

Test details

Location: Volkswagen, South Africa
Measurement device: Circutor AR5-L
Tester: Suresense Technologies



Hydraulic Applications

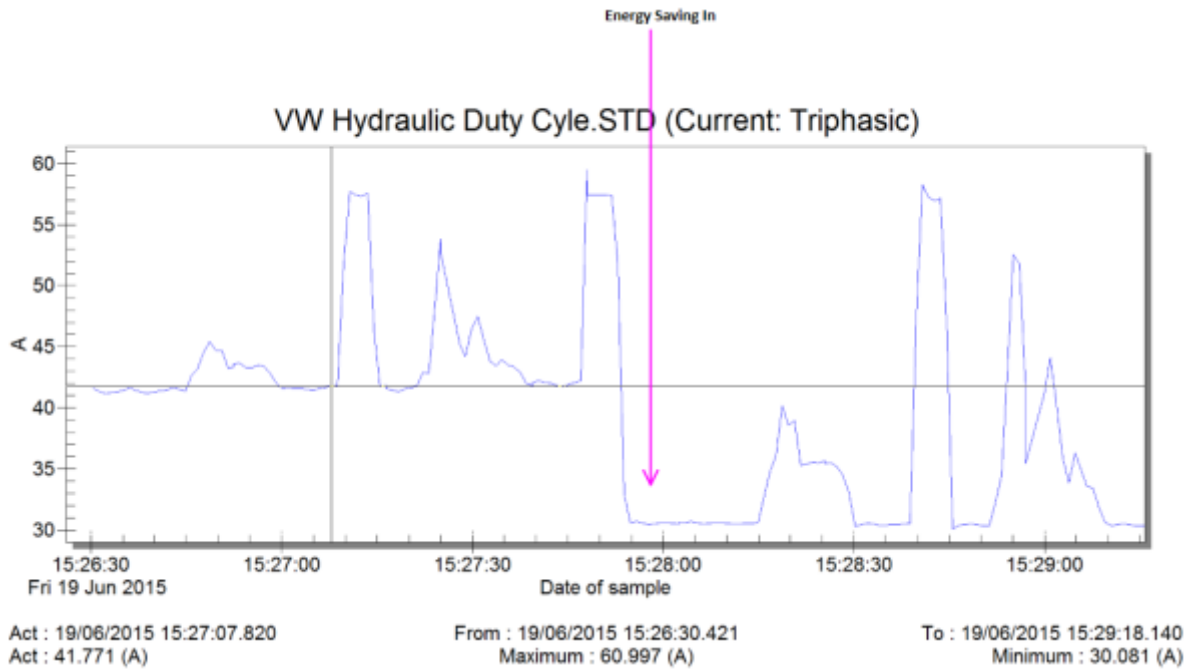
Brief Overview

A total of 11 units were installed on a large VW Car Manufacturing plant in South Africa, on presses and Hydraulic applications. The Hydraulic applications are used to make car parts and recycle scrap metal.

