



> **SMOOTH REDELIVERIES** - The million-dollar* return condition checklist

The million-dollar* return condition checklist

How to accurately anticipate the cost and time required

Agreeing on the right conditions for redelivery in the contract

Negotiating acceptable configurations for returning

WHAT IS A TRANSITION

- Lessor to Lessee
- Lessee to Lessor
- Lessor to Lessor
- Repossession
- New aircraft purchase



WHAT ARE WE TRYING TO ACHIEVE?

- **A smooth predictable Redelivery, on-time and on budget!**
 - **Build on the Lessor – Lessee relationship!**
 - **Co-operation**
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- **Leased aircraft account for up to 11,000 of the global fleet of aircraft so, understanding the process is paramount for organised and successful transitions**

How DO WE ACHIEVE IT?

- ❑ **PLAN, PLAN, PLAN**
- ❑ **REVIEW**
- ❑ **ACT EARLY**
- ❑ **BUILD BINDERS**
- ❑ **REVIEW REGULARLY**

LESSOR

Technical / PM – On Site Technical Representatives
Engineering
Technical Asset Management
Commercial – Lessee relationship
Procurement – Materials – Shipping
IC – C Suite
Legal
Contracts
Trading
Finance
Risk
Insurance
Tax
IT

AIRLINE

Fleet Management
Technical Leasing
Tech Services
Planning
Power Plant
Structures
Avionics
Procurement
Logistics
Flight Operations
Maintenance

THE MILLION-DOLLAR RETURN CONDITION CHECKLIST – 12 Months Out

- Pre-Redelivery Meeting – Agree Redelivery Dates – Workscope (C Check/6Year/12Year) – Establish key contacts
- Align Expectations – Discuss Lessor requirements (Redelivery Mods) - FLEXIBILITY
- Return Location & MRO – Records location for Redelivery.
- Discuss Return Conditions, MTOW, Engine Thrust, Airworthiness Standard - Export CofA - AIRFRAME Condition – Landing Gear Condition - APU
- ENGINE CONDITION – Engine LLP’s – Engine Trend – Engine Shop Visits – Pre-Redelivery BSI’s – Nacelle condition.
- Certification - AD’s, SB’s, (DFP’s & Certification-EASA F1/8130-3)
- Components- HT, OCCM,
- Repairs – expected standards. SRM - RDAS
- Define expected Standards – Any Incidents/Accidents?
- Visit Aircraft for physical inspection
- **Lessor Internal Discussions – Next customer? Requirements? Budget?**
- **Think about Lead Times and next Lessee’s requirements – Discuss requirements with Aircraft Manufacturer’s and Suppliers. Plan Tech Reps**

▪ **Remarketing Report** from aircraft manufacturer

- Contains information such as the current Airworthiness Standard and which modifications (Mandates) would be required to remarket the aircraft in other major jurisdictions (EASA, FAA, DGCA, CAAC), the approximate cost and the expected lead time.

▪ **Maintain contact with Existing Lessee**

- Discuss open items
- Work package requests (Reconfig. If known)
- Confirm Livery (if known)
- Confirm redelivery location
- Confirm timelines
- Review Pre-Redelivery inspection report – contact lessee to discuss issues
- Discuss accessing Technical Records
- Consider reviewing Repair records if repairs are extensive
- Engine condition / discuss return conditions and returning engines
- LDG life / condition with reference to return conditions

- **Request Transition Package** from Aircraft Manufacturer
 - **Contains essential technical information for transitioning aircraft**
 - ACM – Aircraft Configuration Matrix – **All applicable SB's**
 - **List of AD's** – Applicable to the aircraft
 - Lists all **Free of Charge modification kits**
 - List of all recorded **RDAS / RDAF**

THE MILLION-DOLLAR RETURN CONDITION CHECKLIST – 4/3 up to Induction Months Out

- **Ideally next Lessee should be known and Lease Agreement should be executed with next Lessee.**
 - Keep in contact with and inform next lessee of timelines. Redelivery/Delivery MRO etc
 - Make sure airside passes are in place
 - Make sure all PO's are placed
 - Make sure all engineering and materials for next lessee delivery config are on target for redelivery check
 - Selected Technical Records Rep.'s should be ready to begin reviewing records 4/6 weeks before aircraft is removed from service

