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T282C Air Filter Access Platform

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Outline

- Background
- The problem and solution
 - Video presentation of the innovation
- Results and benefits
- Summary
- Open to panel for questions



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Background

- Fleet of 12 Liebherr T282C trucks amongst other heavy mining equipment
- T282C: 600T AC electric drive rear dump truck powered with a 20 cylinder, 2,722kW (3,650HP), 90L diesel engine
- Diesel engine air intake filters located approximately 4 metres above ground level



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The Problem

- Engine intake systems require maintenance, approximately 13 filter changes per annum for each T282C truck
- Maintainers need access to complete filter changes



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The Problem

- Initial method of using standard access platform posed unacceptable manual handling risks



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The Problem

- Interim measure of using electric scissor lift was an improvement but not ideal
 - Residual manual handling risk
 - Competencies and permits required
 - Additional time and labour required
 - Workshop access restrictions



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The Solution

- Custom design and build a fit for purpose access solution
- To reduce manual handling and improve ergonomics



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The Solution



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Results and Benefits

- Reduction in the amount and severity of manual handling
 - No walking or pulling filters up/down the flight of stairs
 - No awkward body positioning on platform or loading in and out of EWP
- Time efficiencies
 - No need to organise EWP, working at heights permit, prior training or required competencies, dedicated spotter etc.
 - Labour/time requirement for task reduced by approximately 50%
- Cost Saving - reducing the number of damaged air filter units
 - Filter dry cleaned and recycled, on average three times in its lifespan
 - Recycled air filters cost approximately one third of new



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Summary



- Hazards involved in the task were highlighted by Millennium's maintainers and the workforce was consulted during the design and change management process which has resulted in wide acceptance and utilisation of the solution
- Solution is simple, practical and cost effective and reduces both the manual handling risks and the time taken to complete the air filter change task, with added commercial benefits
- Working above ground level and requiring access to parts and tools is a common problem, meaning this concept has the potential to be utilised across many applications and industries



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Questions?