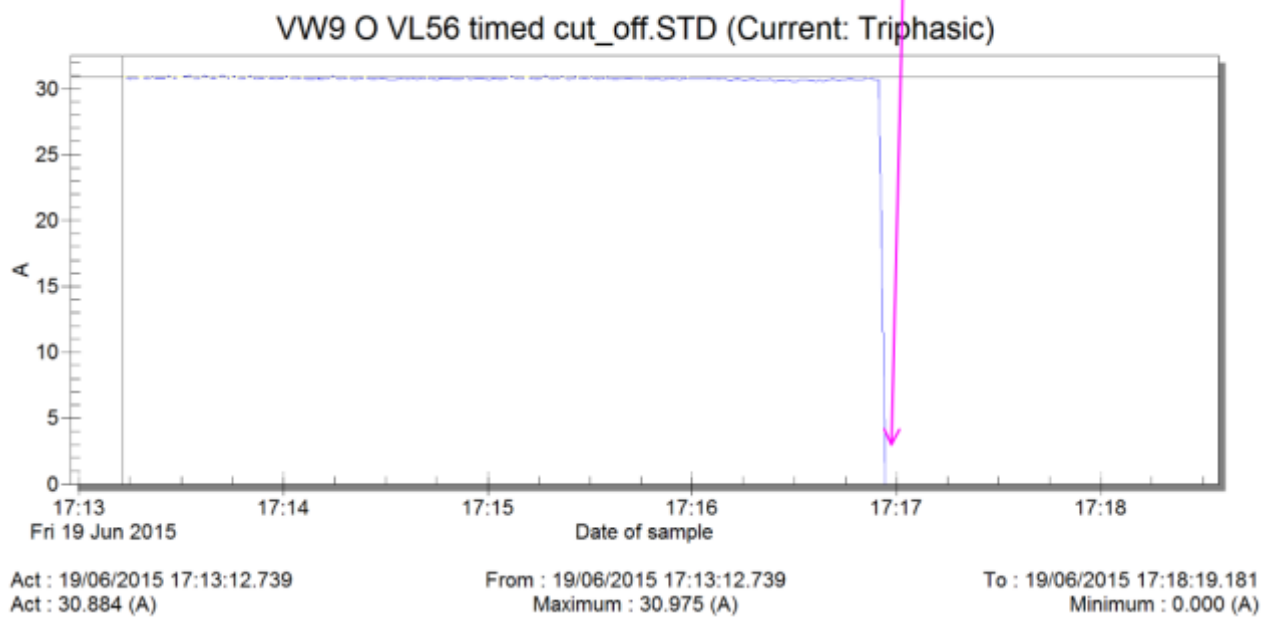
A Hydraulic pack which is on a machine that makes clamps which connect the pistons to the crank shaft in the Engines, has the timed cut off feature enabled. So the normal energy saving is active but when the hydraulic pack has not been used for a period of 5 min 25 s the Integra unit simply switches the motor off. After pre monitoring the application it was found that the machine was use only 30% of the time but the Hydraulic pack was left running.



Test conditions:

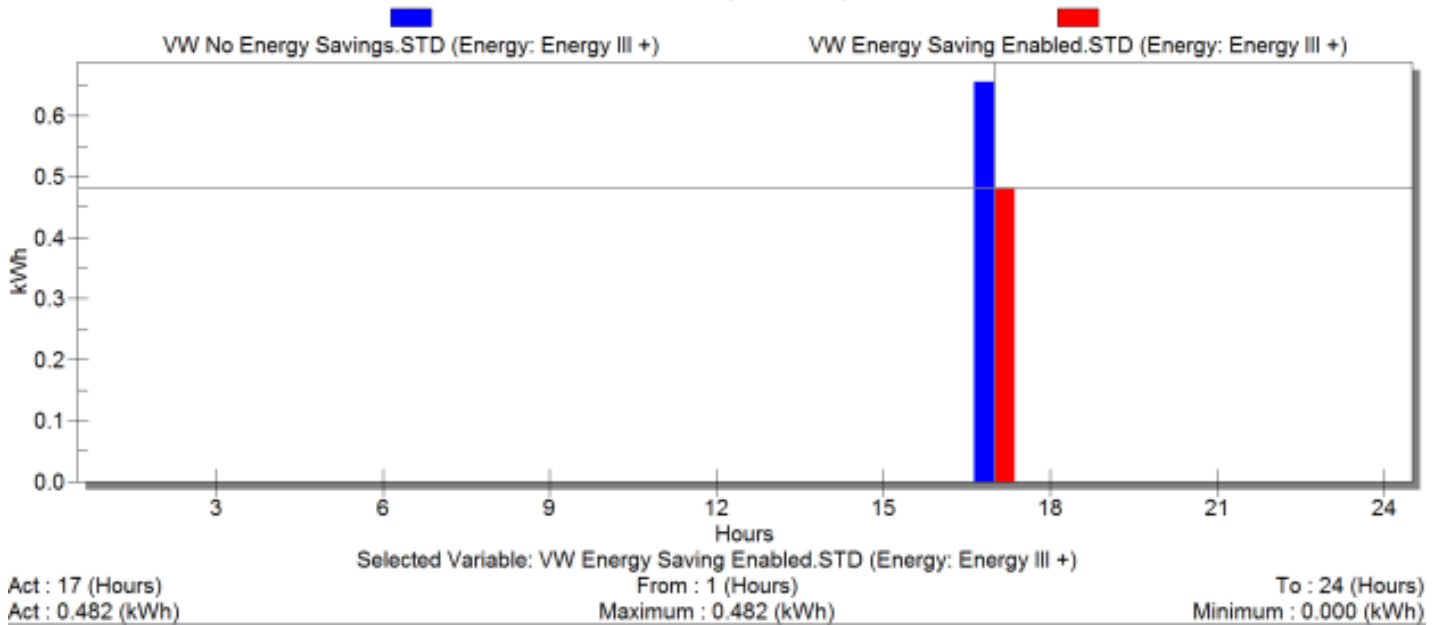


Motor idle for 5 mins, Integra switches it off. 0 kWh!



