
TEGO

Powering Assets with Intelligence

Using TegoTags to Aid Repetitive Inspections

ATA eBusiness Forum – October 2015

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Air Transport Association

SPEC2000
e-business standards

9-5. Radio Frequency Identification (RFID) on Parts

Genesis

- Discussions with the FAA
- Repetitive Inspections
- Use existing standard
- Future operational guidance material

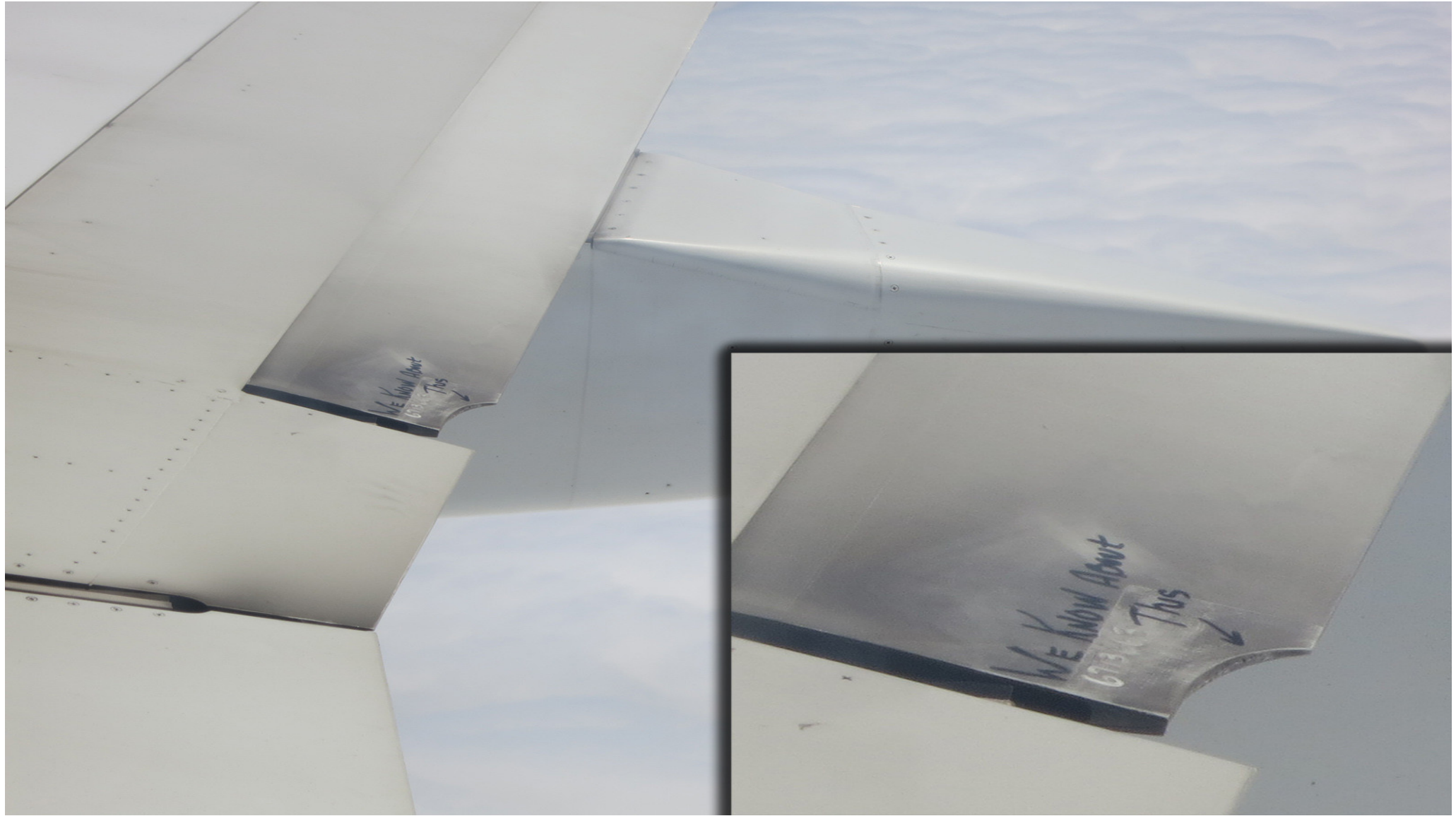


