

# Revisiting Redeliveries in 2019



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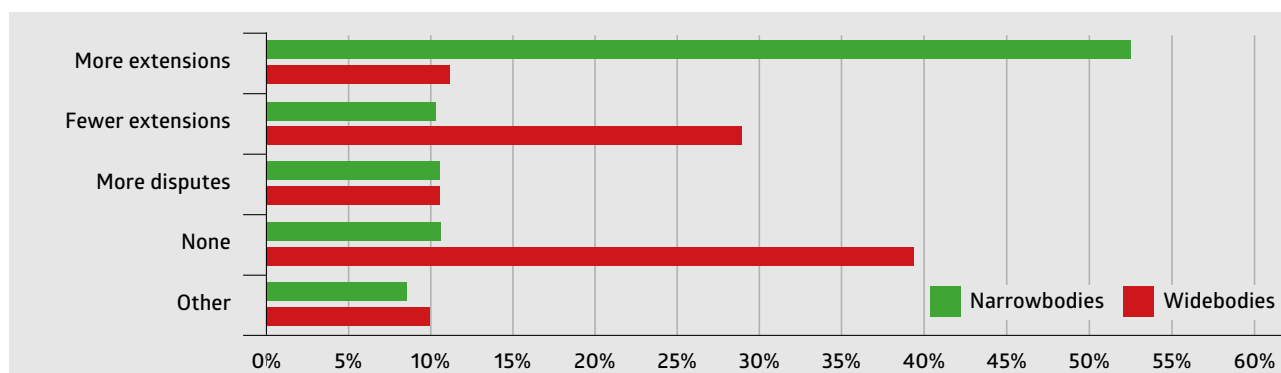
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**What changes to end of lease trends in narrowbodies and widebodies have you noticed in the last 12 months?**

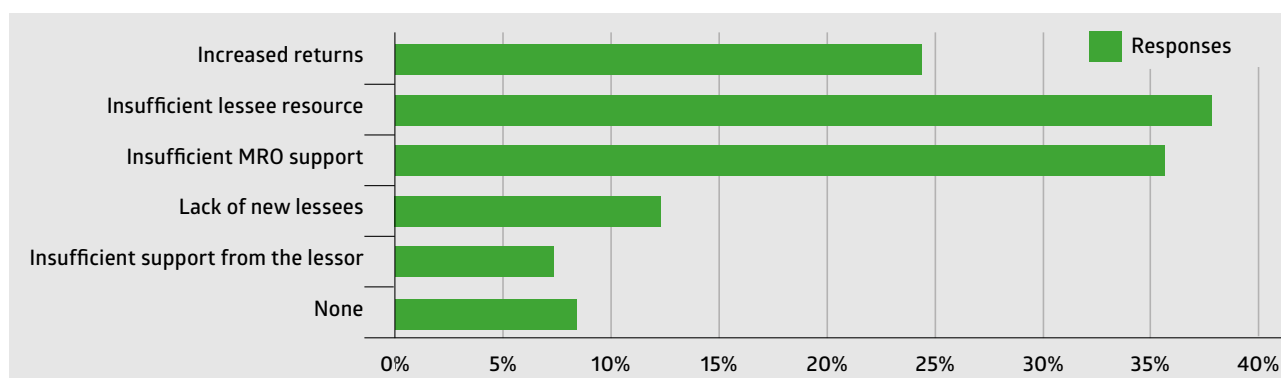


Source: IBA's Redelivery survey

The results reflect current market trends with more lease extensions for narrowbodies and fewer for widebody aircraft. The impact of the 737MAX groundings, ongoing Entry into Service (EIS) issues and lowish oil prices have all resulted in some operators continuing to extend leases. For narrowbodies, the continued trend to extend lease ends could cause a bow wave of returns if demand shifts and MRO slot difficulties would then follow.

Conversely the reduction in widebody lease extensions will concern lessors, particularly where aircraft types whose potential for rehomeing is limited are involved. For example, the A380 which airlines are increasingly phasing out and the A330 which is being replaced by the A350 as operators upgrade their fleets. Configuration of such widebodies to fulfil the next lessee's requirements poses a significant time and investment challenge. The situation is longstanding and we continue to be perplexed by OEM's failure to develop cheaper creative solutions for the secondary market.

