



Parts Traceability: Business Rules

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IATA
19th MAINTENANCE COST CONFERENCE
& 2ND MRO SMARTHUB USER FORUM
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Agenda

1. Aircraft Operational Data (AOD)

2. Parts Traceability

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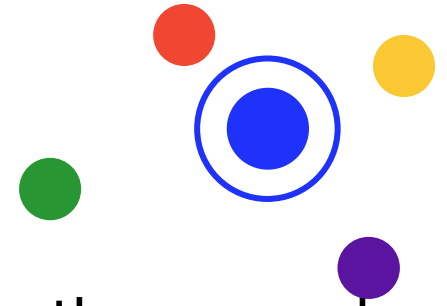
2. Parts Traceability

What is AOD*?

- Data produced from/by the aircraft, its systems, engines, components and sensors, once the aircraft is accepted into operation by an airline.
- This data is generated during flight, when the aircraft is undergoing maintenance, or while on the ground waiting or being serviced.

* AOD: Aircraft Operational Data

Background



- New aircraft create huge amounts of data during operation and on the ground
- Industry stakeholders are trying to position re: AOD
- IATA has been involved with airlines and key OEMs to address data governance
 - IATA on the Board of [IDCA](#) (Independent Data Consortium for Aviation)
 - IATA on certain SAE and A4A groups dealing with data (policy, standards, applications etc.)
- Airline position has been aligned re: data governance
 - AOD Guiding Principles have been defined, presented and negotiated with airlines and other industry stakeholders

The Basics

- The airline is responsible for the operation of the aircraft
- The aircraft owner has a key role
- Intellectual Property (IP) rights have to be respected

AOD Guiding Principles; Summary

- 1) The operator is the “owner” of the data.
- 2) The operator has the right and the need to understand all data generated by its own aircraft.
- 3) Data should be human or machine readable by the operator and its delegates.
- 4) The operator has a right to control data flows and determine which parameters to work with and with whom.
- 5) The operator has a right to access, use, and derive intelligence from AOD (includes safety risk, technical reliability, monitoring/ predictive/ prescriptive tools...).
- 6) The operator has the right to access an open marketplace* necessary to support healthy and fair competition that drives innovations and results in improved customer experience.
- 7) Airlines recognize the OEMs’ AOD needs for product improvement.

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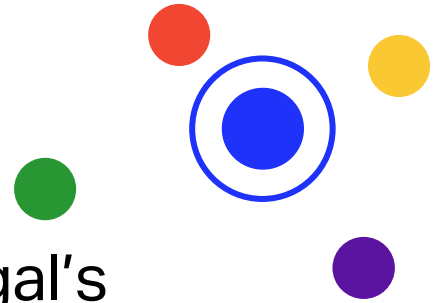
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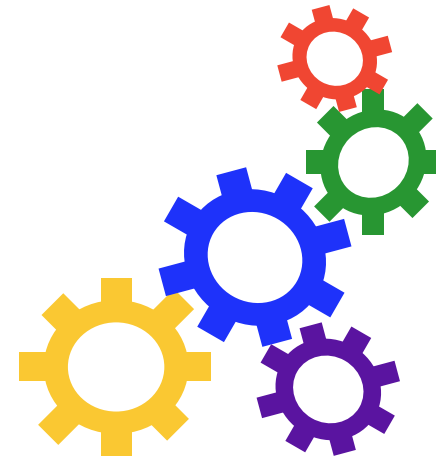
Current challenges



- Certain definitions (e.g., data “ownership”); will be solved with Legal’s engagement
 - Owner cannot restrict operator’s access to data
- Separate data encryption, compression (IT protection of data) vs. Intellectual Property matters (legal protection of data)
 - The OEM should not impose restrictions to designated 3rd parties by operator
- List of AOD coming off the equipment (aircraft, engine etc.)
- Define the boundary between raw data and processed data (IP rights)
- Ensure data anonymity is protected
- Airline awareness of AOD; various industry cases

