FAIRLEIGH ENTERPRISES LTD

Export : Manufacturers and Suppliers of New Zealand's Finest Products
Import : Specialising in "New Technology" Products for Industry

OFFICE : 60 Washington Ave., Glendowie, Auckland . New Zealand.
Web Site Address : www.fairleighent.co.nz

ALL MAIL/CORRESPONDENCE TO:
CPO BOX 1256, AUCKLAND, N.Z.
INTERNET: e-mail : julian@fairleighent.co.nz

TELEPHONE : 64-9-521-0930
FACSIMILE : 64-9-521-0931
MOBILE NO : 027-4950-265

Thursday, 10 May 2012

MARINE OIL TECHNOLOGY (MOT)
Bypass Oil Filtration Technology.

Technical Specification :

Engine size or Horsepower	: 200 to 500 H.P.
Oil Flow rate	: 27 litres per hour.
Max. Sump capacity	: 57 litres
Max. Operating Pressure	: 100 psi or 7 bar
Weight of Unit	: 4.8 kgs.
Voltage	: 12 volt (OP5012-01)
Thermal rating	: 150 deg. C
Filter Housing capacity	: 1.7 litres

Additional components :

(a) Inlet Line : 6, JIC 370 fittings; 1/4” I.D.; 3,000 rated, 150 psi, Heat resistant braided hose.
(b) Connector Line : 6, JIC 370 fittings; 3/8” I.D.; 3,000 rated, 150 psi, General Industrial Diesel fuel, lubrication and anti-freeze hose.
(c) Return Line : 8, JIC 370 fittings; 3/4” I.D.; 3,000 rated, 150 psi, General Industrial Diesel fuel, lubrication and anti-freeze hose.

Marine Oil Technology Inc.

"Oil does not wear out, lose its lubricating properties or change viscosity as long as it is kept free of impurities" **-The U.S. Bureau of Standards**