Deferred Maintenance



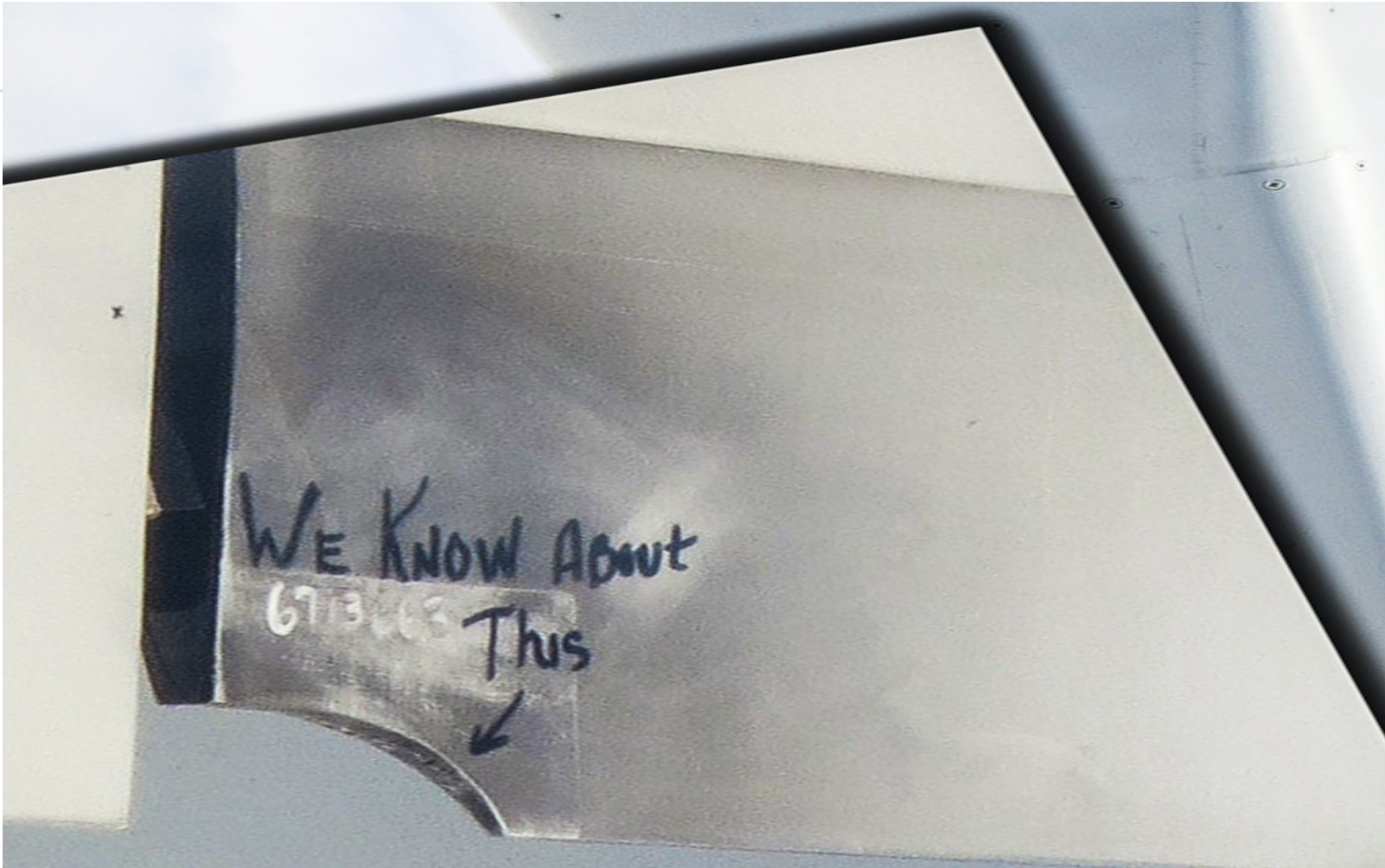
Aircraft Deferred Maintenance

- Minimum Equipment List (MEL)
- “The operator’s FAA-approved MEL allows the operator to continue a flight or series of flights with certain inoperative equipment.”
- Appropriate for “items that have been inspected and found within serviceable limits”.
- “may require repetitive inspections to ensure continuing airworthiness of the items.”