Test Conditions:

MULTIGRAPHIC 19 June 2015 (0.482 kWh)



Results:

Power (kW) 24% Reduction

This does not take into account the extra savings from turning the motor off when it's not being used.

Test Conditions:

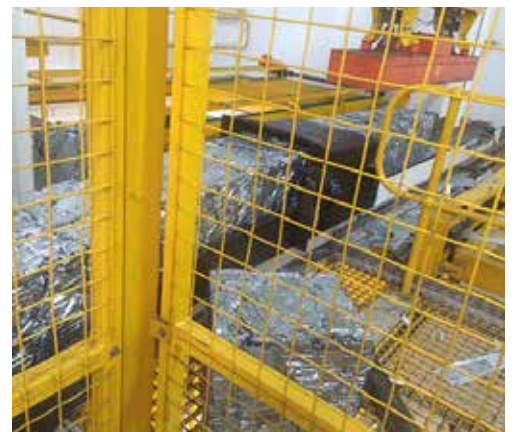
The compactor recycles the scrap metal left over from the mechanical presses when they are forming all the car parts, the metal is transported from the presses to the compactor via conveyor belt system. This automated system is continuously running and the amount of throughput of metal to be recycled depends on the production rate at any given time.

The hopper can take anywhere from 15 - 45 min to full, the automated system monitors the weight of the hopper and when the weight gets to 250Kg, the contents is emptied into the compactor.