Next Steps re: AOD

- Industry agreement with OEMs; status
 - Role of the [EU Data Act](#)
- The OEMs to provide more transparency about AOD
 - What are the parameters monitored?
 - Determine raw data vs. processed data (level of added IP)
 - Storage rules of raw data (how long, what etc.)
- Increase the awareness within the industry: Guidance, workshops
 - Publicize Guiding Principles on IATA's website
 - Develop Guidance Material
 - Share experiences and use cases



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Parts Traceability: Operations-centric

Authorities

- Primary
- Regulatory / Competent
- Air Traffic & Navigation Service

Manufacturers

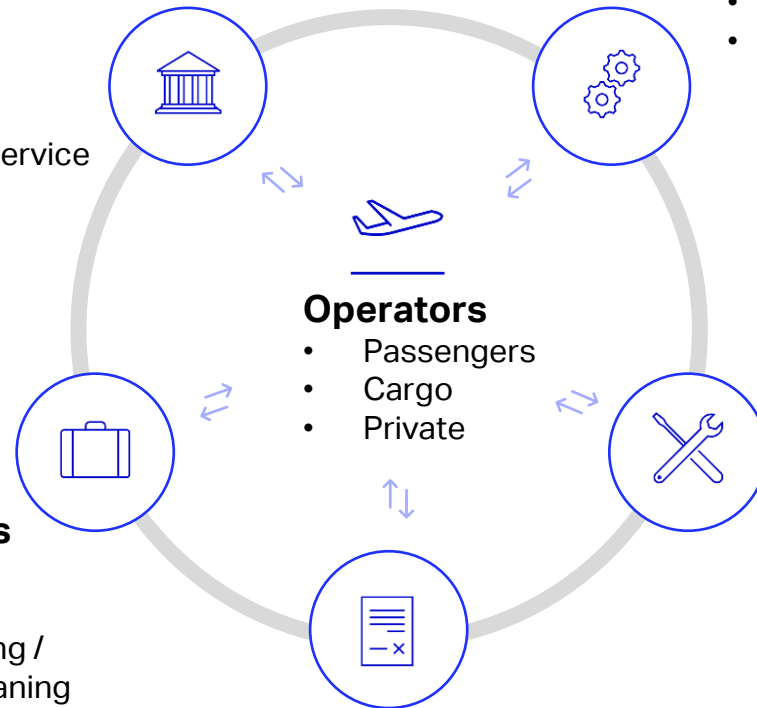
- Design
- Production

The interaction between these stakeholders involve transactions of aircraft records

- Relationship between all stakeholders: while all of them are somehow linked, the relationship will be **operation-centric**.

- Aircraft operators/owners are the revenue generators of the industry.

- **Several transactions involving aircraft records** occur between the aviation stakeholders during the aircraft life cycle



