

Four Ways to Make Life Easier for Your Maintenance Team



The 2024 Oliver Wyman MRO Survey reveals significant challenges in the MRO industry due to rising labor costs, which increased by an average of 7.3% globally last year. Meanwhile the industry is struggling to retain talent, with a frontline labor attrition rate of 5-10%, and North America experiencing the highest attrition at 11.5%. To address the escalating costs and labor shortages, here are four key strategies to make your maintenance team's lives easier by enhancing their workflow and enabling them to focus on what matters most: keeping aircraft safe and operational.

1: Centralize your digital document management

In the fast-paced world of aviation maintenance, mechanics frequently face the inefficiencies of traditional document management systems. Think about your mechanics having to deal with paper documents—it's not just a waste of their valuable time, but it also increases the chances of human error. Plus, they often get stuck with tasks that don't add any real value to your operation, like hunting for misplaced papers or trying to make sense of outdated manuals. This takes them away from what they should be focusing on and can lead to expensive delays. Even with the implementation of digital platforms, the process of sharing technical documents remains cumbersome for the maintenance team.

Typically, it involves downloading a PDF from an document hosting platform (such as MyBoeingFleet), uploading it to a shared drive or site, sending a link to recipients, and then having them download the document on their end. This process is not only time-consuming and complex but also requires significant coordination.

Transitioning to a centralized digital library offers a powerful solution to these challenges. With a sophisticated solution like the new Toolbox Library, your team will be able to have access to consistent and accurate information anywhere, anytime for your entire fleet.

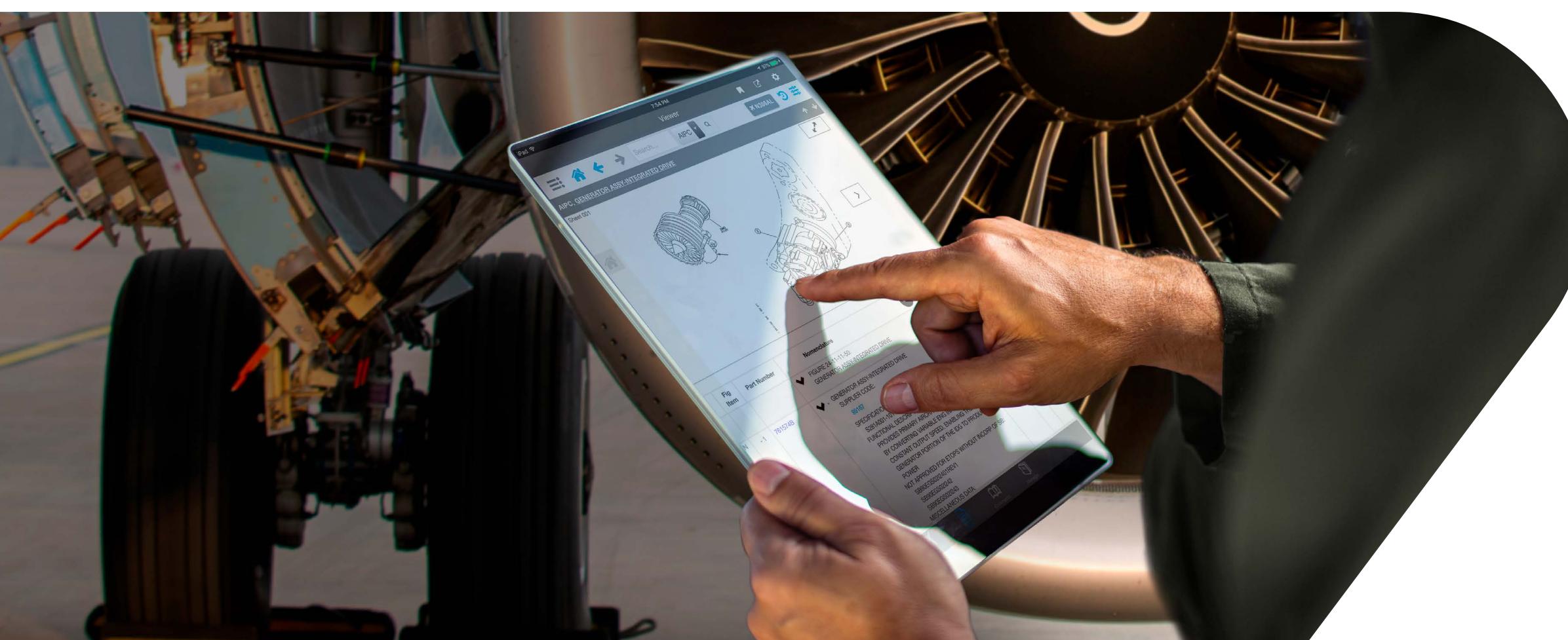
By centralizing data access, this solution significantly reduces the risk of errors associated with outdated or conflicting information, streamlining maintenance operations and improving overall efficiency.

