



## Diagnostic Tools for Diesel Engines and Industrial Equipment



**DIAGNOSTIC TOOLS**

Donaldson<sup>®</sup>

## Oil Analysis Kits



Donaldson Endurance™ Oil Analysis Kit.

### Extending Oil Drain Intervals?

Today's vehicle and engine maintenance personnel know that regular monitoring of engine oil is key to reducing operating costs. Combine our Donaldson Endurance™ oil analysis, the use of premium oil and Donaldson Endurance™ premium filtration products and you'll discover how you can safely extend drain intervals and prolong your engine and equipment life.

Our two Donaldson Endurance kits use the soot testing method recommended by engine manufacturer's (i.e., Detroit Diesel & Mack) to monitor extended oil drain intervals.

The only accurate and cost effective method for measuring soot is with Light Extinction Measurement or LEM.

### Looking for basic monitoring on engines and industrial equipment?

Our basic engine oil test kit, X007374 reports on wear metals and additives (including viscosity, water percentage, fuel percentages, soot by infrared and glycol).



Basic Engine Oil Analysis Kit

The basic hydraulic test kit is typically used on industrial and plant equipment. This kit provides TAN (Total Acid Number), water in ppm and reports ISO particle count. Order Kit No. X007377.



Basic Hydraulic Analysis Kit

### Sample Processing/Reporting

Once the oil sample reaches the lab, we will process it within 24 hours. You will be notified by phone/fax if critical conditions are present.

Note: You should send your sample(s) *as soon as possible* after they are taken. The oil samples do not "break down," but any long delay between sampling and analysis can be crucial if a unit is failing.

### Recommended Kits for Fleet & Off Road Vehicles & Equipment

- 1- OEM Drain X007374
- 2- Extended Drain EOA7375
- 3- Drain Development EOA7376

	1	2	3
Metals, ppm by wt	▲	▲	▲
Viscosity, cSt.	▲	▲	▲
Water %	▲	▲	▲
Fuel % by Infrared	▲		
Fuel % by GC		▲	▲
Soot by Infrared	▲		
Soot by LEM		▲	▲
Glycol (Coolant)	▲	▲	▲
TBN			▲

### Recommended Sampling Intervals

On-Road Engines	
Diesel	10,000 miles / oil change
Gasoline	3,000 miles / oil change
LPG	3,000 miles / oil change
Non-Engines	20,000 miles / 500 hours
Off-Road Engines	
Diesel	250 hours / oil change
Gasoline	150 hours / oil change
LPG	150 hours / oil change
Non-Engines	500 hours / monthly

### Features of the Report:

- Up to 6 sets of test results (current and 5 previous) displayed
- Spectrochemical and Physical results underlined where applicable
- Full headings for all results
- Text explanations are listed on the back



## Recommended Kits for Industrial & Plant Equipment

- 1- Basic X007374
- 2- Correct Drain EOA7376
- 3- Correct Drain & ISO X007377

	1	2	3
Metals, ppm by wt	◆	◆	◆
Viscosity, cSt.	◆	◆	◆
Water %	◆	◆	
TBN (Total Base #)		◆	
TAN (Total Acid #)			◆
Water, ppm			◆
ISO Particle Count			◆

## Recommended Sampling Intervals

Marine Engines	
Main	250 hours / monthly
Support	150 hours / oil change
Non-Engines	500 hours / monthly
Industrial / Stationary	
Diesel Engines	500 hours / monthly
Nat Gas Engines	500 hours / monthly
Gas Turbines	250 hours / monthly
Compressors	250 hours / monthly
Steam Turbines	250 hours / monthly
Geared Drives	500 hours / monthly
Bearings	500 hours / monthly
Hydraulics	500 hours / monthly

## Sampling Accessories

These accessories can simplify your oil analysis during the normal maintenance routines.

- plastic tubing (P176433 - sold in 100 ft rolls)



Sampling Pump & Plastic Tubing (sold separately)

- sampling pump (P176431)
- quick sampling valve (P176432)



Quick Sampling Valve

## Two Coolant Test Kits Available

Engine manufacturers recommend testing your coolant system every time you bring your vehicle or equipment in for regular maintenance in order to maintain a cooling system with the least amount of risk to your engine.

With Donaldson test kits, you can test for freeze protection as well as the concentration of your supplemental coolant additive.

- **Antifreeze test for ethylene & propylene glycol levels.** Cooling system should contain a 50-50 mix of water and glycol. Glycol level should not exceed 60%. Never use pure antifreeze as it provides less protection than a water/antifreeze mix.
- **Cooling system test for supplemental coolant additive level.** Test for proper concentration of SCA to prevent rust, scaling, acidity, pitted cylinder liners, foam, pitted water pump impellers and silicate drop out.

Donaldson offers two test systems for testing coolant concentrations, as shown.

(Note: Do not use Donaldson test kits if you are using Nalcool coolant products.)

### 1-Minute, 3-Way Test Kit for Systems Using DCA4 and SCA

Our convenient 3-way test kit

features easy-to-use and easy-to-read test strips, along with a color comparison



chart for determining maintenance recommendations.

Tests Molybdate type coolant additive (DCA4); Nitrite type coolant additive (SCA); and Ethylene/propylene glycol, which indicates freeze point. Order Part No. X007103.

### Precise Testing for Systems Using SCA Additive

Our vial/droplet test kit, which

involves mixing coolant sample droplets with 10 mil of water, provides a very precise reading



of SCA (not DCA4) chemical concentrations. Order Part No. X006134.

## Handy Diagnostic Tool Provides Clear View of Cooling System

COOLANTEYE®, a handy diagnostic device exclusively from Donaldson, provides a window into your cooling system without having to take the system down! It lets you view 100% of the flow as it passes through your cooling system, analyze system wear trends, and catch the conditions that can cause cavitation and aeration before they cause major damage.



The clear, high-strength polymeric resin material makes it amazingly simple and accurate to view air bubbles, low flow, metal particles, rust, scale, gelling, sand, dirt, and debris in your system. The built-in drain valve also serves as a flushing "T" for coolant sampling and removal of debris. COOLANTEYE® installs easily within the heater hose at up to a 30° angle. Order Part No. P171424.



**For unmatched engine protection, use  
Donaldson Endurance™ air and lube filters.**



**Donaldson**

Donaldson Company, Inc.  
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**United States & Canada**  
Tel: 800-374-1374  
Fax: 612-887-3716  
[www.donaldson-filters.com](http://www.donaldson-filters.com)

**Mexico**  
Tel: 52-53-627320  
Fax: 52-53-978654

**Belgium**  
Tel: 32-16-38-3811  
Fax: 32-16-40-0077

**Latin America  
& Caribbean**  
Tel: 954-236-2404  
Fax: 954-236-2403