Operators

- Passengers
- Cargo
- Private

Core operations

- Airports
- Security
- Ground Handling / Servicing / Cleaning

Ownership ^a

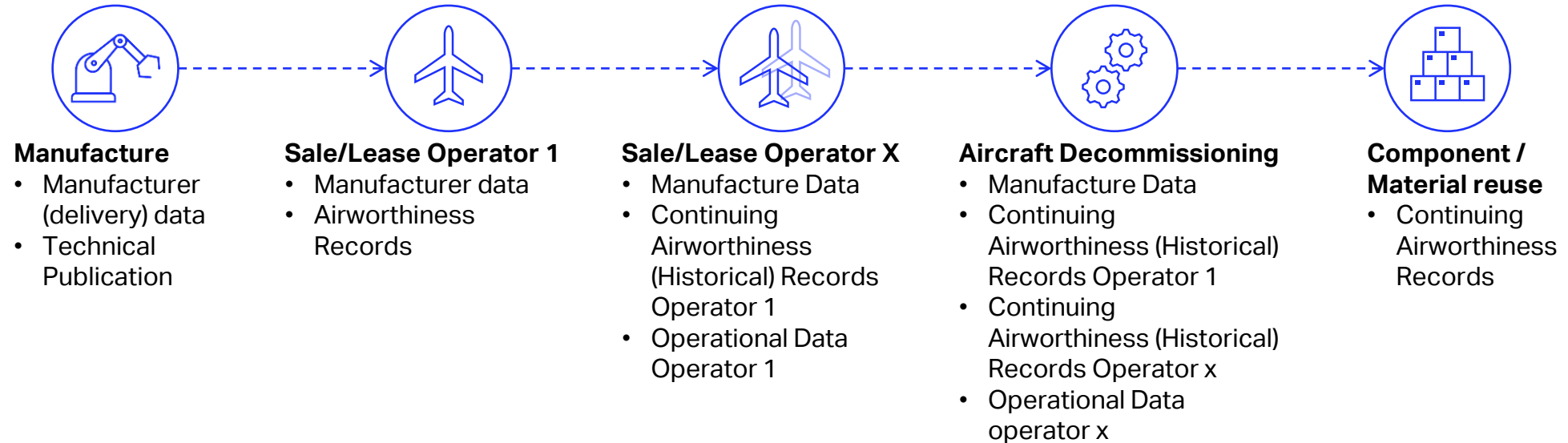
- Owners
- Lessors

Suppliers

- AMO & CAMO
- Management Info. Software
- Spare parts distributors
- Training & Education
- Fuel