WE KNOW ABOUT
THIS

WE KNOW ABOUT
THIS



MEL / CDL / Deferred Maintenance - AW 09/30/2013

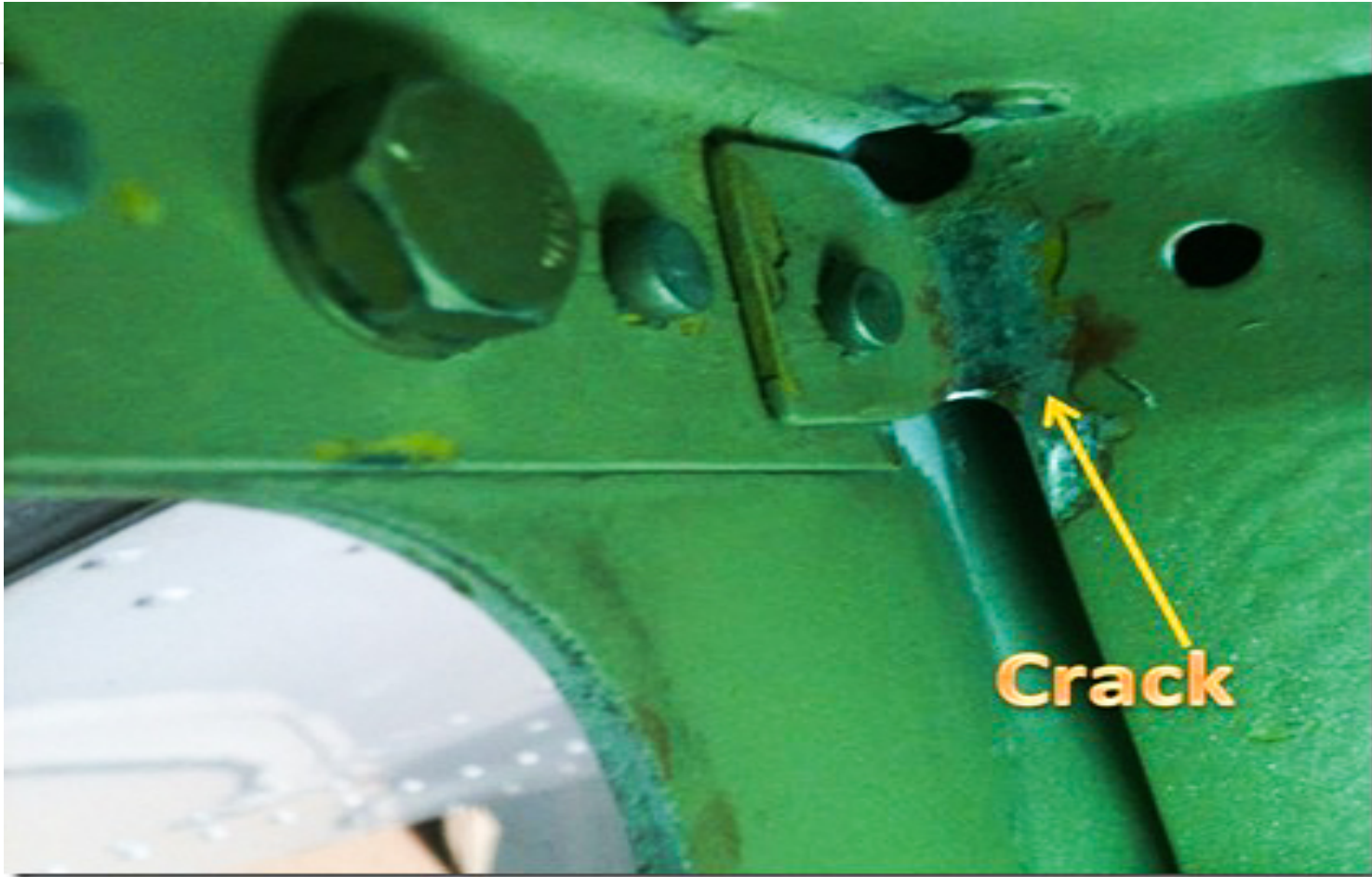
Questions:

