

# *Maintaining The Green Fleet*

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## ***The Green Fleet***



## *The Green Fleet*

The purpose of the "Green Fleet" is to reduce exhaust emissions, increase fuel efficiency and reduce fleet operating costs.

A typical "Green Fleet" will:

- have a number of Hybrid vehicles in various categories
- have a substantial number of modern technology engines
- use alternative fuels, i.e. Biodiesel, Ethanol, CNG, Propane
- have a computerized Fleet Management and Fuel Management System
- have an efficient Preventative Maintenance Program
- have efficient Technician and Driver Training Programs
- have "Green" maintenance and repair facilities
- have "Green" maintenance and repair policies and procedures



## ***Preventative Maintenance***



## *Preventative Maintenance*

"Rather like tuning a piano, reducing exhaust emissions from a heavy diesel engine combines an artistic talent for adjusting the machinery with complex engineering.

In general, fleet operators are the beneficiaries of this artistry and have little to do except run and maintain new engines according to the manufacturer's recommendations." Gary Macklin - Feb. 2002

- Vehicles and equipment get more complex with every new model year
- Preventative Maintenance Programs must be constantly upgraded to keep pace with these changes in technology



## ***Preventative Maintenance***

The only way to keep your "Green Fleet" green is through regular Preventative Maintenance Inspections and follow-up repairs.

A good Preventive Maintenance program consists of number of essential elements - some of which are:

- Accurate vehicle/equipment history and maintenance files
- Skilled and well trained technicians
- Good "Predictive Maintenance" program
- Reliable Oil Sampling Program
- Well trained Drivers



## ***History And Maintenance Files***



## *History And Maintenance Files*

Accurate equipment history and maintenance files will enable the fleet operator to:

- Track costs and quickly spot abnormalities; i.e.
  - excessive fuel, oil and fluid consumption
  - excessive tire replacements
- Abnormal engine wear
  - determined through regular oil sampling
- Repeat adjustments or repairs
- Warranty cost recovery
- ECM Reports





***Skilled and Well Trained Technicians***



## ***Skilled and Well Trained Technicians***

It is essential that technicians are trained in the newest technologies and keep up-to-date with latest "Technical Service Bulletins"

- In-house technician training programs
- OEM training courses
- Local college training programs
- Subscriptions to OEM "Tech Service Bulletins"
- Participation in trade associations;  
i.e. NAFA, ATS, MEOA





# ***Predictive Maintenance***



# Predictive Maintenance

Predictive Maintenance is a critical part of any Preventative Maintenance Program.

Predictive Maintenance - The replacement of a component prior to the average failure time (hrs. or kilometres)

- Components and intervals determined by the OEM
- Components and intervals determined by the fleets own maintenance files

Benefits:

- Substantially reduced on-road failures and down-time
- Reduced maintenance costs
- Higher driver moral





## ***Oil Sampling***



## Oil Sampling

Although not stipulated by the OEM's as part of regular Preventative Maintenance Inspections, having an Oil Sampling Program included as part of your PM Inspections can enable fleet operators to avoid costly engine failures or major component failures.



- Oil sample results will indicate high wear on major components, i.e. crankshaft, camshaft, pistons, etc.
- Oil sample results will indicate oil condition and contaminants



## ***Driver Training***



## Driver Training

Well trained drivers will substantially increase the benefits of your "Green Fleet" through:

- Elimination of "jack-rabbit" starts and stops
- Elimination of unnecessary engine idling
- Reporting of vehicle/equipment deficiencies, unusual noises or handling characteristics and fluid leaks to the Maintenance Department





*Leaders in greening Canadian Fleets*

Questions / Comments ?