OIL PURIFIER FILTRATION SYSTEM

Cummins LNG Installation

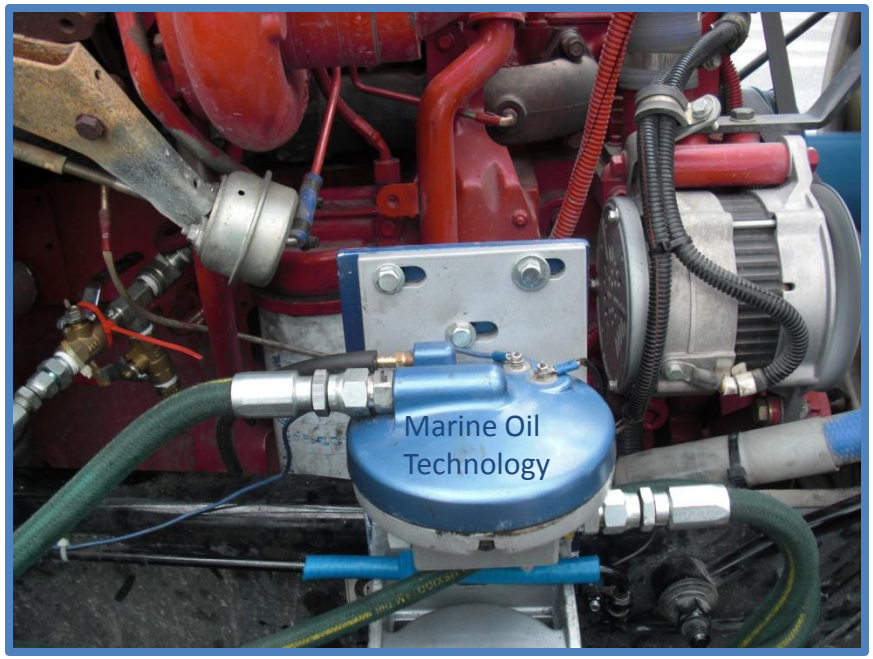
The Superior Oil Cleaning System

MARINE OIL TECHNOLOGY

MOT Oil Purifier Filtration System

Cummins Turbo LNG

MOT Filter Unit collects solid corrosive particles down to 1 Micron

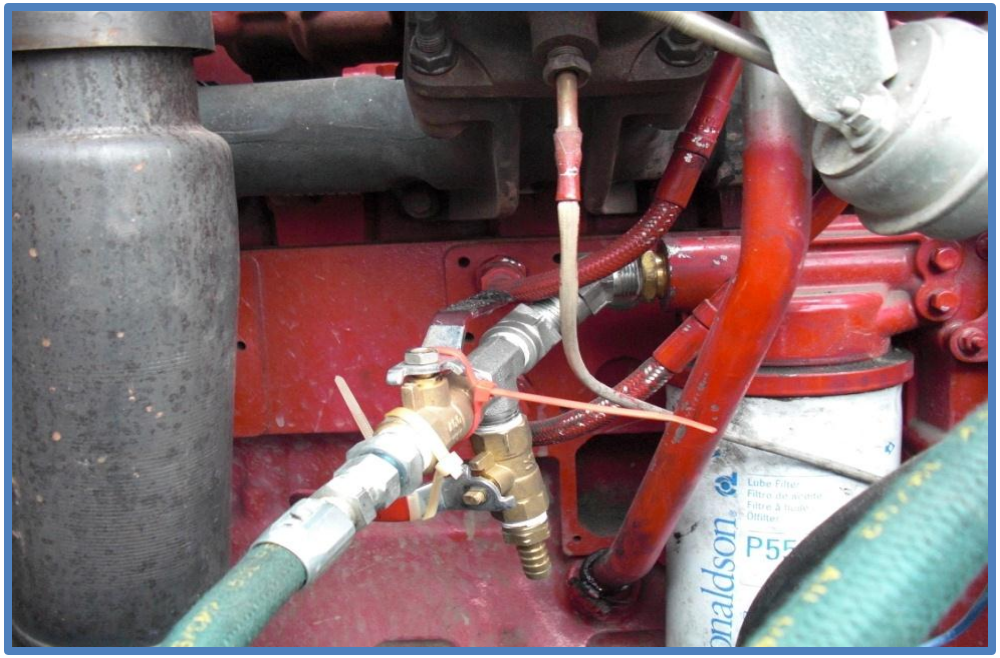


MOT Evaporation Heating Chamber removes water, Fuel and glycol

MARINE OIL TECHNOLOGY

MOT Oil Purifier Filtration System

Cummins Turbo LNG



MOT Filtration System Shut-off valve and Oil Sampling valve

MARINE OIL TECHNOLOGY

MOT Oil Purifier Filtration System

Cummins Turbo LNG

MOT Oil Purifier Filtration System on a Cummins Turbo LNG

2010 Peterbilt Tractor

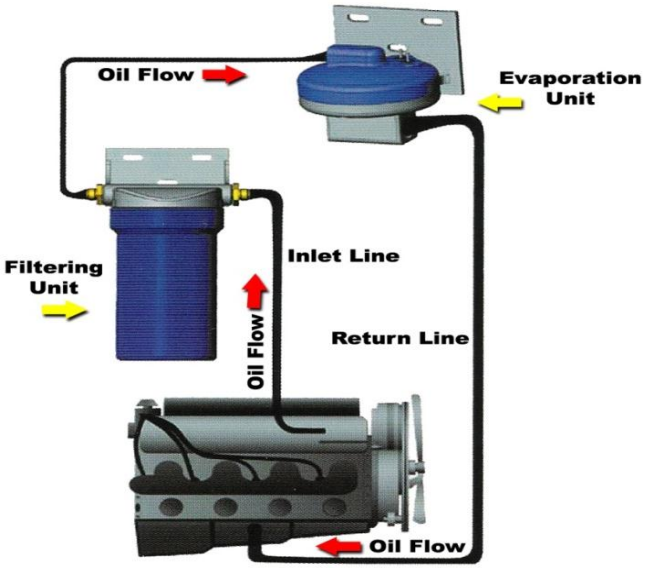
MARINE OIL TECHNOLOGY

Marine Oil Technology, Inc.