1	<p>Did the operator ensure aircraft were not released into service with a deferred item(s) that exceeded the deferred item(s) MEL category repair interval time limit?</p> <p>Updated: Rev. # 4 on 09/30/2012</p> <p>Kind of Question: Flag, Supplemental, Domestic</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Observable
2	<p>Did the operator track the date, and when appropriate the time, an item was deferred and subsequently repaired?</p> <p>Updated: Rev. # 5 on 09/30/2013</p> <p>Kind of Question: Flag, Supplemental, Domestic</p> <p><i>Related Performance JTIs:</i></p> <p>1. Check at the record repository and review sufficient records to determine that repairs have been made within the time period specified in the MEL. (JTI ID: 6) <i>Sources:</i> FAA Order 8900.1, Volume 4, Chapter 4, Section 1</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Observable
3	<p>Did the operator authorize and control MEL Category B and C extensions to the specified maximum repair intervals?</p> <p>Updated: Rev. # 5 on 09/30/2013</p> <p>Kind of Question: Flag, Supplemental, Domestic</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Observable
4	<p>Was the Certificate Management Office notified within 24 hours of any approval to extend Category B and C items?</p> <p>Updated: Rev. # 2 on 03/03/2010</p> <p>Kind of Question: Flag, Supplemental, Domestic</p> <p><i>Related Performance JTIs:</i></p> <p>1. Check at the operator's specified location and review that the Principal Maintenance Inspector or the Principal Avionics Inspector has been notified within 24 hours of any extensions to the maximum repair interval for</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Observable

