Partnership to optimise compressor energy consumption:

Adrian Whitehead-Maintenance Process Leader-Land Rover

Glyn Griffiths-Compcare

Nigel Cook-ABB

Installation June 2008

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Objective: To reduce compressor running costs and reduce Co2 emissions

Compressor: Atlas Copco – ZR250 - 250kW

No3 Compressor Selected due to low load hrs
Total run hrs 14,858
Load hrs 3,917
26% Load to run ratio
8695 Starts

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VSD Installation

A load drive installation supplied with flying leads for quick simple installation

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Control Philosophy

Fixed Speed Oil Pump fitted to supply constant oil pressure during slow speed running

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Control Philosophy

Two auxiliary drives fitted. One to match Drier speed to Compressor speed and one to control oil pump operation.

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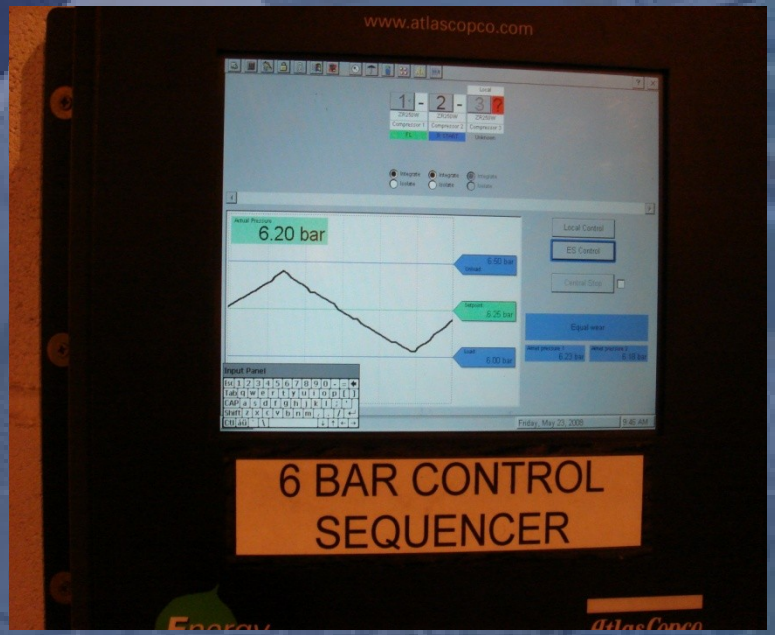
Before



After

This shows the control sequencer before and after installation, before shows the machine on/off load where as constant smooth pressure after.

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Motor Temperature Monitored

Motor temperature monitored to ensure that reduced running speed did not overheat the motor

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Payback on Investment

Payback period = 7.2months

Enhanced Capital Allowance Payback =5.4 months

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Carbon footprint offset

The reduction of Co2 is the equivalent of offsetting 78 SUV's Per Year. Every Year.

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Energy Savings are not limited to compressors!

Ancillary equipment such as Compressor Cooling water pumps, Cooling tower fans, process water pumps, extraction units, AHU's.

Huge on site energy saving potential!

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