The Superior Oil Cleaning System

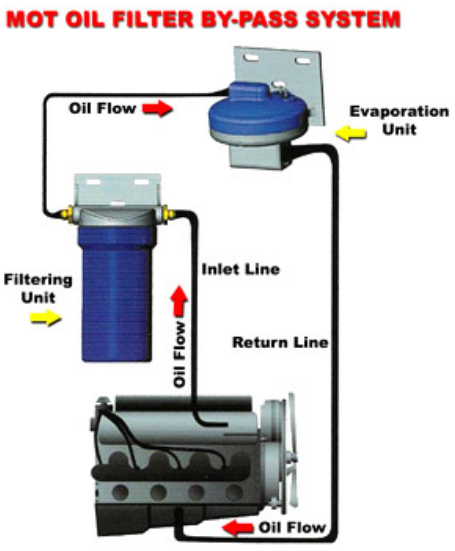
- **San Pedro Harbor Office**
  390 W. 7th Street
  San Pedro, CA 90731
  Attn: Alex Weil, President
  Cell: 310-707-5576
  Fax: 310-548-3372
  E-mail: Alexweil38@aol.com

- **MOT Corporate Office**
  5010 Loma Vista
  Los Angeles, CA 90058
  Attn: Alex Weil, President
  Cell: 310-707-5576
  Fax: 310-548-3372
  E-mail: alexweil38@aol.com



Juan Garcia, V.P.
Cell: 310-650-9295
Fax: 310-548-3372
Email: allnotes@pacbell.net

LAtitude
TRENDS AND BUSINESS NEWS
AT THE PORT OF LOS ANGELES



"Engines equipped with MOT filters can run for years without an oil change." -- Alex Weil, President, Marine Oil Technology

Don't Go Changin'

Even the best of relationships sometimes have friction and, in most cases, that friction is manageable -- unless it takes place inside of a heavy-duty engine. In that case, any particulate over the size of say, three microns – the distance between a piston and a cylinder wall -- can lead to a breakup of major proportions.

That's exactly why maintenance supervisors on land and sea make it standard operating procedure to change an engine's oil regularly, even though filters, oil, tools, and labor all add up to significant ongoing costs.

But just a few short blocks from the Port of L.A., one company -- Marine Oil Technology (MOT) -- has a patented solution that dramatically reduces the need for costly oil changes, saving operators with trucks, vessels, cranes (or anything that operates with an engine and any type of fuel) both time and money. And, equally important to financial managers during this challenging economy, MOT's technology provides a remarkably fast return on investment – less than a year in many cases.

Founded by Norwegian-born engineers Laila and Alex Weil, MOT's Bypass Filtration System uses a progressive five-stage filter core to trap damaging particles as small as one micron. The particulate-free oil then enters a heated evaporation chamber where contaminants such as water, fuel, acid, and other corrosives are removed and ventilated into a collection reservoir.

As a result, independent testing has proven that MOT-fitted engines can be operated many times longer without requiring an oil change, reducing oil purchases and disposal by 89%, according to a U.S. Department of Energy report.*

"Not all filters are created equal," says Weil. "Conventional filters only trap particulates larger than 20 microns and do nothing to eliminate liquid corrosives. That's nowhere good enough. We filter everything down to just one micron – smaller than the distance between the piston and cylinder wall. As a result, engines equipped with MOT filters can run for years without an oil change."

In San Pedro Bay, MOT's filtration systems are being tested by terminal operator Trapac, Sea Launch, and a large harbor area truck operator.

"In every case, we're proving through independent testing that companies are saving money and protecting the significant investment they have in their equipment," says Jim Scott, MOT Vice President. "Plus, our systems make machinery run cleaner, which helps organizations meet environmental standards that are growing more stringent every year."

The math is pretty simple: Take a standard drayage truck requiring 44 quarts and that typically undergoes an oil change four times a year, or after 300 hours of service. Based on a typical per-quart price of $3 and a typical volume-priced filter at $30, the total cost comes to $678 annually, not including the significant cost of labor to do the job. By comparison, the price of an MOT Bypass Filtration System is approximately $1,200. During a three-year test period, terminal operator Trapac has run a number of its utility tractor rigs without requiring a single oil change – only the disposable MOT filter needs replacing.

Based on those numbers, especially with labor factored in, an MOT system is likely to pay for itself well within a year and will continue to provide ongoing cost savings every year after that. Multiply those savings by every truck in a typical fleet and the benefit to the bottom line is significant.

