

# Fire Trucks & Ambulances Increase Uptime & Reduce Tons of CO<sub>2</sub> Emissions



“If an engine fails at a fire, our lives and the lives of others are at stake. The last place you want to be is in a fire without any water.”

ROB MACKENZIE, OKOTOKS DEPUTY FIRE CHIEF



top: An 800 Pad has been protecting Pump 84 and Rob MacKenzie’s men for over a year. above: Amber Den Hood’s EMS fleet extended service intervals with 800 Pads.

## HARD WORKING ENGINES OF EMS & FIRE DEPARTMENTS

Emergency equipment operates in the most severe environments. Responders do not choose when accidents occur or how long they will be onsite. Responsive and sustainable fleets require peak engine performance in the most demanding environments.

To ensure system up time and extend engine life the Town of Okotoks installed FilterMaster Magnetic Oil Filter Pads on the existing disposable oil filters of their fire trucks and ambulances. The protection the pads provide gives responders added confidence that their equipment will be there to support their efforts in saving lives.

### Padded Fire Trucks

“You can’t have too much preventative maintenance” notes Rob MacKenzie, Okotoks Deputy Fire Chief. “If an engine goes out during a fire, our lives and the lives of others are at stake. The last place you want to be is in a fire without any water.”

Steve Smith, a local oil consultant, installed Pads on the fire trucks for a trial. At the next routine oil change the existing disposable filters were cut open to examine the contaminants they captured. Smith said, “the Town and I were amazed at the volume of micron-sized captured particles. It was far greater than what we expected to see.”

MacKenzie, who was a licensed mechanic before joining the fire department said,





Emergency generators, gas & diesel engines, pumps and compressors are also protected with 500 and 800 Pads.

“I can definitely see the advantage of capturing metal filings at the oil filter before they circulate through the engine. These Pads help assure critical equipment uptime.” He also installed Pads on other equipment including the mobile generator (pictured above) and runs FilterMaster Pads on his own Ford F350 Diesel.

### Increased Uptime for Ambulances

Right after the trial results came back the Town’s ambulances had FilterMaster Pads installed on them.

“We can be on calls when units are scheduled for maintenance. We run the units really hard and there is no way we can stop. Increasing our ability to go a bit longer, and sometimes much longer, makes a huge difference to the services we can provide. Since the Pads were put on, everyone has noticed our units are running better and are not in the shop as much.” summarizes Amber Den Hood, lead EMT-A for Foothills Regional EMS.

### Extend Oil Life by 3 Times

Significantly extending oil life is another key benefit of FilterMaster Magnetic Oil Filter Pads. “Right now Robel Trucking of Edmonton is over 1,000 hours using a FilterMaster 900 pad on the oil filter,” says Jim Dewald, an oil consultant in Calgary. “The oil analysis says that the oil is absolutely fine.”

Because FilterMaster Pads slow the wear cycle so significantly the oil additive packages (which degrade from use) are not consumed and the oil maintains its viscosity as if it were new. The industrial version of FilterMaster Pads (the ADD-Vantage 9000) has transport trucks extending their oil change intervals from 250 hours to over 1,200 hours – with oil analysis.

### Filter Diesel Fuel

Pads are also applied to fuel filters as diesel becomes contaminated during processing and transportation. In Alberta, diesel fuel has an average of 300 PPM of ferrous contamination between 50 microns and 1 micron in size. These hard metal particles score the fuel injectors producing inefficient combustion. Pads remove ferrous and non-ferrous contaminants from fuel and translate into increased fuel mileage, and ultimately fewer harmful emissions.

Smith relates numerous cases of customers with fuel injector problems being turned away from dealerships. “They are willing to try anything by the time they get here. We put a Pad on the fuel filter and the problems just go away. Sometimes we even use a zip strip to hold them onto aluminum or glass filters.”

### Pick-A-Pad

| Pad # | For applications on:   |
|-------|--|
| 500   | Gasoline engines, marine engines, motorcycles, small transmissions, rear end disposable filters and small fuel filters |
| 800   | Diesel engines - oil, fuel, hydraulic, water, coolant, and transmission disposable filters                             |
| 900   | Large block diesel engines – oil, fuel, hydraulic, water, coolant, and transmission disposable filters                 |

### How FilterMaster Pads work

FilterMaster Magnetic Oil Filter Pads magnetically attach onto the outside of all brands of disposable filters. They work with and compliment all existing filters by magnetically removing hard metal (iron & steel) contaminants right down to the sub-1-micron level. This stops particles from causing more wear on other vital parts including gaskets, valves, seals and bearings; significantly slowing the wear cycle.



## Why FilterMaster Pads Work

Studies show particles smaller than 10 microns generate 3.5 times (350%) more wear than larger particles as these small contaminants are able to break fluid films and are carried into high pressure contact areas causing more wear – especially on softer metals.

Extremely strong magnetic fields are required to filter very fine particles with small masses in high flow areas of engines. Patented One Eye magnetic filtration technology is able to remove ferrous, and some nonferrous contaminants, to below 1 micron in size. This is the first time credible filtration to this level has been possible.

## Customer at a Glance

**company:** Okotoks EMS & Fire Departments

**industry:** big engines

**location:** Okotoks, Alberta

## Technology Highlights

- **FilterMaster 500, 800, 900 Oil Filter Magnet Pads** – trapping ferrous contamination down to sub-1-micron levels on conventional disposable oil filters and fuel filters

| Challenge  | Solution   | Results  |
|--|--|--|
| <ul style="list-style-type: none"><li>• Reduce maintenance costs &amp; significantly slow wear cycles.</li></ul> | <ul style="list-style-type: none"><li>• Improve oil &amp; fuel filtration with FilterMaster Magnetic Oil Filter Pads:<ul style="list-style-type: none"><li>• Remove ferrous contamination right down to sub-1-micron levels.</li></ul></li></ul> | <ul style="list-style-type: none"><li>• Payback periods of less than 6 months.</li><li>• Reduced engine wear &amp; increased life of critical components (bearings, seals, gaskets, injectors, and pumps).</li><li>• Extended existing disposable filter life.</li><li>• Effective life of 5+ years.</li></ul>   |
| <ul style="list-style-type: none"><li>• Increase up time.</li></ul>  | <ul style="list-style-type: none"><li>• Extend oil change intervals to over 1000+ hours with oil analysis.</li></ul>   | <ul style="list-style-type: none"><li>• “Over 1000 hours since the last oil change using a 900 Pad.” Jim Dewald, oil consultant for MotorLube International.</li><li>• “Pads help assure critical equipment uptime,” Rob MacKenzie, Okotoks Deputy Fire Chief.</li><li>• “Our units are running better and are not in the shop as much,” Amber Den Hood, EMT-A for Foothills Regional EMS.</li><li>• Peace of mind knowing your equipment has the best filtration on the market.</li></ul> |

For more information on how to get One Eye Industries working for you please contact your local reseller, visit [www.OneEyeIndustries.com](http://www.OneEyeIndustries.com), or call 1-877-888-TRAP

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