One of Toolbox Library's customers noted that “Toolbox has greatly reduced the complexity of managing maintenance information for multiple airplane types across our entire fleet.”

Figure 1: Library dashboard of new Maintenance Performance Toolbox

The value-added features include, but are not limited to:

- Support for all Boeing aircraft as well as aircraft manufactured by other OEMs, including Airbus, Embraer, Bombardier, and more.
- Advanced search capabilities that allow mechanics to quickly locate specific documents or sections within manuals, saving them precious time.
- Mobile features that enable offline access ensuring critical information is available even in environments with limited connectivity, enabling mechanics to continue their work without interruption.





2: Enable content customization

In the highly regulated world of aviation maintenance, the ability to customize maintenance documentation is not just a convenience—it's an essential capability. Imagine an airline that is making critical configuration changes or modifications to its aircraft. The changes must be accurately reflected in the maintenance manuals to ensure that mechanics are working with the most up-to-date information.

Without a tool that allows for seamless content customization, the process of updating these manuals becomes a daunting task. Manually revising documents, coordinating with OEMs, and ensuring that all changes are properly integrated can be time-consuming and fraught with potential errors. This not only delays the availability of crucial information, but also increases the risk of miscommunication, potentially leading to costly mistakes on the hangar floor.

That's why having a tool that allows you to directly incorporate changes into OEM maintenance manuals becomes vital. It ensures that documentation is always aligned with the latest configurations and operational needs, reducing the risk of oversight and improving overall safety and efficiency.

Boeing's Toolbox Authoring is designed to meet this exact need. As a powerful module within the Toolbox product suite, it empowers your personnel—particularly those in Technical Publications—to easily customize and manage their maintenance documentation.

Title	Number	Model	Document Type	Document Number	Document Owner	Status	Action
Additional inspection step to comply with FAA AD 2019-03-07 Para (i) & ASB 737-57A1327R02	MPV-CAMO-A0106 Rev.03	737-700/800/900	AMM	D633A101-BBJ	BBJ	Published	
[AIRS 3796] Independent Inspection on Oxygen Generator Release Pin for Correct Installation	MPV-CAMO-A0120 Rev.04	737-700/800/900	AMM	D633A101-BBJ	BBJ	Published	
AP-ES-Upload-Component	AP-ES-Upload-Component	737-8200	AIPC	D638A002-WJE-0126	WJE	Draft	
DASA AD A36-2018-001] A36 - Fuel Vent Stringer Crack - ICA Change from Incorrect Manufacture	MPV-CAMO-A0039	737-700/800/900	FIM	D633A103-BBJ	BBJ	Draft	
[AIRS #4884] Record APU HRS & CYC prior to APU Removal	MPV-CAMO-A0231 Rev.00	737-700/800/900	AMM	D633A101-BBJ	BBJ	Draft	
[DASPA/2018-10-31/003 Iss.01] Total Loss of Radio Communication on Final Approach - Suggested Action per Boeing 737-5L-20-055-A	MPV-CAMO-A0088_R03	737-700/800/900	FIM	D633A103-BBJ	BBJ	Published	
Annotation SPA BBJ are POST-MOD SB AP737-27-002	MPV-CAMO-A0213 Rev.00	737-700/800/900	AMM	D633A101-BBJ	BBJ	Draft	
Wasp Nest Infestation - Conditional Task (CASA AWB 02-052)	MPV-CAMO-A0208 Rev.00	737-700/800/900	AMM	D633A101-BBJ	BBJ	Published	
Added into MISCO DATA that RAAF BBJ are POST-MOD SB AP737-27-002	MPV-CAMO-A0213 Rev.02	737-700/800/900	AIPC	D638A001-BBJ-0124	BBJ	Published	