THE MILLION-DOLLAR RETURN CONDITION CHECKLIST – AIRCRAFT INDUCTION

▪ Aircraft arrives at the Redelivery MRO

- Redelivery workscope is reviewed and accepted by lessor – provided to next lessee for approval/comments
- Physical Reps. should be on-site before aircraft is inducted for physical check
- Meeting is held with Redelivering Lessee, MRO and lessor to discuss how the check will be managed
- Lessor will convene a meeting with next lessee. Redelivery protocol will be discussed based on existing lessee's rules etc
- Agree a method to communicate and share physical discrepancy lists
- Ideally, technical records review should begin 4/6 wks in advance of the redelivery check
- First inspection is a review of repair records and structural survey comparing to the Damage Chart or Dent & Buckle Chart
- Reps offices should be ready to accommodate
- Redelivery check begins
- On-site reps should manage next lessee to ensure inspections take place separately to lessor inspections
- All pick-ups should be provided to lessor, recorded in a controlled manner
- Keep separation between existing lessee and next lessee
- Phases - Inspection – Repair – Rebuilding – Testing – Technical acceptance flight – BSI's – Technical Acceptance – Delivery

Technical Records

AD's – DFP's +Certs
SB's – DFP's + Certs
LOPA - Certified
Emer Equip List
Engine Shop Visits
Engine LLP BTB
Repairs
Maint. Status Summaries
Statements – Incident Clearance Certs
Last 6Yr Check Records
Last 12Yr Check Records
Landing Gear O/H - BTB
APU Shop Visits
HT Components Certs and O/H reports
OCCM Certification
Burn Certs incl. combination
Last Full Cycle, Tech records
Last Weight Report
+++++

Certification

Registration
Cert. of Airworthiness
ARC
Export CofA
Noise Cert.
Radio Station Licence
De Reg Confirmation
Burn Certification
Insurance Cert

Physical Findings

Inspection Findings:
Cabin
Airframe
Structural
Engines
Systems
Painting

Aircraft and Systems Testing

Systems Ground testing
Engine Ground Testing – MPA's etc
APU Ground Testing
Flight Testing
Engine and APU BSI

Technical Records **Certification**

- Good housekeeping
- Controlled records system
- Close control of documentation coming back from hangar floor. (Stamps, AMM, SRM, NTM, EASA F1's Batch Numbers. etc)
- Power plant should ensure EPR's are approved by lessor if required but also that the workscope is consistent with the lease requirements
- Control of materials certification
- Comp. life requirements
- Consider effects mods will have on the lease requirements. – STC's!
- Awareness of Lease Requirements
- Close scrutiny of all documentation coming back from MRO's, Shop Visits and component maintenance, Internal practices, MOE's

Physical Findings

- Focus on Maintenance Quality throughout the lease term
- Begin to think about returning aircraft at all times especially last C Check
- Focus on repairs and repair files at last C Check and follow up at appropriate maintenance opportunities right up to redelivery check induction
- Materials – Lead Times!
- Have a team of specially trained cabin engineers – Cabin APPEARANCE is crucial!

Aircraft and Systems Testing

- Efficient Troubleshooting
- Test all aircraft systems before acceptance flight to ensure minimum defects
- Reliability Report
- Ensure areas in and around both engines are clear of FOD before run-up
- Stick to Manufacturer's Testing procedures i.e. ISATFM (Airbus), AMM
- Safety First! Be sure the aircraft is clear of obstacles, docking etc before hydraulic power is turned on

Focus on Technical Records!

- ❖ Aircraft Certification
- ❖ AD's
- ❖ SB's
- ❖ STC's
- ❖ HT Components
- ❖ OCCM Components
- ❖ RSC
- ❖ Repairs
- ❖ Engines
- ❖ APU
- ❖ Landing Gear
- ❖ Checks
- ❖ Statements
- ❖ ICS

○ Focus on ENGINES

- Engines fresh from shop are always desirable. This gives Lessee's the opportunity to benefit from preferential pricing such as FHA agreements
- Engines fresh from the shop can be more cost efficient, especially where the engines might be tired and the end of lease adjustment is expected to be significant
- Engines fresh from the shop are less likely to fail the final contractual borescope inspection
- Approved workscope for last EPR before redelivery is essential
- Pre-Redelivery BSI is advised! This could be carried out at the beginning of the redelivery check or while the aircraft is in service where time is limited but this also carries significant risks for the operator as an unknown condition could cause the grounding of the aircraft. Prudence is essential
- Cycling an engine through a shop could take anything up to 90 days or perhaps longer. Don't get caught at the end of a lease with an avoidable engine shop visit
- Examine engine trend data for trend excursions or accelerated diminishing conditions and take appropriate actions

