

ENERGY CONSERVATION ACHIEVEMENTS

During the period 2002-2005 ,Mahindra & Mahindra has implemented around 85 energy saving proposals through Engineering initiatives, workmen's suggestion schemes, auditor's suggestions and TPM methodology resulting into total savings of Rs. 38.68 Lacs with an investment of Rs. 35 Lacs. This has resulted in a reduction of 33.9% in specific electrical energy consumption.

In water conservation also we have reduced the consumption by 16.21%.

Major projects implemented during the year 2004 – 2005 are listed below:

ENERGY CONSERVATION PROJECTS

Energy Conservation Achievements :

- **Install an Alternator on Test-bed frame:**

Before:



After:



Procedure :

- **Install an Alternator on Test-bed frame.**
- **Adopt a pulley on to the Tacho side of the dyno shaft & provide a drive to the alternator & charge a lead-acid battery.**
- **With help of Reverse Inverter, connect tubes on battery.**

Investment : Rs. 74000/-

Saving : Rs. 7911/- per year.

. Daily/weekly Timer fitted on Oven for Heaters on off:

Energy saving on crank gear oven..



BEFORE



AFTER

Investment : Rs. 2500/-

Saving : Rs. 43200/-

. Replace conventional type pump- motor by Energy efficient pump-motor assembly of lower HP rating :

BEFORE



Actual Line current 21 A

AFTER



Actual Line current 9 A

Investment : Rs. 1.25 Lakhs /-

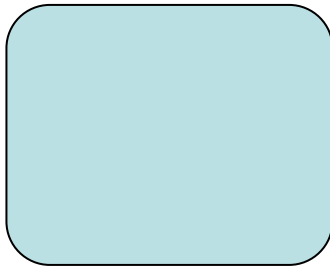
Saving : Rs. 1.96 Lakhs /-

. Dirty tank coolant motor and pump having 7 HP and under utilizing during cycle:

M/C No	Problem	Modification Done	Saving
8111	Dirty tank coolant motor & pump having 7 HP & under utilizing during cycle	Pump & motor replaced by low HP as 5 HP	Saving of 2 Hp laod App 30 Rs/ Shift

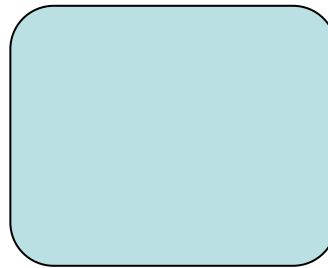
Before

7 HP Motor used for filtration system
High Rating



After

High rating motor replaced by LOW rating

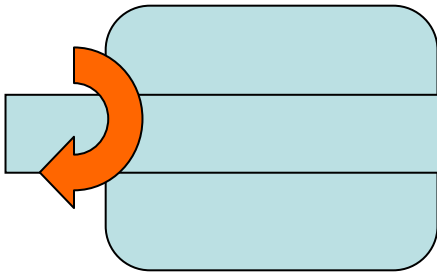


7.5 HP hydraulic motor run continuously during shift :

M/C No	Problem	Modification Done	Saving
3155	7.5 HP hydraulic motor runs continuously in shift causing unwanted power consumption.	Electrical circuit modified to run motor only in cycle time.	17 units saving.78 Rs. / shift