^a **Note:** If Owner is different from Operator

The Aircraft Records Life Cycle; from birth to decommissioning



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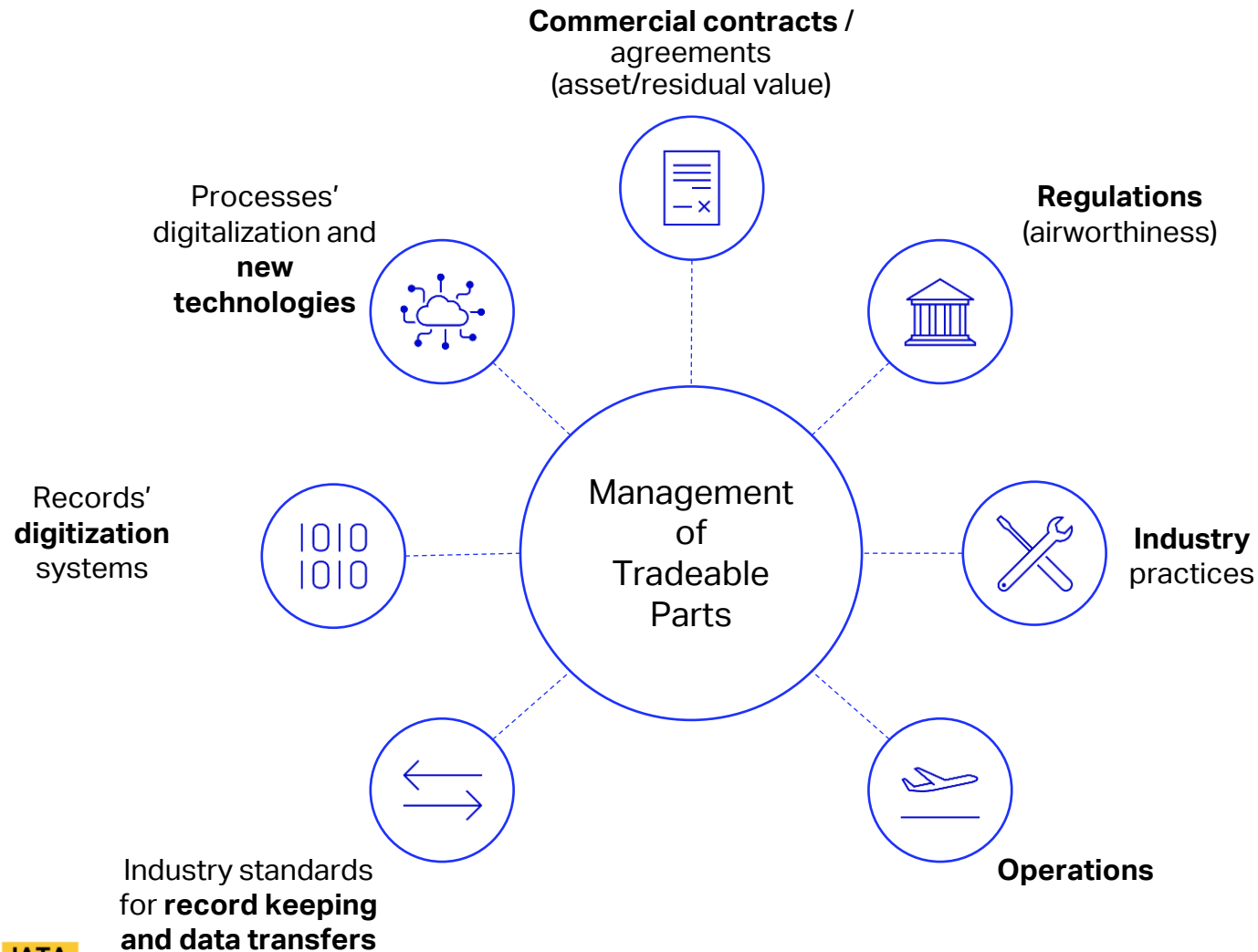
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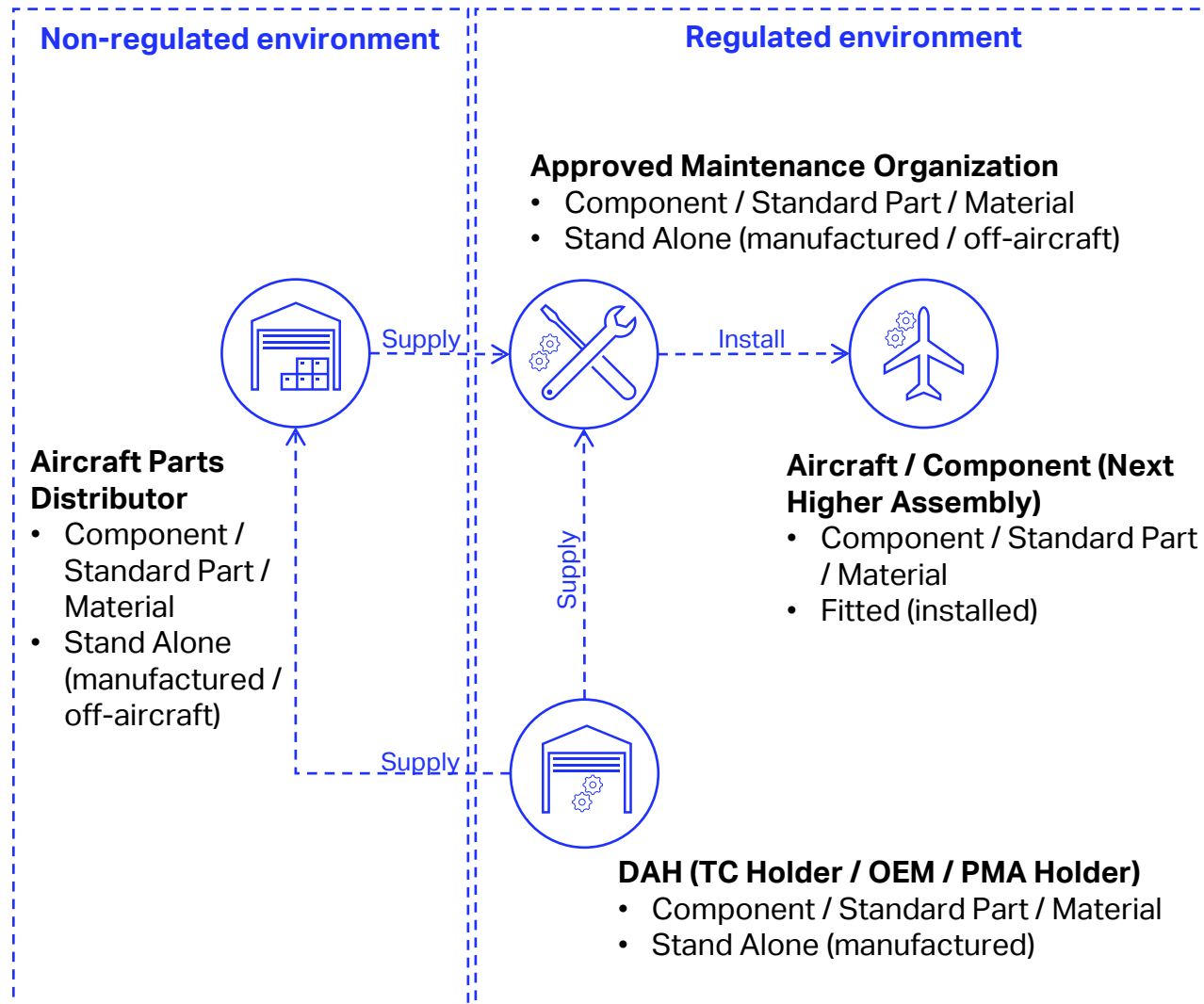