Figure 2-1: Airline Revision Dashboard in Toolbox Authoring

Figure 2-2: XML Editor in Toolbox Authoring

By supporting a wide range of OEMs and offering advanced features like a user-friendly XML editor, supplement attachments, and an auto-merge function for reconciling updates, Toolbox Authoring ensures that airlines can keep their documentation accurate, up-to-date, and tailored to their specific requirements. With Toolbox Authoring, airlines can navigate the complexities of document management with confidence, ensuring that their maintenance teams have the reliable, precise information they need to keep operations running smoothly.

3: Optimize maintenance program task management

Without a comprehensive task management system, maintenance teams struggle with fragmented communication and disjointed workflows. Task cards may be outdated, leading to errors during execution. When new revisions are issued by OEMs, manual updates are labor-intensive and prone to mistakes, causing further delays. The lack of integration with existing Maintenance & Engineering (M&E) systems exacerbates these issues, requiring time-consuming manual data transfers that increase the likelihood of errors.

The Toolbox Tasks module directly addresses these challenges, offering a comprehensive solution for you to manage maintenance planning data, programs, and task cards. It comprises three key components: the Maintenance Program Manager, Job Card Manager, and Engineering Order Writer—each designed to streamline and enhance different aspects of the maintenance process.

- Maintenance Program Manager allows you to upload, customize, and manage MPD requirements from OEMs, alongside your own custom requirements.
- Job Card Manager serves as a centralized repository for task cards, allowing you to create or modify task cards and link them to maintenance requirements.
- Engineering Order Writer simplifies the management of engineering orders and Service Bulletin, offering customizable fields for assessment and decision-making.

Toolbox Tasks is designed to integrate seamlessly with an airline's existing M&E systems. Approved task cards and maintenance requirements can be easily exported for planning and scheduling, eliminating manual data transfer and reducing error risk.

Requirement Status	Task Card Status	Revision Management	Job Status
Active	103	Active	753
Pending	0	Pending	0
Draft	0	Draft	994
Retired	0	Retired	574
Not Applicable	0	Not Applicable	4

