

Boeing ReliablePlane

Sensor-enabled detection of aircraft component degradation

Operational impact

Identify aircraft component degradation early so teams can act before it impacts the schedule. Reduce unplanned maintenance, shorten troubleshooting time, improve dispatch reliability, and make more accurate maintenance and replacement decisions.

Business challenge

Unplanned maintenance events increase when early aircraft component degradation is missed by manual inspections. Technicians rely on trial-and-error troubleshooting, which extends downtime and delays return to service. Parts are often removed too early or too late, driving unnecessary cost and inefficiency. Without accurate diagnostics, engineering teams lack the data needed to break this cycle and improve reliability performance.

ReliablePlane solution

ReliablePlane is Boeing's proprietary diagnostic solution that detects early aircraft component degradation using AMM-based tests, sensor data, and engineering models. Technicians run quick, guided tests to capture accurate measurements, with results flowing to an engineering portal for fleet-wide trend analysis. Airlines can reduce troubleshooting time, avoid unexpected failures, and make more confident maintenance decisions.

Key features

- OEM-authored AMM-based diagnostics
- Sensor-based data capture
- Guided iPad testing workflow
- Engineering portal with trend analysis
- Data export for engineering systems

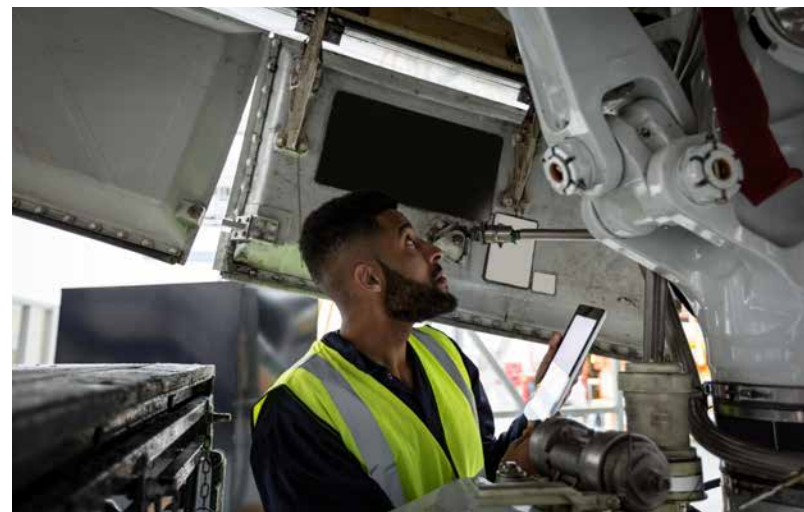
Key benefits

- Reduce unplanned maintenance events
- Shorten troubleshooting and accelerate return to service
- Replace trial-and-error troubleshooting with accurate diagnostics
- Lower maintenance and labor costs
- Extend component life and avoid unnecessary removals

Proven operational impact

"With ReliablePlane, we can identify the cause of 737 flap lockouts in about 20 minutes, compared to an entire shift previously. This significantly reduces troubleshooting time and helps return aircraft to service faster."

— United Engineering Service Team



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Why ReliablePlane stands apart

- Industry-first sensor-enabled OEM diagnostics for aircraft components
- The only solution built on Boeing engineering models and design data
- Converts sensor data into true component health, not raw signals
- Validated by Boeing engineers and flight test insight
- Expanding to additional aircraft systems over time

How ReliablePlane delivers value

Detect degradation before failure

Identify aircraft component degradation early so teams can act before it becomes an operational issue.

Shorten troubleshooting and return to service

Use accurate diagnostics to quickly identify root cause and get aircraft back in service faster.

Avoid unnecessary removals and extend component life

Base decisions on actual component condition to reduce premature removals and maximize part life.

Improve maintenance planning with real data

Use early signals and trend data to plan maintenance with greater confidence and avoid reactive decisions.

Integrate seamlessly into maintenance workflows

Run quick, guided tests that align with AMM procedures and fit into existing maintenance operations.

Seamless integrations across operations

Boeing product integrations

Connects with Boeing Toolbox, Airplane Health Management, and Self-Service Analytics.

Data export to existing systems

Export diagnostic data into existing engineering and analysis tools.

Is your operation ready to engage?

Talk with Boeing to evaluate how ReliablePlane can reduce troubleshooting time, avoid unexpected component failures, and improve maintenance decision-making across your fleet.



Learn more about ReliablePlane
at services.boeing.com