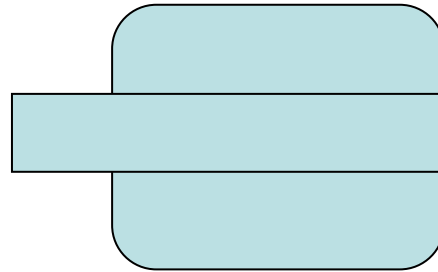
Before

7.5 HP Hydraulic motor run continuously during shift



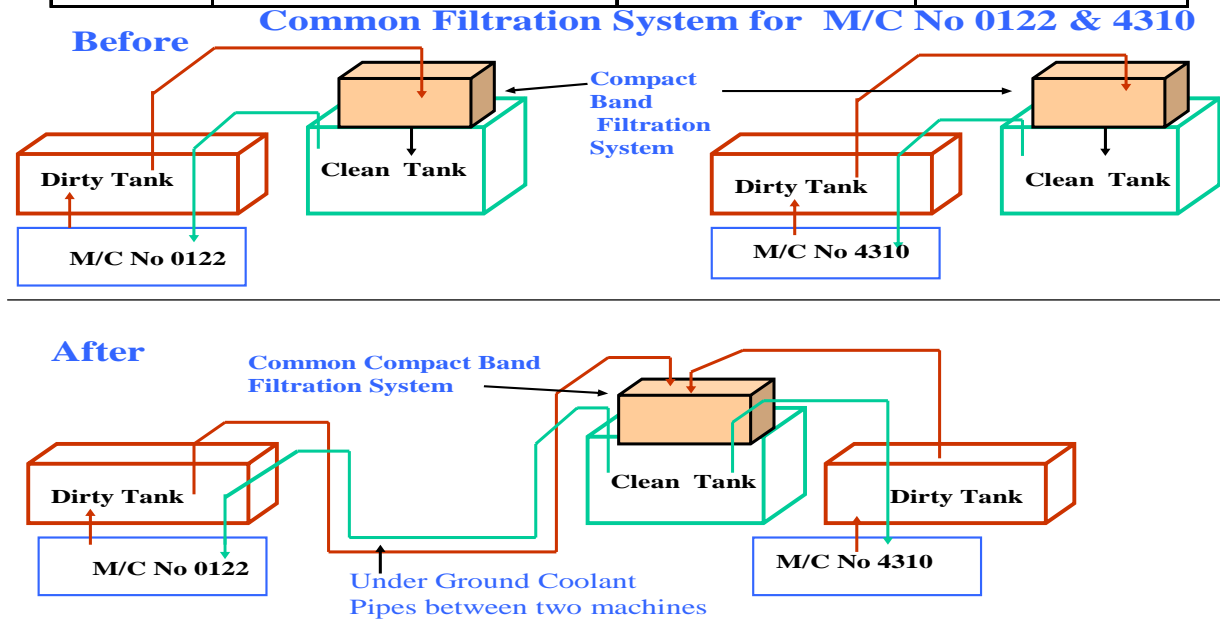
After

Electrical circuit modified to run in auto cycle only.



. Individual coolant system and other electrical accessories for both machine :

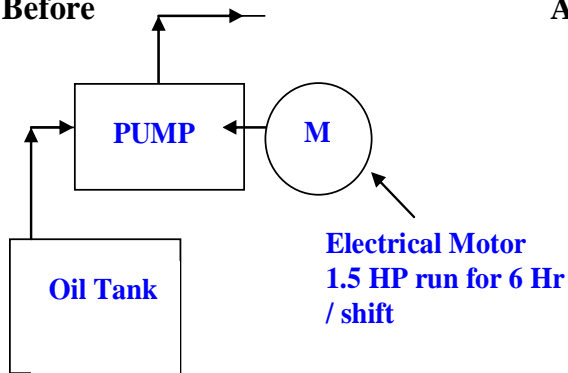
M/C No	Problem	Modification Done	Saving
4310 & 122	Individual coolant system & other electrical accessories for both machine.	Common coolant tank & other accessories provided for two machines to eliminate common accessories & saving of 7 Hp electrical loads.	Saving of 7 HP of load



. Vacuum pump remains on continuously during cycle causing unwanted power consumption :

M/C No	Problem	Modification Done	Saving
W.J.L.T	Vacuum pump remains on continuously during cycle causing unwanted power consumption.	Vacuum pump which works on available compressed air supply used instead of electrical motor & pump.	Cost of power @ Rs 25 Rs per shift & oil Rs 40 per 2 Month saved

Before



After