Figure 3: Job Card Management in Toolbox Tasks

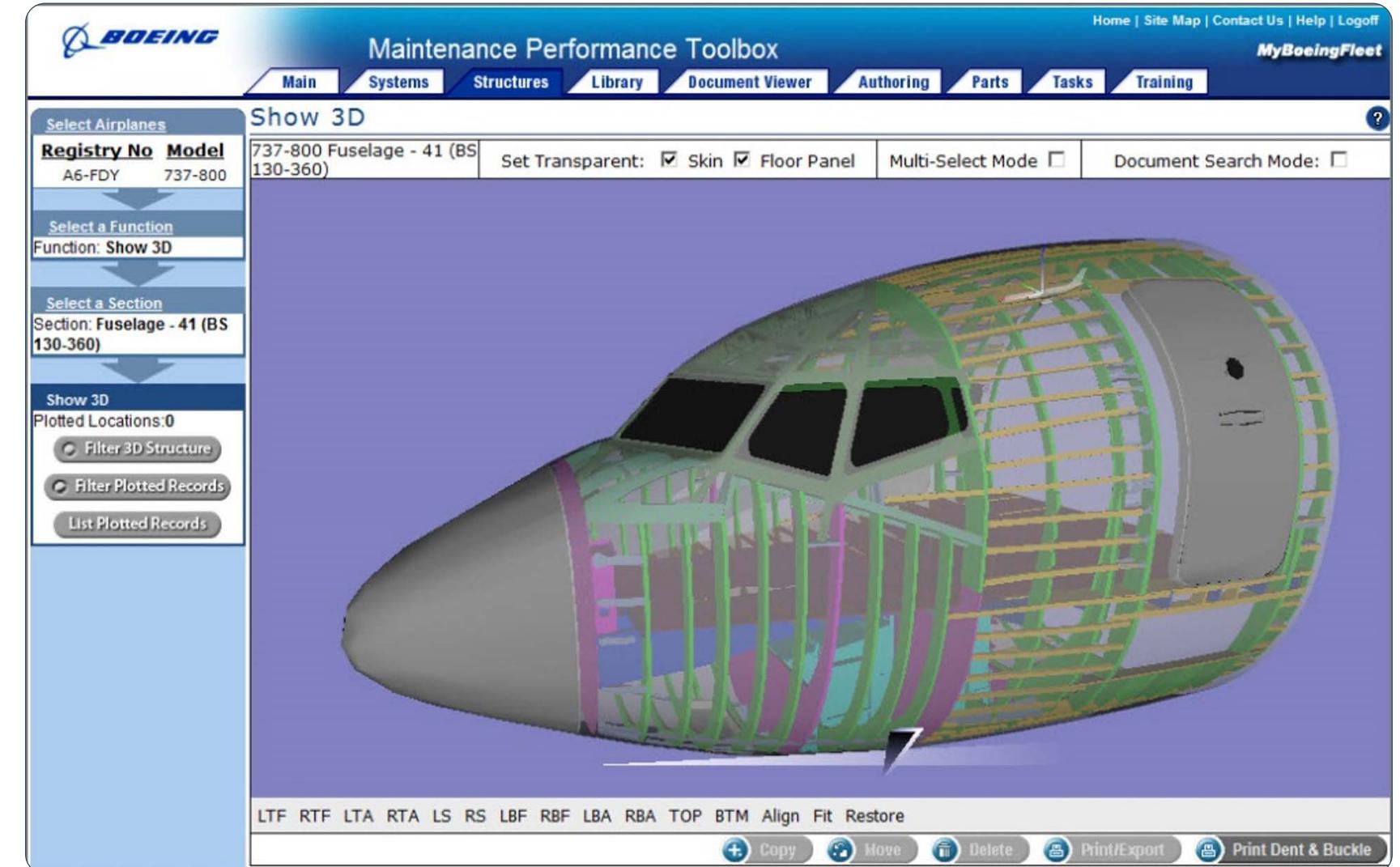


Figure 4: 3D Model of 737-800 Fuselage-41 in Toolbox Structures

4: Document structural defects with a 3D model

Mechanics and engineers face significant hurdles when it comes to recording defects in complex aircraft areas. Sometimes, the lack of precision can lead to oversight, miscommunication, and ultimately, potential safety risks. Traditional methods of damage tracking, which often rely on 2D images or written descriptions, fall short of providing a comprehensive view, making it difficult to maintain up-to-date and detailed records across an entire fleet. The task becomes even more daunting when attempting to track multiple defects over time, where inconsistencies in records can result in ineffective maintenance strategies.

Boeing's Toolbox Structures module leverages 3D model documentation to provide you with a powerful tool for managing structural defects. By integrating 3D models into the maintenance workflow, it allows for real-time updates and tracking of defects, ensuring that all information is current and accessible.

The platform's intuitive interface makes it easy for users to document defects, generate reports, and share information across teams, streamlining the maintenance process and reducing the likelihood of errors. Moreover, Toolbox Structures' ability to provide a fleet-wide view of damages empowers airlines to make informed decisions about repairs and maintenance schedules, ultimately enhancing the safety and efficiency of their operations.

A complete maintenance document management solution

Maintenance Performance Toolbox provides comprehensive solutions across Library, Authoring, Tasks, and Structures. By adopting this tool into your operation, you can expect long-term benefits, including enhanced safety, reduced maintenance costs, and increased operational efficiency.

Ready to learn more?



Contact Sales