**What redelivery challenges are you facing in 2019/2020?**



Source: IBA's Redelivery survey

Insufficient lessee resource was the most prominent feature of the last 12 months followed by an increase in respondents who felt MRO support was inadequate and a large shift in aircraft returns. These are the major challenges facing the market now and into 2020.

Our view is the increase in returns is affected by widebody aircraft as well as by regular churn, as rollover programmes replacing old aircraft with new become increasingly commonplace. Airlines, particularly low-cost long-haul operators, are looking for fuel-efficient aircraft that afford reduced cost-per-seat yields to give a healthier and younger fleet. This could put pressure on MRO slots as operators book out time to deal with returns.

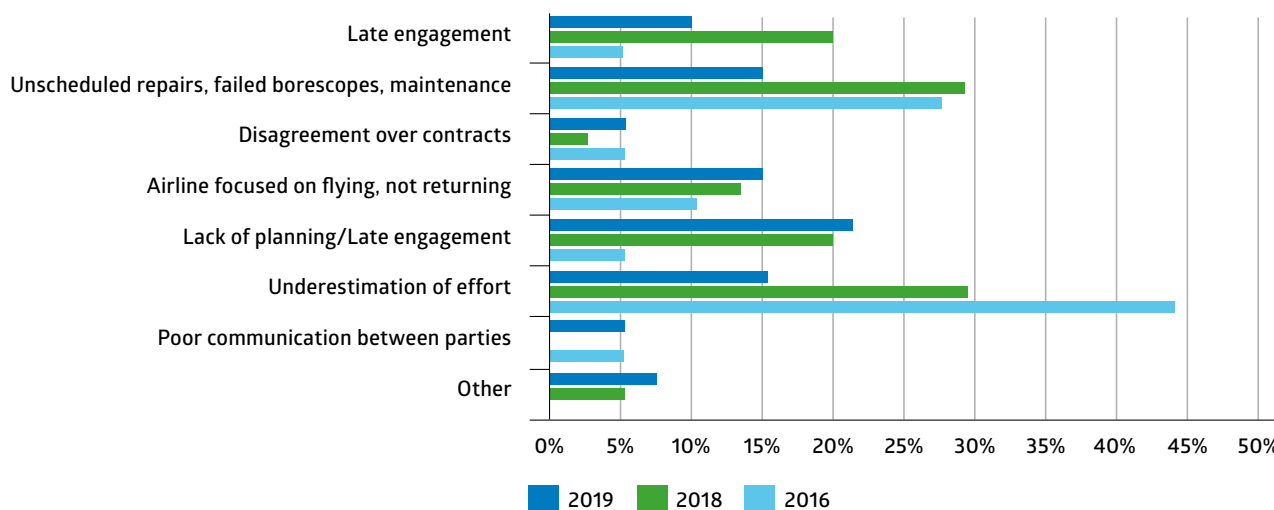
## Revisiting Redeliveries in 2019

Poorly managed redeliveries are a staggering waste of money. Every narrowbody and widebody whose redelivery is inefficiently handled can cost \$USD 2 million and \$USD 4.5 million respectively. Putting that into context, the unnecessary expenditure would be enough to fund six to eight months' lease rental for each aircraft, a Heavy C Check, or even an engine shop visit.

We expect to see large numbers of lease ends over the next three years and, whilst extensions are likely, we anticipate at least 50% of those lease ends will result in redelivery to the lessors. Consequently, our expert advisory and asset management teams are working closely with clients to help them avoid costly delays. So, what challenges can postpone aircraft redeliveries? We recently commissioned a pulse survey and canvassed over 200 airlines, leasing companies and other key stakeholders to find out.

The clear picture we uncovered echoed our previous findings; over 80% of respondents confirmed they sometimes or very often cannot fulfil a lease's return conditions. We look at this alongside other difficulties facing airlines and lessors in 2019 and suggest how best to navigate the redelivery process.

