Catastrophic Failures – Bucket Wheel

Investigation Results

• Fatigue cracking had initiated in the mast at stiffener termination which had a very low fatigue category detail
• The crack had grown to a length of 800mm over a long period of time (>4 years)
• The catastrophic failure occurred during walking
• The defect location had not been inspected. The last inspection was conducted 3 months prior to the failure. The bucket wheel structure was inspected annually by the OEM

Outcomes

• Inspection regime did not cover critical areas and low fatigue category details during the inspection
• Operator unaware of critical areas for inspection

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