | | | | CF 1 | b. LCF 2 | c. TTI | d. OP HOURS |
| 26. APU START METER | | 27. APU HOUR METER | | | | | |
| 28. HISTORY RECORDER SN ECD03595 | | | 29. HISTORY RECORDER READING | | | | |
| | | | | a. LCF 1 | b. LCF 2 | c. TTI | d. OP HOURS |
| | | | | 2 7 | 1 6 0 3 | 1 4 7 | 6 8 5 |
| | | | | 2 7 2 | + 5 9 7 | + 3 5 | 6 8 2 |
| 30. ACFT MODEL UH-60A | | 31. ACFT S/N 8023426 | | 32. MAINT LEVEL 0 | | 34. UIC (This Action) WOWFAA | |
| 39. DATE CHECKED 96185 | | 40. PID AND TELEPHONE NUMBER AW0980 DSN 861-2361 | | 41. UIC WOM | | MANHOURS TO REPAIR/OVERHAUL 203 | |
| 43. INSPECTION AND ACTION CODES | | | | 44. REASON FOR GAIN | | MAINT D | 47. ACT FAIL CODE 317 |
| (A) SERV | | E (E) REPAIR | (G) REBUILT | | | | 48. SRA/ESRA N |
| (B) UNSERV | (D) REMFG | (F) O/HAUL | | | | | |
| REMARKS Total cumulative counts and hours calculated by WOWFAA due to history recorder failure. | | | | | | | |

Serial Number

Part Number

CAGE Code

Navy SNT – NALCOMIS OMA

NALCOMIS OMA

File Window Help

Active Work Order Query

Work Order Update - Removed

ORG: WA7

BUHO/SERNO: 164

WUC/UNS: []

MCH: []

MCH List:

- 00002N8 WA
- 00002N9 WA
- 00002NA WA
- 00002NB WA
- 00002ND WA
- 00002NE WA
- 00002NF WA
- 00002NG WA
- 00002NH WA
- 00002NI WA

MCH: 00002NI

WUC/UNS: 1513500

Mal Cd: 374

Pos Cd: RED

Buno/Serno: 164176

REMOVED

Cage: 07450

Part Number: 01-21551B42

Serno: 2163211

Date Removed: 17 JAN 2001

CDI Signature: []

Buttons: Cancel, Apply, Sort By

Serial Number

CAGE Code

Part Number

Air Force SNT – Form GO-81

AMC Graphical User Interface on LYNX - [G081 Session]

File View Connection Options Window Help

PA1 PA2 Send/Enter Disconnect Clear Screen Text Screen GUI Screen G081 Help

Screen: g021

MAMU9021 ON-LINE SICR PROGRAM

TRANSACTION **S** PASSWORD CEI MC0637D SERIAL NUMBER 0000000938

PART NUMBER 2248000-41 NHA CEI MA0001D NHA SERIAL NUMBER 0001000193

LOCATION CODE DKFX AF ACCEPTANCE DATE 02289 CAGE CODE 98571 STATUS M

TOTAL HOURS 01791.9 TOTAL CYCLES TSOH 0178.7 CSOH

TOTAL ENGINE FLIGHTS 000000 TOTAL LANDINGS 000619 ID NUMBER

LAST OVERHAUL AGENCY DATE LAST OVERHAUL TSO LAST INSPECTION

DATE LAST OIL CHANGE DATE OIL SAMPLE TAKEN DATE INSTALL 02198

CONFIGURED ARTICLE C WUC/REFDES 3133RC001 MADAR BOLT # POSITION

DATE OF LAST STATUS CHANGE 02198 % OF EXTENDED LIFE BUILD INTVL

WARRANTY DATE WARRANTY INDICATOR N CONTRACT # CFE

ADJUST CYCLES BY (EX: 0000012) ADJUST HOURS BY (EX: 00012.5)

VALID TRANSACTIONS: A-ADD, C-CHANGE, D-DELETE, S-SCAN, F-FIX LINKAGE PROBLEMS,
Y-ADD HRS/CYS TO ENG COMPONENTS, Z-SUBTRACT HRS/CYS FROM ENG COMPONENTS.
ALL DATES ARE JULIAN (POSITION YEAR AND 3 POSITION DAY).
ALL FIELDS USING HOURS ARE OF THE FORMAT 99999.9. YOU TYPE IN THE DECIMAL.
ADJUST CYCLES ARE HHHH FOR C17, ALL OTHERS ARE 9999999 WITH NO DECIMAL.

ACTIVITY ACCEPTED

Serial Number

Part Number

CAGE Code

Ready... [INS] [NUM] [CAPS] [SCRL] [R2,C14] 21:40 Zulu

Start | Inbox - Microsoft ... | ATMGOV | AMC Portal - Nets... | Microsoft Outlook | AMC Graphical U... | 1:41 PM

The Transition State of UID Implementation

- Existing Information Systems in place.
- New Information Systems.
- Existing parts.
 - Human readable information.
- New and Legacy parts.
 - UID with Machine Readable Code.
- Exists for 10+ years until over 80% coverage.

How did the Cargo PMO select a path forward?



PM Cargo UID Solution

Construct 1

- 2-data element configuration for UID.
- Re-serialize existing parts with Government CAGE.
- 3-data elements on part.
- Only current part number on label.
- Interoperable with Current Information System.