### What are the primary reasons for a late redelivery?



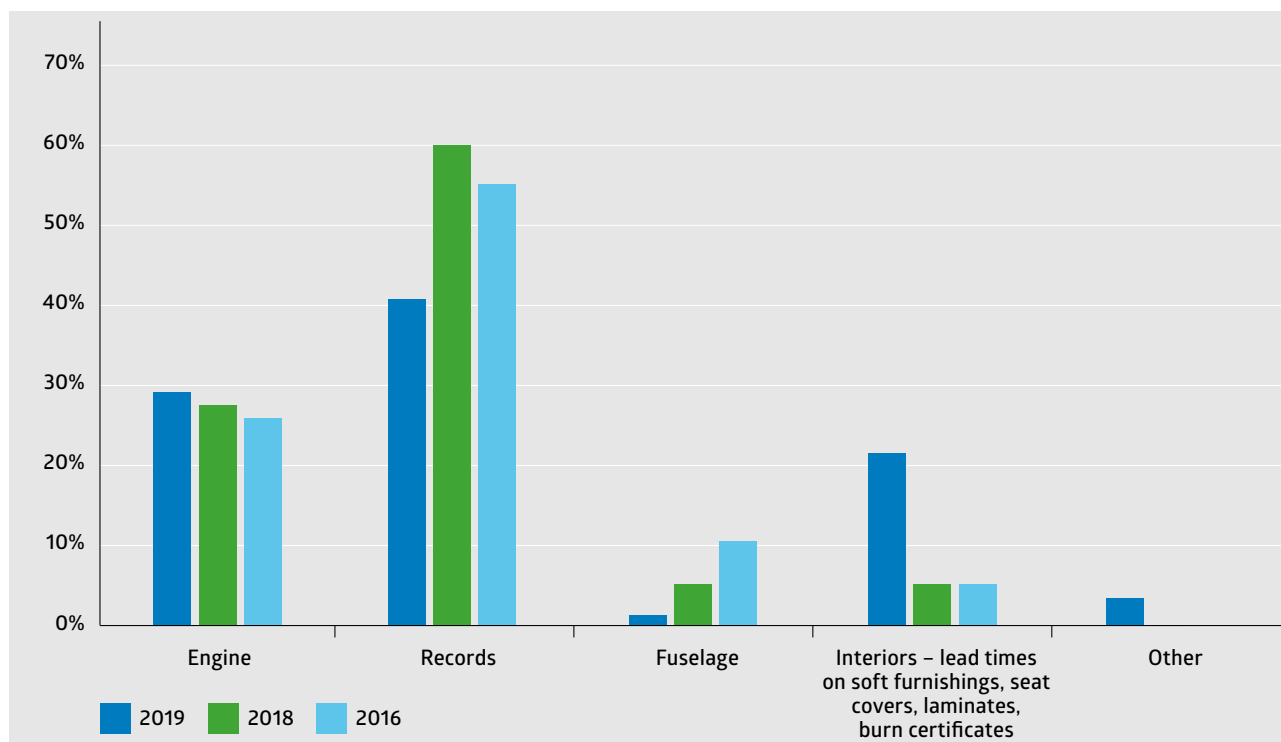
Source: IBA's Redelivery survey

The key issues have been constant since our 2016 survey. Lack of planning, late engagement, underestimating effort and unforeseen repairs or failed borescopes continue to cause most delays. The good news this year, however, is airlines are more aware; they're working smarter. They've recognised that failed borescope inspections pose a high cost and delay risk for redeliveries and this increased understanding has had encouraging consequences. A positive trend has emerged from survey responses in that fewer distinct issues resulting in late redeliveries have been specified.

Keen to avoid unnecessary financial outlay, airlines are closely scrutinising lease return conditions and scheduling maintenance and shop visits so as to fulfil them. A drop in unexpected repairs and failed borescope inspections has been the welcome result. More and more airlines are arranging pre-emptive mid- and high life checks so engines can be removed off-wing and stored to preserve their condition pending redelivery. Such an approach, however, works only for those with reserve engines or access to additional leased in engines and is more typical of airlines operating in harsh environments and those with a higher risk of foreign object debris (FOD) damage.

Pre-delivery physical inspections and record audits are prudent. They will reveal discrepancies which could prevent lease return conditions being met and, in turn, these inconsistencies will inform the scopes of works for Maintenance and Repair Organisation (MRO) bidding. Timing is crucial and we recommend early engagement in the redelivery process.

Which area of the aircraft is most challenging to redeliver on time and on budget?