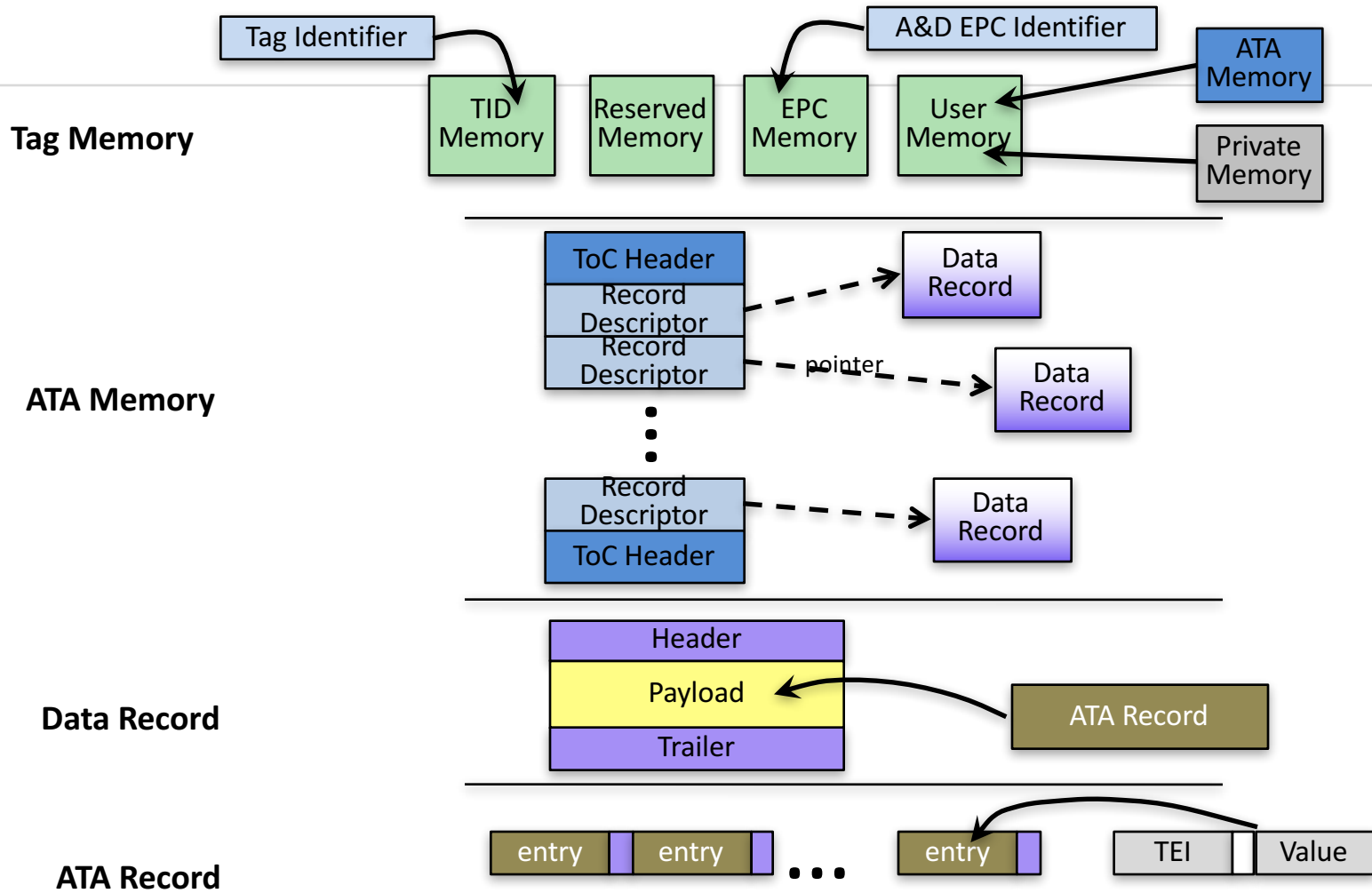
Common Examples

- Fuel leak classifications
- Dent limitations
- Cracks
- Temporary repairs

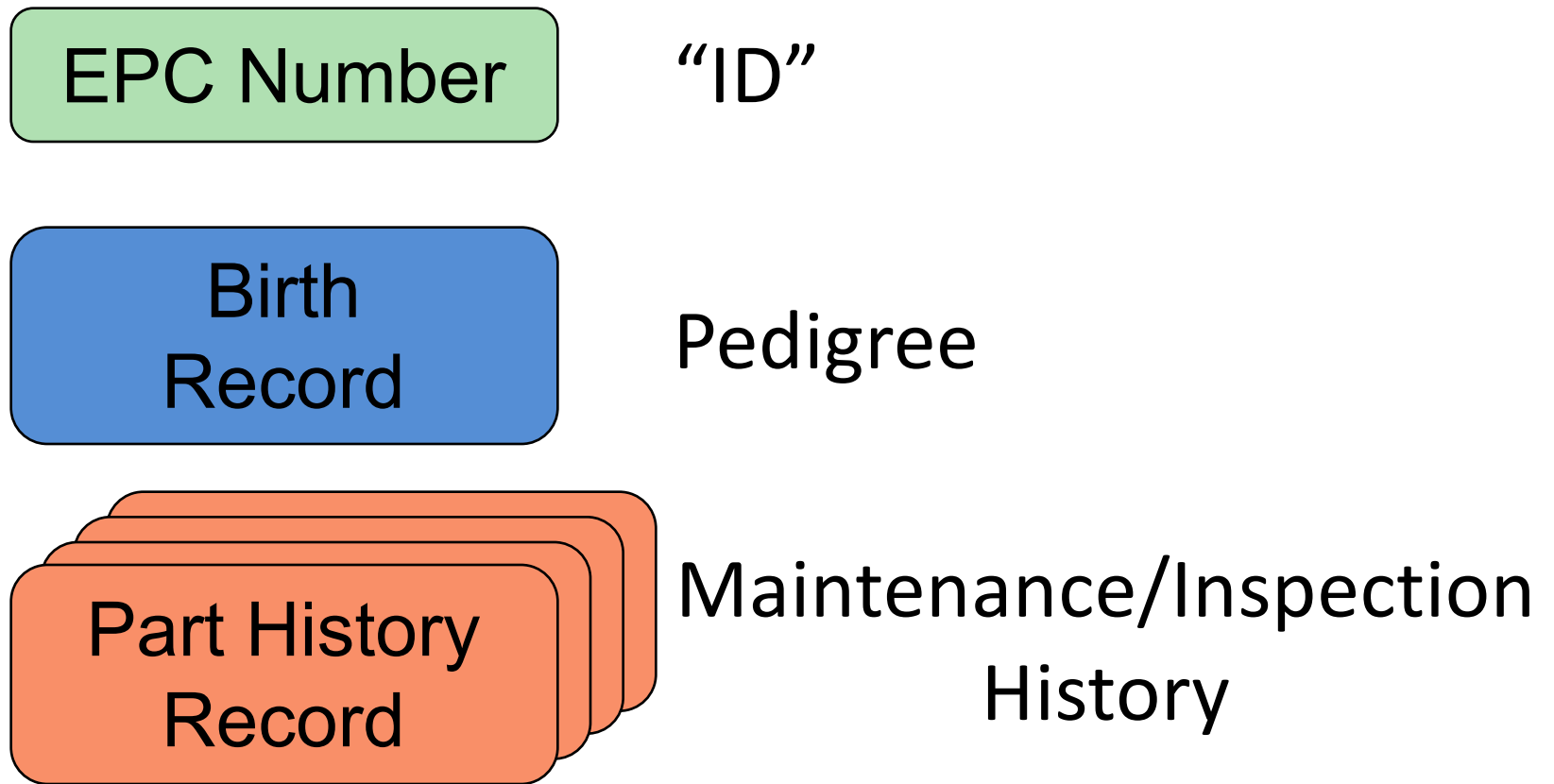








Spec 2000 Data Organization



Birth Record Contents

Item	TEI
CAGE Code	MFR
Part Number	PNO
Serial Number	SER
Part Description	PDT
Date of Manufacture	DMF
Expiration Date	EXP