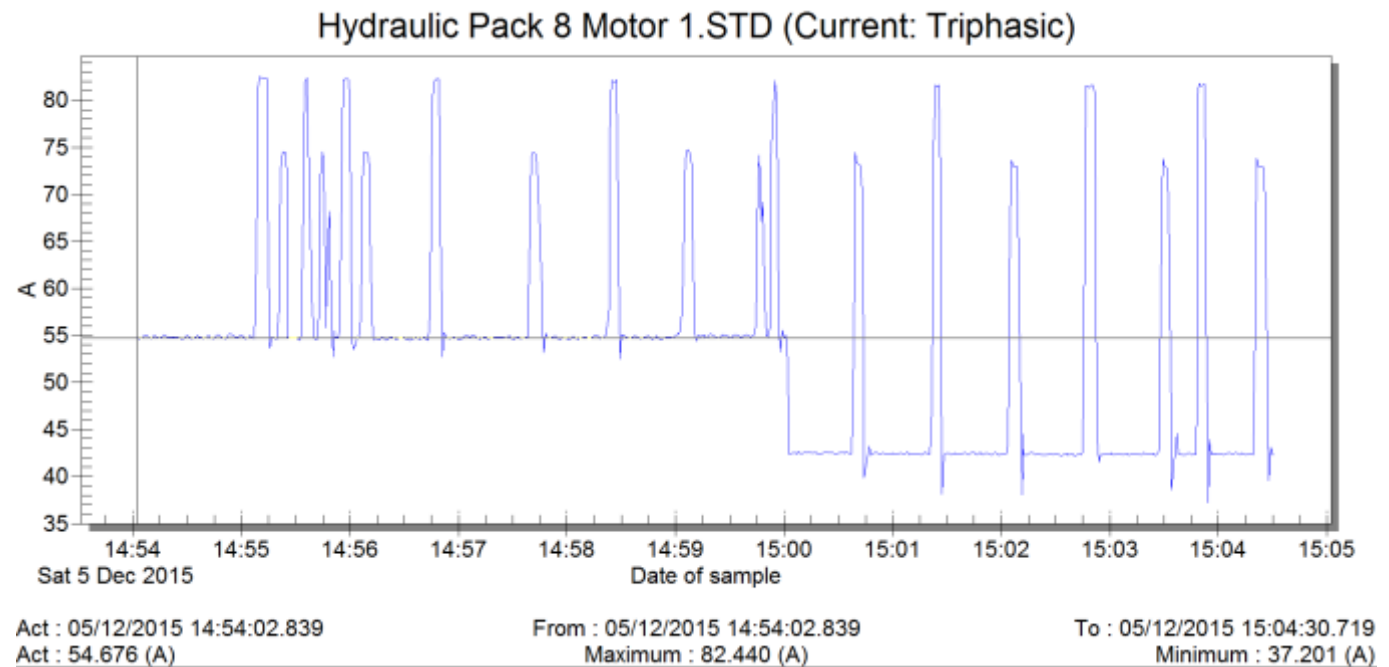
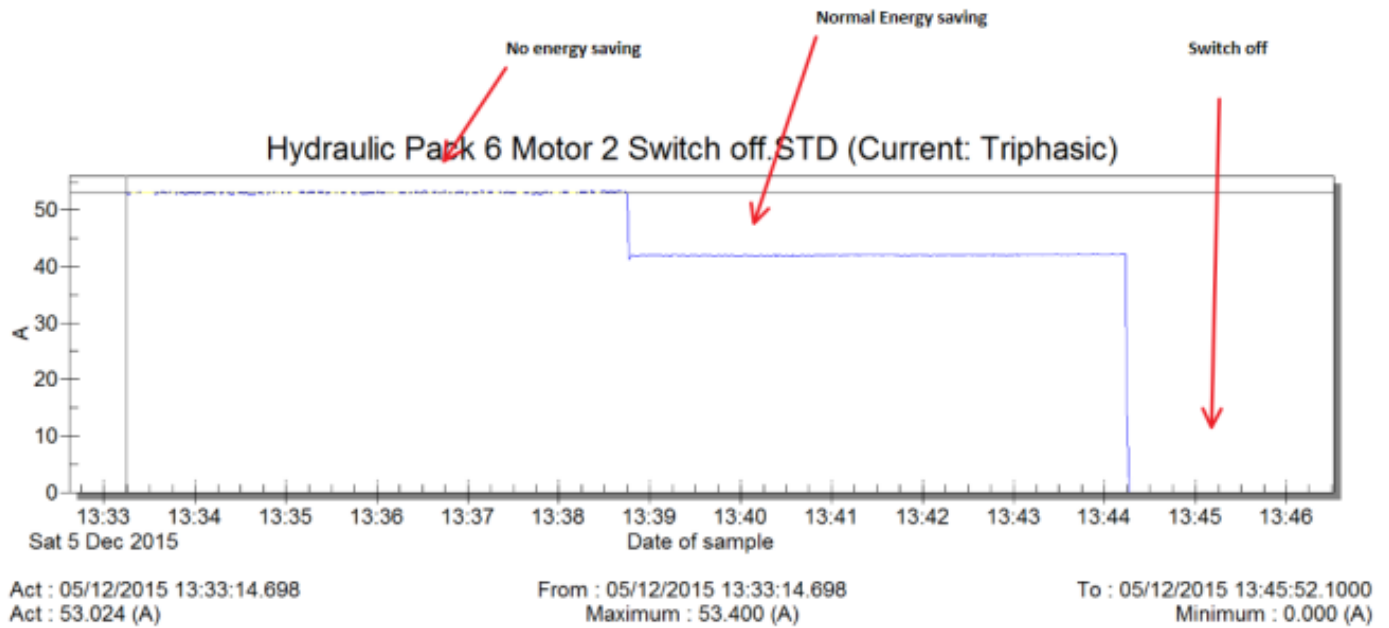
The hydraulic rams of the compactor then squeeze the metal into cubes and sends them to the automatic magnetic skip filler.

Energy Saving

This type of application is perfect for the Integra unit, when the hydraulic pack is not needed the Integra will save energy and also monitor the loading and switch the pack off when it's not being needed.



Test Conditions:





intelligent fixed speed motor control

Energy Efficient

This excess consumption is not only an unnecessary cost in your energy bill, but it also serves to damage your equipment as the excess energy is released through the windings of the motor in the form of heat, vibration and noise. Integra will give your motors intelligence through monitoring the load on the shaft of the motor for every cycle of the supply. The Integra will then feed your motors the electricity that they require to run efficiently at any point in the duty cycle.

Integra integrates fully with its surroundings and can even switch your motors off automatically when they are not being used, or use stored energy in certain applications (such as flywheel mechanisms) to reduce your electricity consumption even further.

Customers

There are a growing number of forward thinking executives and energy consultants who are taking their corporate responsibilities (CSR) very seriously. In an effort to target carbon reduction and increase their company profits, they have chosen Suresense Technologies energy saving solutions. These implementations were viewed as part of their own energy saving strategy and were driven by two other key factors, low risk and high return on investment (ROI).