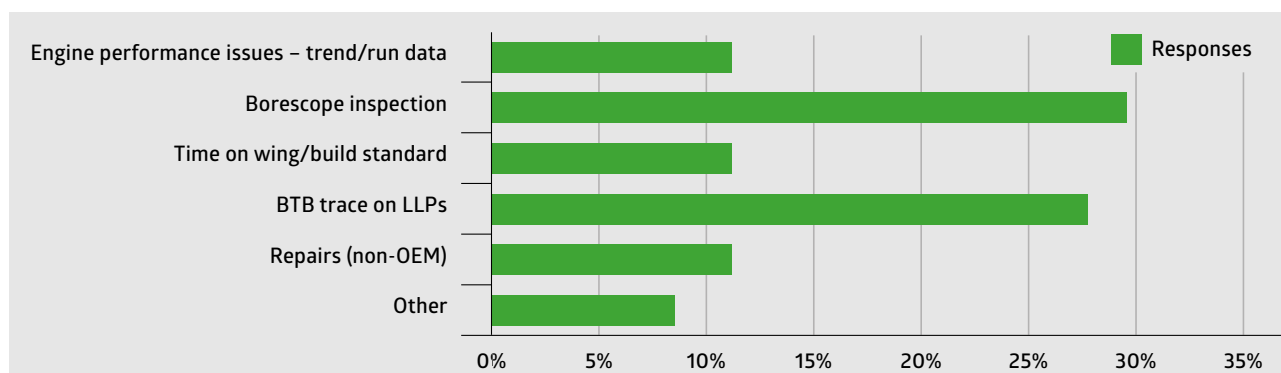
Source: IBA's Redelivery survey

Back to birth (BTB) traceability and records certification: efficient management of records and documents still presents significant challenges for both airlines and lessors. Documenting every change performed on every aircraft within a fleet is a complex time- and resource-consuming process. Mix historical records audits together with end of lease checks that will inevitably demand component changes and you have the ingredients of a perfect redelivery storm.

We've witnessed welcome enhancements to the robustness of digitised record management solutions available on the market. Bespoke online services from simple scanning to fully comprehensive management solutions can help airlines achieve effective record keeping. We believe greater use of such online facilities may have driven the reduction since 2016 in responses citing record keeping as a major threat to on time and on budget redeliveries.

It's no surprise cabin interiors and furnishings cause headaches for some lessees when returning aircraft. Many will refresh their cabins to align with new aircraft within their fleet and frequently devise substantial modification programmes for long-term leased aircraft. Such renovations can cause certification disputes: we've seen cases where an operator is certified to effect a modernisation but has only local approval for the materials used, burn certificates for example. This can prove extremely costly. Without the requisite certification at redelivery, operators will be forced to certify retrospectively, replace the original equipment or at best reach a financial compensation agreement with the lessor. It is worth noting leases typically require modifications costing over \$USD 250-500K to be approved by the lessor prior to their commencement.

**Specifically looking at engines, which element is the most challenging to redeliver?**



Source: IBA's Redelivery survey

Borescope inspections, BTB traceability on Life Limited Parts (LLPs) and engine performance. Our findings again confirm these three factors are fundamental complications in the redelivery process. Borescopes enable in depth, meticulous aircraft engine inspection. Small wonder then that mid-life engines have a high probability of failure: erosion, cracked blades and damage to the engine's core are often exposed.

To meet redelivery conditions, airlines are increasingly sourcing second-hand LLPs for engine rebuilds. Consequently, full traceability in BTB documentation may not always be in place and they may also lack previous operators' non incident/accident statements (NIAS).

IATA's Aircraft Leasing and Advisory Group (ALAG) in which IBA takes part has provided useful guidance to airlines and lessors about agreed BTB procedures. It can reasonably be surmised that the parties are not adequately examining these directions and following their advice, however, since BTB issues did not reduce last year.