Birth Record Contents

- CAGE Code
 - CAGE code of the tagging enterprise

Birth Record Contents

- Part Number (PNO)
 - A part number chosen for and assigned to the maintenance item.
- Serial Number (SER)
 - Serial number assigned to the maintenance item.
- Part Description (PDT)
 - “Deferred Maintenance Item”

Birth Record Contents

- Date of Manufacture (DMF)
 - Date the damage occurred or was discovered.
- Expiration Date (EXP)
 - (optional) Date by which repairs must occur.
- Next Higher Assembly Part Number (NHA)
 - Part number of the aircraft part affected by the damage.

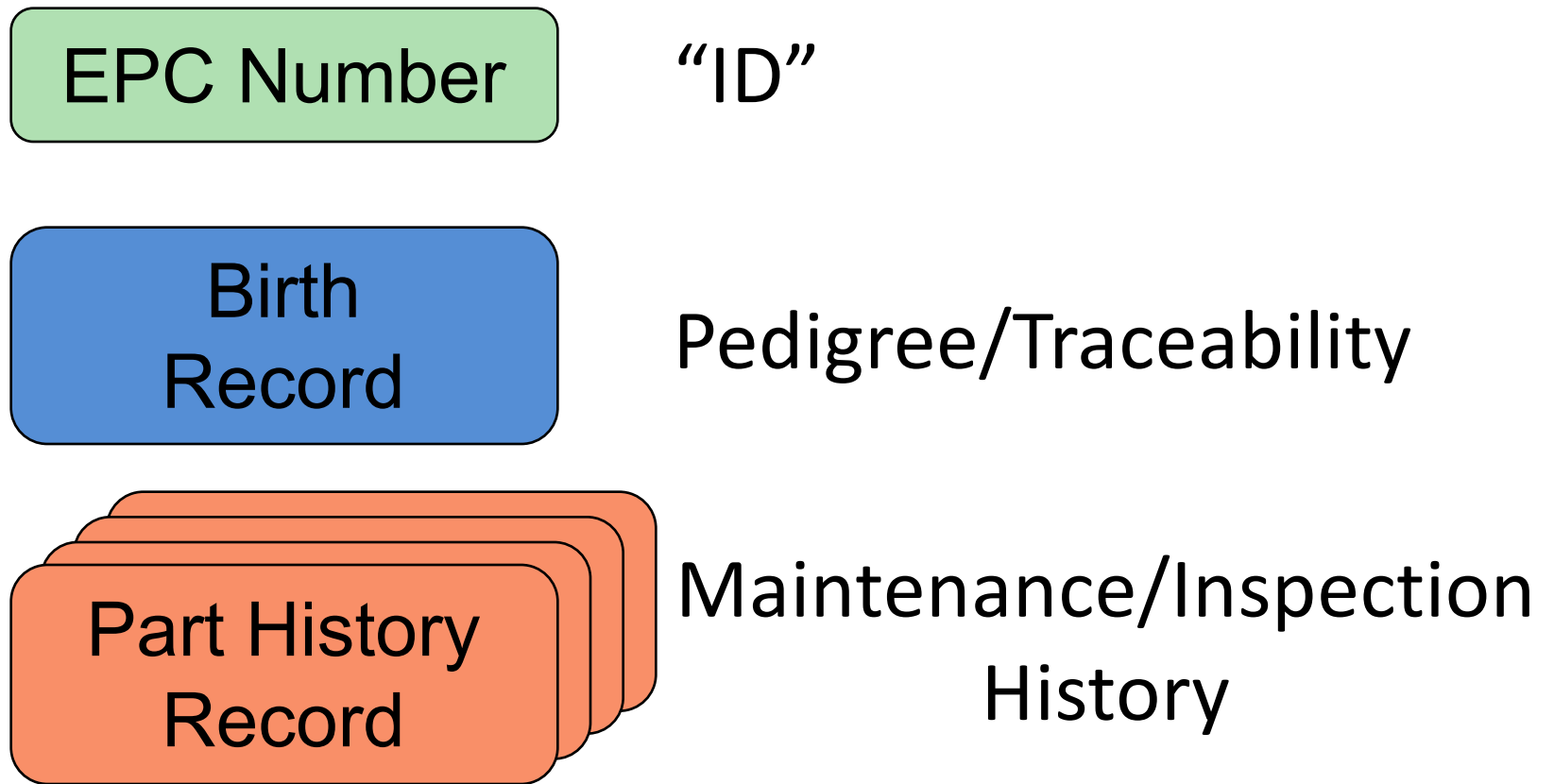
Birth Record Contents

- Description of Maintenance Item
 - Proprietary Identifier (ex. _MID)
 - Ex. “Crack, 10mm long, 1.5mm deep”

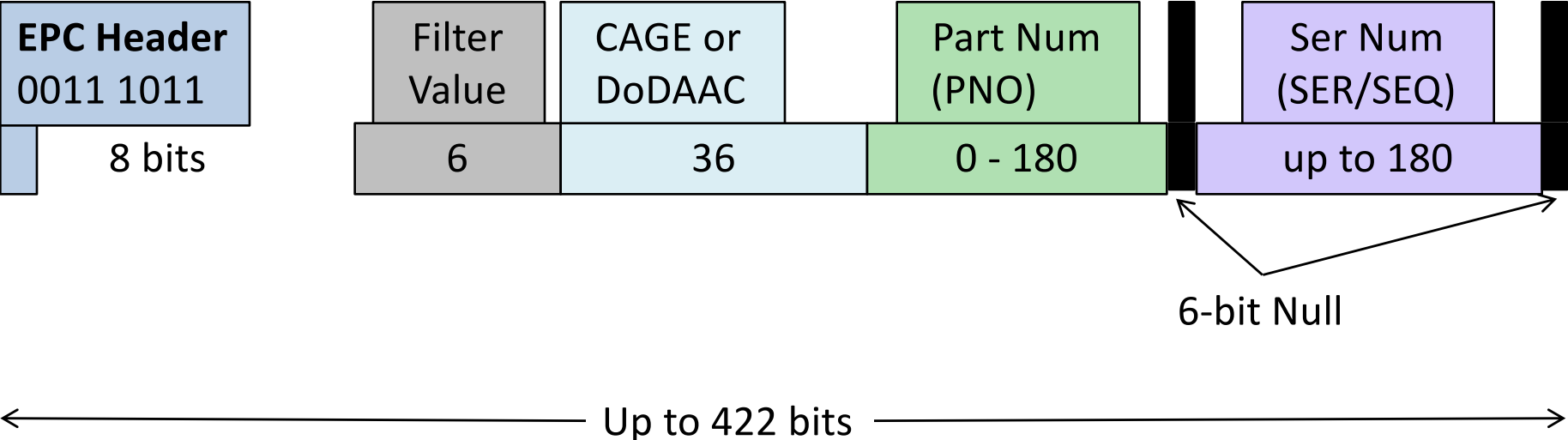
Birth Record Contents

Item	Value
CAGE Code (MFR)	Cage code of tagging enterprise
Part Number (PNO)	Part Number assigned to maintenance item
Serial Number (SER)	Serial Number assigned to maintenance item
Part Description (PDT)	“DEFERRED MAINTENANCE ITEM”
Date of Manufacture (DMF)	Date damage occurred or was discovered
Expiration Date (EXP)	(optional) Date by which repair must occur
Next Higher Assembly Part Number (NHA)	Part Number of aircraft part affected by damage
Description of Maintenance Item (Proprietary Identifier)	Description of the damage ex. “Crack, 10mm long, 1.5mm deep”

Spec 2000 Data Organization



EPC Number Format



Part History Record Contents

- Action Codes
 - Inspected
 - Tested
 - Repaired

Why keep the data on the tags?

- Many players
 - various inspection locations
 - different enterprises
- Shareable database = complexity
- Network availability
- Security concerns

Role of Standards (from 2012 presentation)

- Assure interoperability
- Satisfy the needs of the users
- Provide for future growth
- Allow for competition
- Resolve conflicts of interest