➤ An early start pays dividends

- Carry out an internal review at last C Check before redelivery
- Make sure all out of SRM conditions are well certified
- Corrosion properly controlled and eliminated
- Make sure all RDAS / RDAF's are in final form and all are Permanent category A or B!
- Make sure all repairs have a robust repair file and all documentation is present including material certs
- Make sure all composite repairs are properly certified including inclusion of material curing records are present
- Dimensions are critical – make sure all are present and in accordance with the SRM
- If repairs are carried out to earlier versions of the SRM make sure a copy of the procedure is present.
- Need all material certification
- Need all material heat treatment records
- NDT certs are crucial – NDT procedures need to be verified with back-up to MRO MOE
- Ensure all engineers stamps are correct – May need back-up by QA
- Make sure the Damage Chart (D&B) is updated
- Structural repairs should be verified before aircraft painting. This reduces issues during the Bare Metal Inspection

- ❑ **Meticulous record keeping is essential**
- ❑ **Attention to detail is key**
- ❑ **Preparation is essential – If you Fail to Plan you Plan to Fail!**
- ❑ **Attention to Redelivery Conditions is essential**
- ❑ **Keep all verbal agreements official, always back up agreed positions by email**
- ❑ **Communication is key: Make sure all stakeholders are fully aware of what is planned next at all stages**
- ❑ **Aircraft will be inspected by next aviation authority so transition will only be possible if all the T's are crossed and the I's are dotted!**
- ❑ **Be Flexible and Reasonable at all times**

- **Costs depends on redelivery type:**

- **Back to Back redelivery - most efficient in terms of costs**
- **Redelivery, no next Lessee – problematic, high risk & unpredictable costs**
- **Delayed Redelivery – High Risk - Unpredictable, high cost, penalties to next lessee, reputational damage.....**
- **Normal Redelivery with Engine BSI failure.....High Risk, unpredictable**

- **Meticulous planning and analyse the scope of the project**
- **Time is Money!**
- **Budget accurately. Do not overestimate costs**
- **If the redelivery is normal business then a 10% contingency should suffice, otherwise allow 20%**
- **Check the lease for high level timelines and dates**
- **Evaluate redelivery / delivery conditions for modification requirements. Allow time for embodiment. Access in the aircraft can be challenging**
- **Is the redelivering lessee properly prepared for the task of redelivering an aircraft?**
- **Experience levels**
- **Reach out to industry sources for modification cost comparison**
- **Discuss unusual modification requirements with several sources for comparison of costs**
- **Don't rely entirely on manhour estimates in SB's**
- **Redelivery checks take longer to complete and are heavy on resources**
- **If records are to be rebuilt allow sufficient time. Analyse requirements**

- Redelivery Conditions will have been agreed many years earlier when the original lease was signed
- RC's would have been agreed in terms of what was current at the time lease was negotiated
- ❖ Economic conditions may have been different
- ❖ Airline ownership may have been different
- ❖ Risks different

- ❖ Redelivery conditions don't necessarily change significantly over time

- **Aircraft needs to be Transferable without risk or significant cost!**
 - ❖ **Generic LOPA's**
 - ❖ **Generic interior decor**
 - ❖ **No Lessee Branding**
 - ❖ **Industry average Thrust and MTOW. Not less than as at Delivery unless agreed**
 - ❖ **White with grey wings and empennage or new lessee livery**
 - ❖ **Latest EASA/FAA Mandates to be included**
 - ❖ **Removal of customised structural STC's**
 - ❖ **Returned 100% MPD**
 - ❖ **Acceptable serviceable engines**

- ✓ **Legal input**
- ✓ **Commercial input**
- ✓ **Taxation/Finance input**
- ✓ **Credit input**
- ✓ **Trading input**

Key choices

- ✓ Lease extension
- ✓ Sale
- ✓ Part out
- ✓ Conversion

- ✓ MRO selection
- ✓ Ferry flights
- ✓ New airline & jurisdiction
- ✓ Generally shorter lease

THANK YOU

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