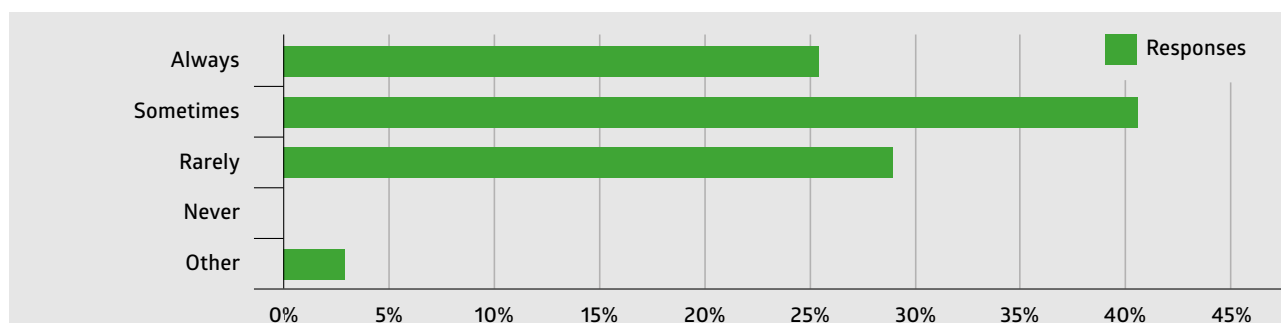
Whilst Original Equipment Manufacturers (OEMs) can conduct online monitoring of engine performance, lessors and lessees often have different opinions about time on wing and build standards which may lead to disputes.

How can such delays and disagreements be avoided? We advocate that airlines communicate with lessors about all proposed and planned engine work and maintenance activity in full and sooner to reduce postponements.

**As a lessor, typically how late do you feel the lessee engages in the redelivery process?**

As in previous years, the results continue to suggest lessors believe airlines engage too late in the redelivery process, with over 70% of respondents feeling engagement was between 3-6 months overdue.

**Lessees, are internal teams aware of lease return dates and return conditions?**



Source: IBA's Redelivery survey

Responses concerning the journey of aircraft from acquisition to return differed according to the type of airline. Broadly speaking, larger legacy carriers anticipate lease ends well but their scale results in larger technical, engineering and records departments which make allocation of responsibilities difficult. Such airlines acknowledge their internal teams are frequently unaware of contract time frames and terms and conditions. Conversely, low cost operators who outsource to Maintenance and Repair Organisations (MROs) rely on them and on limited internal resources to manage their redeliveries. MRO's ability to provide effective support depends on early engagement in the redelivery process and strong management ensuring sustained focus.



## How to avoid the overspends

Positive trends emerge from this year's survey suggesting there is greater awareness about the difficulties inherent in redelivery. Whilst an understanding of the effort involved has improved, the execution of redelivery still appears to pose complications in some cases. We believe some airlines may have inadequate resources or assets available to activate the redelivery process on time because of competing operational demands.

Engines are high risk items that can be costly and delay redelivery if the maintenance timeline is mismanaged. B2B traceability, records and interiors are also areas that continue to challenge.

We continue to see more narrowbody extensions and fewer widebody extensions, which could be a worry for returning widebodies looking for new homes.

To counter such conflicts, we advise our clients to do the following as a minimum:

- ▶ Plan 15 months ahead for narrowbody returns, more for widebodies and more again for widebodies with onerous lease return conditions
- ▶ Ensure adequate resources for technical support and records management are available, hiring or outsourcing to plug any gaps. A first lease narrowbody absorbs at least 120 man days' resource, with widebodies potentially more than double that
- ▶ Appoint a strong project manager and engage with the other party to the lease both to establish a rapport and to agree lessor presence at the end of lease (EOL) and redelivery check
- ▶ Understand the redelivery conditions. Examine every clause in the lease to identify:
  - ▶ What work needs to be planned in good time by the lessee to redeliver in accordance with the lease or...
  - ▶ Whether certain items can be 'bought out'. For example, rather than the lessee arranging an engine shop visit for a full refurbishment, the lessor accepts the engine as is subject to cash compensation
  - ▶ How to execute the lessor's obligations to the lessee, such as resolving AD cost share payments and/or maintenance reserve payments
- ▶ Agree any ambiguous terms in the return conditions, if not already resolved, and ensure the entire redelivery resource is acquainted with the specific return conditions
- ▶ Book out MRO slots early
- ▶ Lessors should mitigate against lack of lessee engagement or experience in aircraft returns when the aircraft is due back
- ▶ Focus more keenly on assets during operations. Deploy a cradle-to-grave maintenance timeline to manage aircraft, making sure the penultimate annual inspection in the lease includes plans for redelivery
- ▶ Plan for operational demands consuming redelivery resource
- ▶ Manage records centrally, keeping them complete and correct

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**For more information on IBA's Asset Management and Technical services, or how we can help your business further, please email: [guljar.lehri@iba.aero](mailto:guljar.lehri@iba.aero)**

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