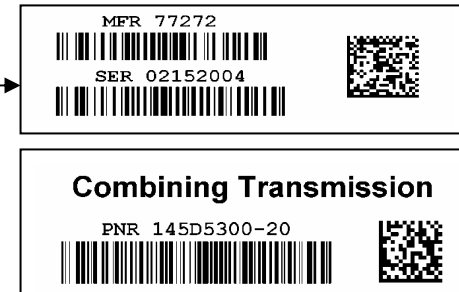
Combiner Transmission Construct #1 Utilizing TEIs

New Part from Manufacturer



Must be guaranteed by
Manufacturer CAGE code

Modified Part



Existing Part Marked by Government



3 Data
Elements

Marked using
Government Cage Code

Modified Part



Current Implementation Status w/ Cargo PMO

- New Maintenance Information System being fielded to Fleet.
- Part Numbers Targeted for UID
 - 1175
- Part Numbers approved for marking.
 - 136
- Total Parts marked in the field.
 - 786



Intelligent Data

means

Shared Data – Shared Benefits



Commander's Dashboard - Unit: WP1DAA

Timelines

Readiness

Operational

Phase/Reset

Alterations

Last Month Readiness

Current Month Readiness

Last Month MTF Ratio

Yesterday's Readiness

Bank Time = 650 hours (92 hours/AC)

Last Month Usage

Current Month Usage

Year to Date Usage

Last Month MTF Usage

Trends

Readiness

Utilization

Analysis

Reliability

Experience

Maint Planning

| | | | | | | |
|--|---|--|--|---|--|---|
| | | | | | | |
| S/N 8700100 Hours 5354.5 Phase 5554.5 Fly to 19.7 | S/N 9100269 Hours 4460.3 Phase 4661.4 Fly to 0.0 | S/N 9100270 Hours 3916.8 Phase 3952.6 Fly to -3.7 | S/N 9200281 Hours 2026.9 Phase 2182.0 Fly to 45.1 | S/N 9200282 Hours 3534.2 Phase 3596.9 Fly to -12.0 | S/N 9200287 Hours 3850.2 Phase 4040.7 Fly to 45.3 | S/N 9200288 Hours 2140.1 Phase 2147.0 Fly to 2.5 |

Installed Parts for LCN 05B01KG

| Aircraft | Part No. | Serial No. | Part | Lcn | Alt Lcn | Lcn Name | Subsystem | Subsys Name | Cage Code | Fitted | Operated | Threshold | Cumulative | Remaining |
|----------|------------|------------|----------------------|---------|---------|--------------------------------|-----------|--------------|-----------|--------------------------|--------------------------|-----------|------------|-----------|
| 8424158 | 114R2197-7 | A401AC | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Sep 23, 2003 12:00:00 AM | Sep 23, 2003 3:38:42 PM | 4800 | 3828.2 | 971.8 |
| 8424154 | 114R2197-7 | RL1566 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Sep 29, 2003 12:00:00 AM | Nov 29, 2003 12:06:00 PM | 3515 | 1403.18 | 2111.81 |
| 8700096 | 114R2197-7 | RL3510 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Aug 16, 2003 12:00:00 AM | Jan 11, 2004 2:00:00 PM | 3600 | 3443.55 | 156.45 |
| 8700100 | 114R2197-7 | RL5029 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Jun 26, 2003 12:00:00 AM | Jun 26, 2003 4:24:31 PM | 4820 | 2961.5 | 1858.5 |
| 8900135 | 114R2197-7 | TZ-1021 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Nov 7, 2003 12:00:00 AM | Nov 7, 2003 10:07:26 AM | 3330 | 1162.8 | 2167.2 |
| 9200282 | 114R2197-7 | TZ1281 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Jun 25, 2003 12:00:00 AM | Jan 26, 2004 12:00:00 PM | 5957 | 3871.2 | 2085.8 |
| 8700083 | 114R2197-7 | UW736A | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Nov 19, 2003 12:00:00 AM | Jan 15, 2004 12:20:00 PM | 3844 | 1639.7 | 2204.3 |
| 8900130 | 114R2197-7 | VM-5679 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Dec 1, 2003 12:00:00 AM | Dec 1, 2003 9:44:18 AM | 4800 | 2879.1 | 1920.9 |
| 8524345 | 114R2197-7 | VM1221 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Dec 9, 2003 12:00:00 AM | Feb 18, 2004 10:50:00 AM | 3999 | 1692.49 | 2306.5 |
| 8324124 | 114R2197-7 | VM1619 | HORIZONTAL HINGE PIN | 05B01KG | 00 | AFT HORIZONTAL HINGE PIN GREEN | 05 | ROTOR SYSTEM | 77272 | Aug 15, 2003 12:00:00 AM | Feb 17, 2004 11:07:00 AM | 4162 | 3362.03 | 799.96 |

Summary

- Reducing burden on Soldier is Priority One!
- UID/AIT is the key enabler to execute logistics transformation.
- Long term commitment required.
 - Will not happen overnight for legacy systems.
- Return on investment occurs only after Information systems are brought on line.
- Resourcing will require aggressive and innovative management.



Thought Piece!