Marine Oil Technology is currently one of several innovators benefiting from their relationship with PortTechLA, a public/private non-profit technology incubator and commercialization center funded by the Port of Los Angeles, the City of L.A., and the San Pedro and Wilmington chambers of commerce.

"MOT is exactly the kind of organization we want," says Bill Walles, Director of Client Services for PortTechLA. "They've got a cost-effective solution that will save companies many thousands of dollars, they reduce the need for fossil fuels, and they have a technology that's great for the environment. The sooner the industry discovers MOT, the better."

For more information on Marine Oil Technology, contact Juan Garcia at 001-310-415-1496 or allnotes@pacbell.net. For information about PortTechLA, go to www.porttechla.org or call 001-310-832-0028.

*U.S. Dept of Energy Report INL/EXT-06-01355

Where do the oil contaminants come from?

By examining the substances in the oil you can find out where in the engine you have a problem.

- Boron (B) — Anti-freeze, fuel with biocides
- Sodium (Na) — Seawater, dust, anti-freeze
- Silicon (Si) — Sand, dust, dirt, glycol-additives
- Barium (Ba) — Oil additives, diesel additives
- Aluminium (Al) — Pistons, bearings, bushings, cylinder liners, dirt, dust
- Chromium (Cr) — Piston rings, cylinder liners, valve lifters, camshaft, anti-freeze
- Copper (Cu) — Bearings, bushings, cooling tubes, copper paste
- Iron (Fe) — Miscellaneous machine parts
- Lead (Pb) — Bearings
- Tin (Sn) — Tin-covered pistons, bearings
- Molybdenum (Mo) — Cylinder liners, piston rings.
- Nickel (Ni) — Camshaft, rods
- Titanium (Ti) — Rubber gaskets
- Silver (Ag) — Bearings (needle bearings)

Oil flow and temp

The filter unit and the evaporating unit are built to work as one unit together. To get correct and safe function with the right flow, the oil has to pass through the filter unit before the evaporating unit. The process is driven entirely by the engine's oil pressure and normal electrical system.

What about Additives?

The oil analysis reveals the amount of additives in the oil sample. **A decline of 20% is generally accepted**. The following substances are normally included in oil additives:

- Barium (Ba)
- Boron (B)
- Calcium (Ca)
- Magnesium (Mg)
- Phosphorous (P)
- Zinc (Zn)

Additives enhance specific properties of the oil and can be further categorized into sub-groups, depending on their respective functions:

- Anti-oxidants
- Rust prohibitors
- Dispergents/Detergents
- Anti-wear additives
- EP-additives (Extreme Pressure)
- Anti-foam additives

- VI improvers (Viscosity index)
- Pour-point depressants
- Flow improvers

How to read an oil analysis

Viscosity by 40 ^{o}C and 100 ^{o}C
Unit: mm2/s
Limit: A variation of +/- 15% is normally accepted.

Viscosity decrease
The oil has been diluted by fuel, the oil viscosity helpers have been broken down or the oil has been topped up with oil of lower viscosity.

Viscosity increase
Large amounts of soot or other contaminations, oxidation products, water that has caused emulsion or the oil has been topped up with oil of higher viscosity.

Oil Condition Index (OC)
Unit: Graded 0-40
Gives an indication of how contaminated the oil is. Values of 8-11 are typical for new oils. Up to 28 is acceptable for used oil. Higher values can indicate problems with the status of the oil.

Soot
Unit: Weight%
Level of soot in the oil - most engine manufacturers accept values of up to 2.5%.

TBN/TAN
Unit: mg KOH/g
Total Base Number/Total Acid Number -An acid oil can together with water be very aggressive and cause corrosion. **Most engine manufacturers accept a reduction of TBN by 50%**.

Water
Unit: % or ppm
Level of water in the oil
Water in oil should be avoided. Water starts the oxidation process and the oil breaks down. More than 0.2% water (2000 ppm) should not be accepted.

Fuel
Unit: Normal/Caution/Serious
Degree of fuel dilution in the oil.

