

Application note

Helicopter Inspection

Benefits

- Reduce inspection time
- Mobile inspections where you need them
- Save on gearbox costs
- Real3D measurement



Summary

Helicopters allow pilots and passengers to view places and travel unlike any other mode of transportation. Similarly, Waygate's Borescopes allow users to view and inspect subjects unlike any other tools. Helicopters have complex components that need to be inspected to not only follow recommended maintenance but also to help ensure a long life of your equipment. Drivetrain components like fans, blades, and gearboxes all should be inspected regularly. Beyond the drivetrain, panels, and electronics also might need to be inspected.

Challenge

At the core of every helicopter is the main gearbox. The main gearbox brings power from the engine to the main rotor and is essential to the function of a helicopter. Fractures in the gears and other gearbox components can easily translate to catastrophic failures, so the gearbox needs to be regularly inspected. Unfortunately, inspections aren't easily done; they involve removal of the rotor and a disassembly of the gearbox which is both expensive and labor intensive.

It would be ideal if every inspection took place at a convenient place and time. Unfortunately, that isn't always the case. For example, if a rotor isn't starting, you may need to inspect several pieces in the drivetrain quickly to make sure everything is operational before flight.

Solution

Everest Mentor Flex provides an easy alternative for gearboxes in an inspection. While video borescopes have been available for years, the Everest Mentor Flex will change how you inspect the gearbox. All inspectors need is an opening wide enough for a 4.0mm probe. First, navigate to the inspection using the Flex's innovative and powerful articulation. Then capture high quality images using advanced TrueSight image processing, tag images and automatically generate a report using Menu Directed Inspection (MDI). Real3D Stereo measurement provides a fully surfaced point cloud to analyze cursor placement for accurate measurement. Finally, store and share the images through InspectionWorks Insight. Inspecting the gearbox has never been easier.

Take your inspections anywhere with Everest Mentor Flex. Both the backpack and carry-on case are designed to be portable and secure for wherever inspections are needed. Once on site, the Mentor Flex can withstand the harshest environments with its military grade magnesium alloy housing (MIL-STD-810H).

Helicopter inspections become more objective; more reliable; more accurate.