



OIL REPORT

LAB NUMBER: E20144 UNIT ID: C320 HULL 690
 REPORT DATE: 7/19/2010 CLIENT ID: 20662
 CODE: 20/284 PAYMENT: CC: Visa

UNIT	EQUIP. MAKE/MODEL: Yanmar 3GM30F	OIL TYPE & GRADE: Mobil Delvac 1300 15W/40
	FUEL TYPE: Diesel	OIL USE INTERVAL: 118 Hours
	ADDITIONAL INFO:	

CLIENT	KARL MIELENHAUSEN	PHONE: (252) 638-1433
	2042 ROYAL PINES DR	FAX:
	NEW BERN, NC 28560	ALT PHONE:
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COMMENTS
 KARL: While wear metals read about the same as last time, the condition of the oil itself changed for the worse. 2.5% of this sample was fuel, which is into the problem range. We have found fuel from this Yanmar engine in the past, though not quite this much. The fuel is likely the cause of the lower viscosity, reading in the 30W range. We'll watch this closely next time and suggest keeping an eye on the oil level on your dipstick to see if it's rising. No other contamination was present, and the low silicon and insoluble readings show good air & oil filtration. Wear looks good.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	118	91	173	91	106	48	UNIVERSAL AVERAGES
	MI/HR on Unit	1,127	1,009	918	745	654	548	
	Sample Date	07/05/10	07/01/09	07/01/08	11/12/07	11/27/06	11/01/05	
	Make Up Oil Added	0 qts	0 qts	1 qt	0 qts	0 qts		
		UNIT / LOCATION AVERAGES						
ALUMINUM	3	5	3	6	6	7	4	5
CHROMIUM	2	2	2	3	2	2	2	3
IRON	12	21	16	29	21	30	19	28
COPPER	1	3	1	3	4	7	2	5
LEAD	2	3	2	3	7	4	2	4
TIN	0	1	0	1	0	1	1	1
MOLYBDENUM	50	86	51	80	60	199	76	41
NICKEL	0	0	0	0	0	0	0	0
MANGANESE	0	0	0	0	0	0	0	0
SILVER	0	0	0	0	0	0	0	0
TITANIUM	0	0	0	0	0	0	0	0
POTASSIUM	1	1	2	3	1	0	1	1
BORON	50	67	46	45	52	106	104	76
SILICON	4	5	4	6	6	5	5	10
SODIUM	7	3	3	2	2	2	3	6
CALCIUM	1301	2521	1554	3424	2621	3147	3078	2659
MAGNESIUM	838	412	857	270	464	12	33	232
PHOSPHORUS	954	1134	1005	1279	1224	1116	1224	1051
ZINC	1095	1362	1300	1505	1531	1335	1405	1242
BARIUM	0	0	0	0	0	0	0	0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	68.3	69-78	69.3	72.5	71.7	71.2	62.6
	cSt Viscosity @ 100°C	12.51	12.7-15.3	12.77	13.62	13.39	13.26	10.94
	Flashpoint in °F	390	>415	405	420	405	390	430
	Fuel %	2.5	<2.0	1.0	<0.5	1.0	1.5	<0.5
	Antifreeze %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Water %	0.0	<0.1	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.3	<0.8	0.3	0.5	0.4	0.4	0.5
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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