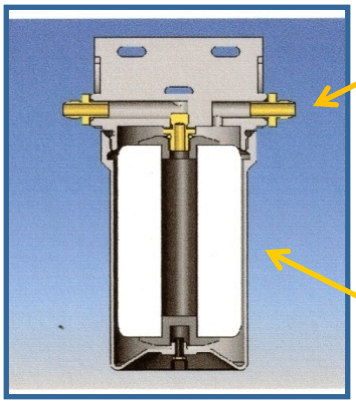
Glycol
Unit: Normal/Caution/Serious - degree of glycol dilution in the oil.

Flash Open
Unit: Degrees Celsius
Shows if the oils flammability is higher or lower than the stated temperature:
Limits: >195=normal, 195-180=caution, <180=serious

Dispersancy
Unit: Good/Poor. The ability of the oil to keep (soot) particles floating so that they can be filtered out when the oil passes the oil-filter.

MARINE OIL TECHNOLOGY

Bypass Filtration System
for Engine & Hydraulic Oil



Oil contaminated by solid particles and liquids enters the **MOT Bypass Filtration system** at a measured flow rate.

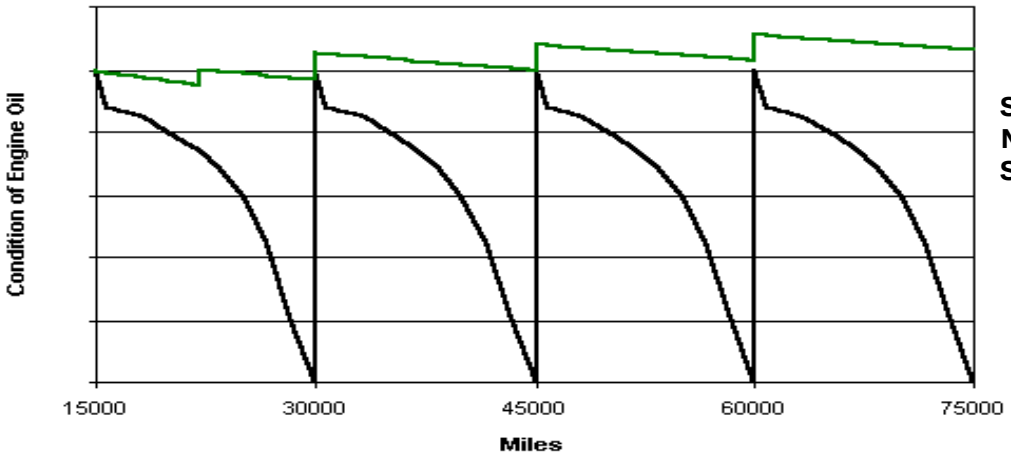
85% of engine wear is caused by contaminated oil in the range of 5-15 microns.

The **MOT 5-Stage Cotton Filter element** effectively collects solid particles down to **1 micron.**

Oil then enters the **PATENTED Evaporation Chamber** removing the liquid contaminants such as **Water, Fuel, Glycol, Corrosives, Acids and the** CLEAN OIL returns by gravity to the engine.

Oil Contamination

Without MOT System **With MOT System**



SAE Technical No. 831317 Sec: pg 4,6,7

Green line with MOT system maintains Oil Quality and NO OIL Changes Needed.

MARINE OIL TECHNOLOGY, INC. 5010 Loma Vista Avenue Los Angeles, CA 90058

MARINE OIL TECHNOLOGY

Bypass Filtration System
for Engine & Hydraulic oil

CLEANS OIL - SAVES OIL - SAVES FUEL

- 89% reduction of oil purchases and waste stream disposal
- Port of Los Angeles terminal operator has not changed oil in their UTR's and Side Handlers in 3.5 years
- Port of Long Beach terminal operator has tested for 3 years resulting in no oil changes on engines, transmissions and hydraulic systems
- Port of Los Angeles commercial sport fishing vessel has not changed oil in 3 .6 years on twin 1,500 hp diesels.
- Port of Long Beach commercial satellite company has not changed the hydraulic systems oil in 4 years on their launch vessel
- Reduces maintenance service, down time and costs
- Pay-Back period of 9 months or less

Oil Never Wears Out – *It Just Gets Dirty* – MOT *CLEANS OIL*

Fairleigh Enterprises Ltd., P.O. Box 1256, Shortland St., Auckland, 1140
Phone : 09-521-0930 Mobile : 0274-950-265 Email : julian@fairleighent.co.nz