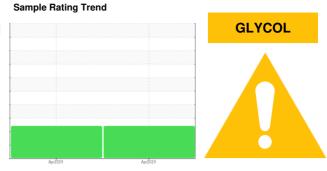


OIL ANALYSIS REPORT

THE QUEEN CITY YACHT CLUB CKS01046

Diesel Engine

SHELL ROTELLA T 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Test for glycol is positive. There is a light concentration of glycol present in the oil.

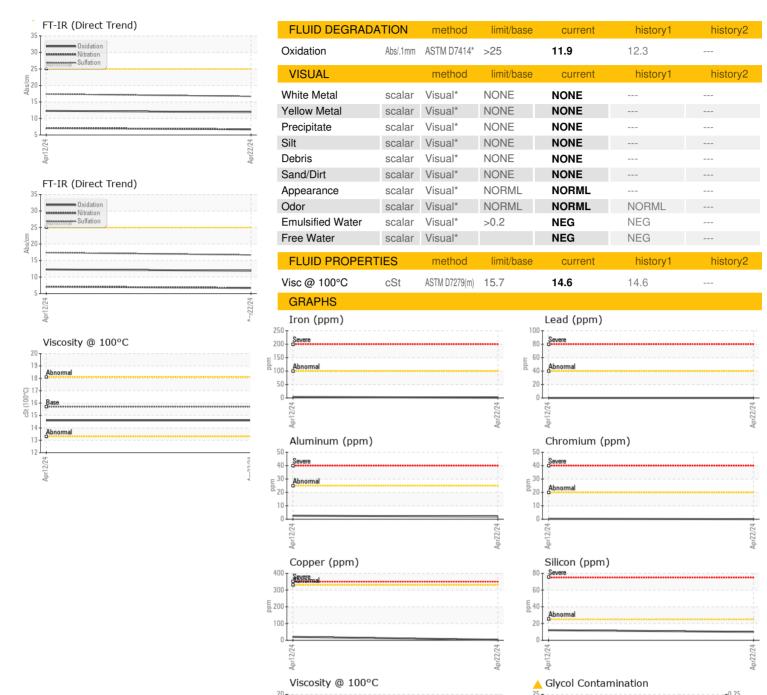
Fluid Condition

The condition of the oil is acceptable for the time in service. The oil is no longer serviceable due to the presence of contaminants.

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SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PP	PP	
Sample Date		Client Info		22 Apr 2024	12 Apr 2024	
Machine Age	hrs	Client Info		15473	5454	
Oil Age	hrs	Client Info		9	10	
Oil Changed		Client Info		N/A	N/A	
Sample Status				MARGINAL	ABNORMAL	
CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	1	4	
Chromium	ppm	ASTM D5185(m)	>20	0	<1	
Nickel	ppm	ASTM D5185(m)	>2	0	<1	
Titanium	ppm	ASTM D5185(m)	>2	0	0	
Silver	ppm	ASTM D5185(m)	>2	0	0	
Aluminum	ppm	ASTM D5185(m)	>25	2	3	
Lead	ppm	ASTM D5185(m)	>40	0	0	
Copper	ppm	ASTM D5185(m)	>330	3	20	
Tin	ppm	ASTM D5185(m)	>15	0	0	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	35	66	64	
Barium	ppm	ASTM D5185(m)	0	0	0	
Molybdenum	ppm	ASTM D5185(m)	0	83	87	
Manganese	ppm	ASTM D5185(m)	0	0	0	
Magnesium	ppm	ASTM D5185(m)	10	9	12	
Calcium	ppm	ASTM D5185(m)	2340	2061	2099	
Phosphorus	ppm	ASTM D5185(m)	1110	944	992	
Zinc	ppm	ASTM D5185(m)	1210	1073	1126	
Sulfur	ppm	ASTM D5185(m)	3890	2961	3079	
Lithium	ppm	ASTM D5185(m)	3030	<1	<1	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	10	12	
Sodium	ppm	ASTM D5185(m)		4	17	
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	
Glycol	%	ASTM D7922*		<u> </u>	△ 0.048	
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	0	
Nitration	Abs/cm	ASTM D7624*	>20	6.7	7.1	
Sulfation	Abs/.1mm	ASTM D7415*	>30	16.7	17.4	



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : PP

: 02630835

Unique Number : 5763967

Diagnosed Test Package : MOB 1 (Additional Tests: Visual)

To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

Received

Tested

Toromont CAT - Power Systems

288 Orenda Rd. Brampton, ON **CA L6T 1E9**

0.20

0.15 0.10 0.05 $L_{0.00}$

Contact: Sarah Abdulhameed sabdulhameed@toromont.com

> T: F:

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: 22 Apr 2024

: 23 Apr 2024

: 23 Apr 2024 - Kevin Marson