Aircraft records' management

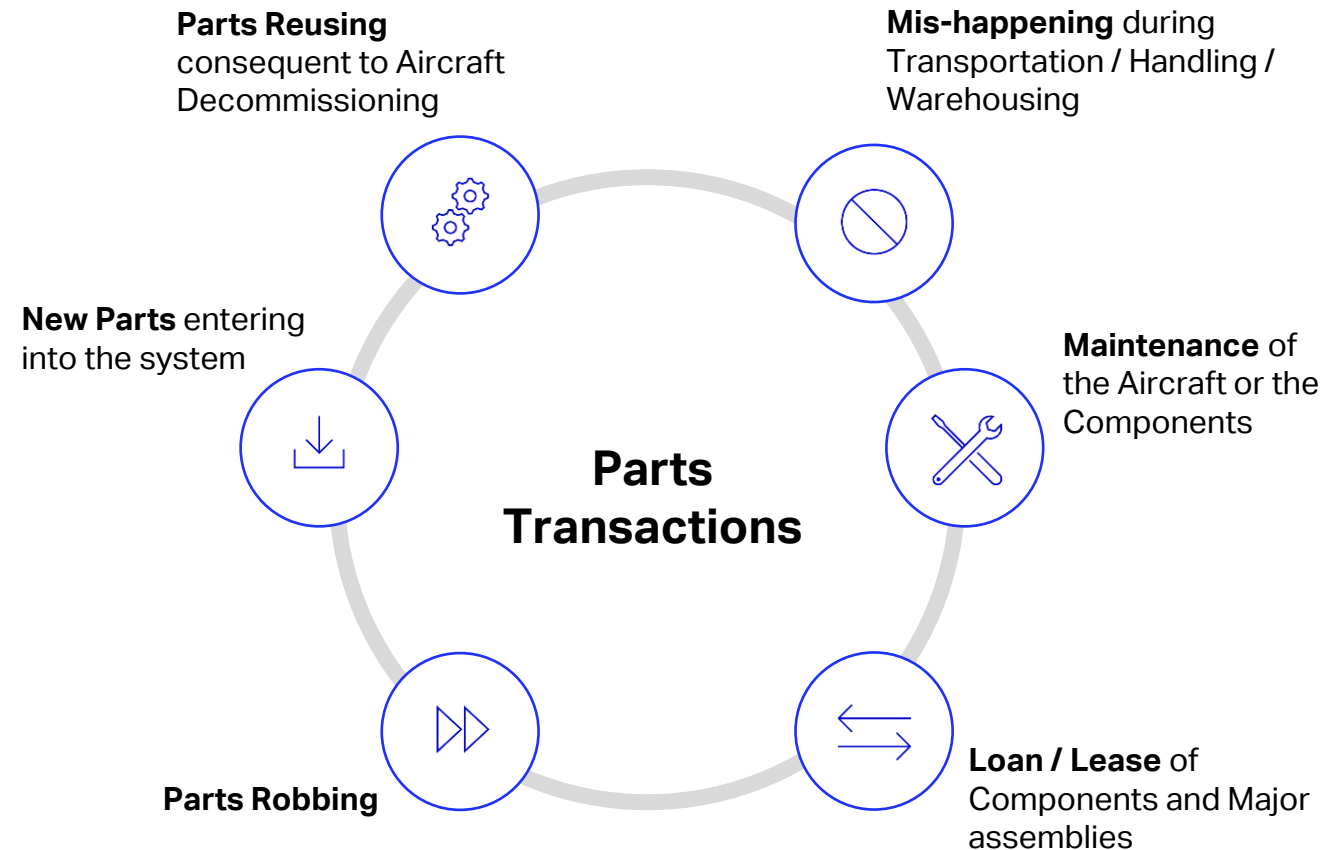


- Many factors influence the management of tradeable parts, which **may eventually affect the residual value of the part.**
- Those factors could be considered as variables and subject to environment and level of implementation within the organizations.
- The potential impact on the financial value of the part could be significant
- Although certain expendable parts of immaterial value need to be tracked for airworthiness reasons, most of those parts are not tradeable

Parts Transactions; Regulatory Framework

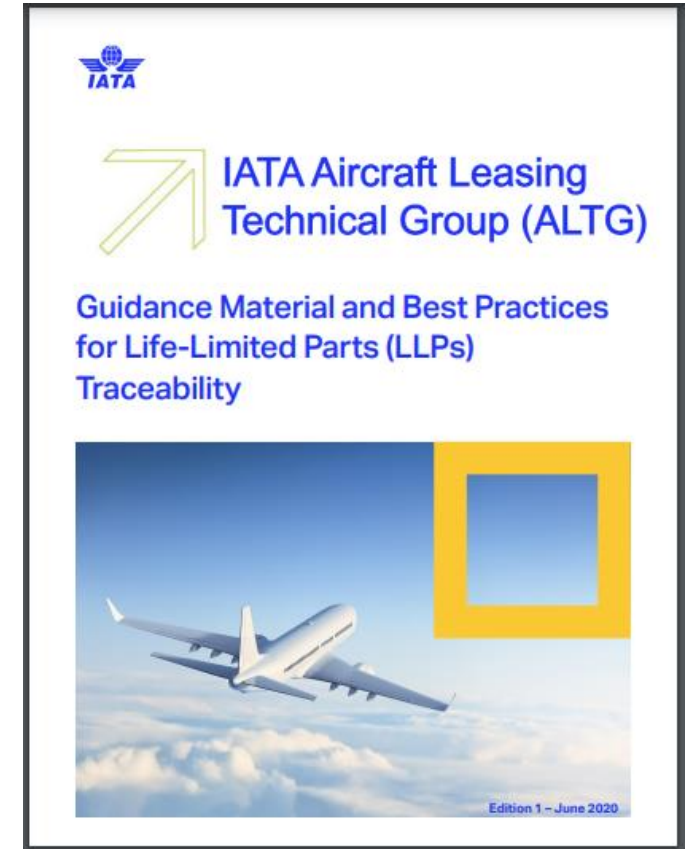


Main Aircraft Parts' Transactions



Next Steps re: Parts Traceability

- Guidance on Aircraft Parts Traceability
 - At the footsteps of the [Guidance Material and Best Practices for Life-Limited Parts \(LLPs\) Traceability](#)



Thank you!

Any questions?

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