

INFRACAL SOOT METER

...FOR ON-SITE OR LABORATORY MEASUREMENT OF SOOT LEVELS IN DIESEL ENGINE OILS



RAPID OIL CONDITION ASSESSMENT

The InfraCal Soot Meter complies with ASTM 7686-11 method for measuring soot in in-service lubricants. It provides a fast and accurate test method that can be done on-site or in the laboratory in under 30 seconds. More stringent emission requirements as well as cost savings with extended drain times make it more important than ever to routinely check soot levels. The amount of soot is an indicator as to the oil quality and potential engine problems.

Infrared spectroscopy is a well-established laboratory method for testing used lubricants. The InfraCal Soot Meter measures the amount of suspended carbon (soot) in diesel engine lubricating oils by infrared absorption at a fixed wavelength. The table below shows a comparison to FTIR and TGA (thermogravimetric analysis). Both FTIR and TGA methods require considerable operator training and are not suitable on-site field use.

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INFRACAL SOOT METER FEATURES

- ◆ Factory calibrated for ease of use
- ◆ Direct Reading - one-step measurement
- ◆ Measure levels to 15% without sample dilution
- ◆ Rapid Analysis - less than 30 seconds
- ◆ Compact, portable and rugged
- ◆ ASTM approved test method



IDEAL FOR:

- ◆ **OIL TESTING LABS** - results comparable to TGA or FT-IR with less time and expense
- ◆ **ENGINE TEST LABS** - obtain on-the-spot engine testing assessment
- ◆ **FLEET MAINTENANCE SHOPS** - test engine oil to determine exactly when to schedule oil changes
- ◆ **CONSTRUCTION OR MINING SITES** - check on-site to reduce equipment downtime
- ◆ **ON-BOARD SHIP** - no need to return to port to monitor oil condition
- ◆ **BACK-UP DIESEL GENERATORS** - prevent clogged filters that could shut the generator down

Sample ID	Field Test Samples				Lab Engine Test Samples			
	FT-IR	Soot, % mass			Engine Hours	Soot, % mass		
	TGA	Soot Meter 1	Soot Meter 2	TGA		Soot Meter 1	Soot Meter 2	
A1	1.46		1.4	1.4	Mack T-8			
B1	1.59		1.6	1.6	Hrs: 0	0.13	0.1	0.0
B2	1.82		1.8	1.9	50	1.76	1.7	1.7
B3	1.94		1.9	2.0	100	3.13	3.2	3.1
B4	2.56		2.5	2.5	150	4.48	4.5	4.4
A2	2.74	2.65	2.6	2.6	175	5.16	5.0	5.0
B5	2.68		2.7	2.7	200	5.80	5.8	5.8
B7	2.82	2.90	2.6	2.7	DDC Series 60			
B9		3.21	3.2	3.2	Hrs. 0	0.09	0.0	0.0
B10		3.53	3.3	3.1	24	0.83	0.8	0.8
A3		3.54	3.5	3.6	48	1.40	1.4	1.4
A4		4.05	4.0	4.0	72	1.98	1.9	1.9
A5		4.40	4.3	4.4	96	2.52	2.5	2.5
					120	3.05	3.0	2.9
					144	3.58	3.5	3.5
					168	4.10	4.0	4.1
					192	4.57	4.5	4.6
					216	5.03	4.8	4.9
					240	5.33	5.0	5.0