



## OIL REPORT

LAB NUMBER: F39139

UNIT ID: 07 34 PILOT

REPORT DATE: 1/29/2013

CLIENT ID: 61174

CODE: 20/75

PAYMENT: CC: Visa

**UNIT**

MAKE/MODEL: Yanmar 6LYA-STP  
FUEL TYPE: Diesel  
ADDITIONAL INFO:

OIL TYPE & GRADE: Shell Rotella T 15W/40  
OIL USE INTERVAL: Hours

**CLIENT**

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**COMMENTS**

DAVID: The potassium and sodium in this sample show the presence of coolant or cooling water in the oil. As a result of the contamination, you can see that wear metals are elevated compared to universal averages, which show typical wear for this type of Yanmar engine after about 100 hours on the oil. We're not sure how long this oil was run, so it's hard to say how "bad" metals are compared to averages. Aluminum shows piston wear, iron is from steel parts, and lead is from bearings. Look into the possible coolant/cooling water issue and use short oil runs to monitor.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil		UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
	MI/HR on Unit	800							
	Sample Date	01/16/13							
	Make Up Oil Added								
	ALUMINUM	32							3
	CHROMIUM	3							1
	IRON	82							28
	COPPER	20							11
	LEAD	5							2
	TIN	0							0
	MOLYBDENUM	7							6
	NICKEL	1							0
	MANGANESE	1							1
	SILVER	0							0
	TITANIUM	0							0
	POTASSIUM	25							3
	BORON	27							31
	SILICON	4							5
	SODIUM	722							4
	CALCIUM	2478							2511
	MAGNESIUM	95							95
	PHOSPHORUS	972							1041
	ZINC	1102							1152
	BARIUM	0							0

Values  
Should Be\*

PROPERTIES	SUS Viscosity @ 210°F	70.6	68-79					
	cSt Viscosity @ 100°C	13.11	12.4-15.5					
	Flashpoint in °F	430	>410					
	Fuel %	<0.5	<3.0					
	Antifreeze %	1.44	0.0					
	Water %	0.0	0.0					
	Insolubles %	0.4	<0.6					
	TBN							
	TAN							
	ISO Code							

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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