

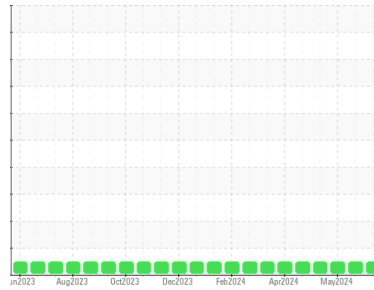


OIL ANALYSIS REPORT



Area
KDAC
 Machine Id
200300
 Component
Diesel Engine
 Fluid
TEST OIL RED 6 (40 LTR)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Test Oil Red 6)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0955700	WC0926281	WC0926296
Sample Date	Client Info		07 Jul 2024	12 Jun 2024	30 May 2024
Machine Age	kms	Client Info	366561	348155	338882
Oil Age	kms	Client Info	55880	37474	28201
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>120	30	25	20
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	2	1	<1
Titanium	ppm	ASTM D5185(m)	>2	<1	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Aluminum	ppm	ASTM D5185(m)	>20	8	7	6
Lead	ppm	ASTM D5185(m)	>40	<1	0	0
Copper	ppm	ASTM D5185(m)	>330	16	16	14
Tin	ppm	ASTM D5185(m)	>15	<1	0	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		24	36	51
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		48	51	48
Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Magnesium	ppm	ASTM D5185(m)		888	952	916
Calcium	ppm	ASTM D5185(m)		1288	1323	1298
Phosphorus	ppm	ASTM D5185(m)		623	727	725
Zinc	ppm	ASTM D5185(m)		874	909	853
Sulfur	ppm	ASTM D5185(m)		1836	1962	1864
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	5	4	4
Sodium	ppm	ASTM D5185(m)		2	6	2
Potassium	ppm	ASTM D5185(m)	>20	4	23	3

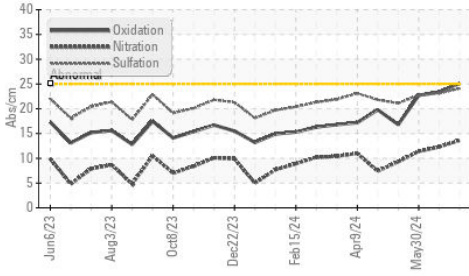
INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	0.8	0.6	0.5
Nitration	Abs/cm	ASTM D7624*	>20	13.6	12.3	11.4
Sulfation	Abs./1mm	ASTM D7415*	>30	24.1	23.1	22.7

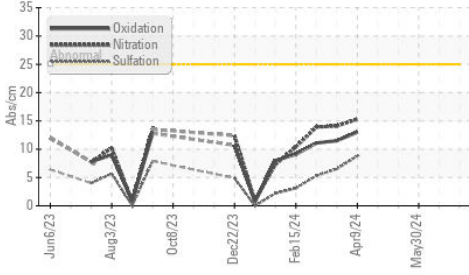


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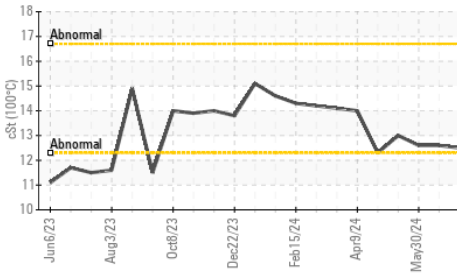
FT-IR (Direct Trend)



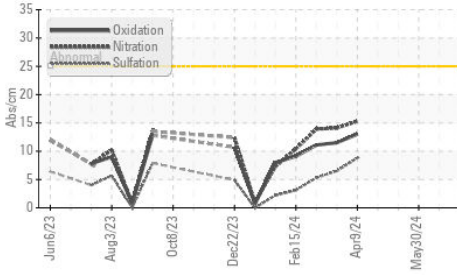
FT-IR (Differential)



Viscosity @ 100°C



FT-IR (Differential)



FLUID DEGRADATION method limit/base current history1 history2

Oxidation	Abs/.1mm	ASTM D7414*	>25	25.1	23.4	22.7
Base Number (BN)	mg KOH/g	ASTM D2896*		8.25	9.92	10.13

VISUAL method limit/base current history1 history2

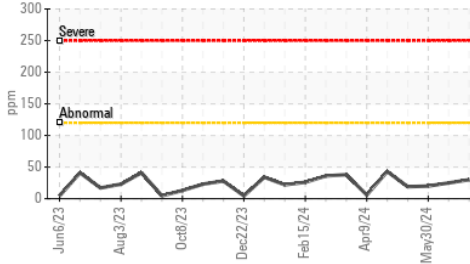
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES method limit/base current history1 history2

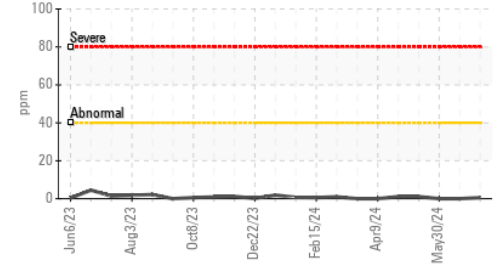
Visc @ 100°C	cSt	ASTM D7279(m)		12.5	12.6	12.6
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GRAPHS

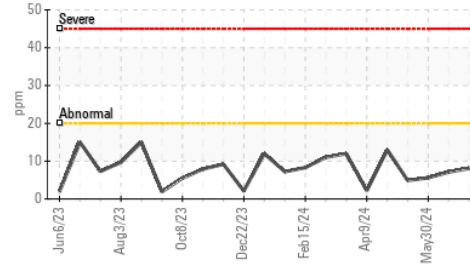
Iron (ppm)



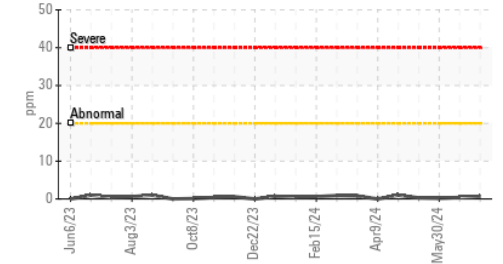
Lead (ppm)



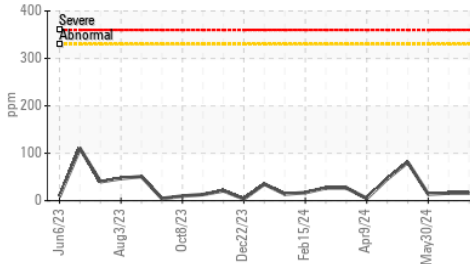
Aluminum (ppm)



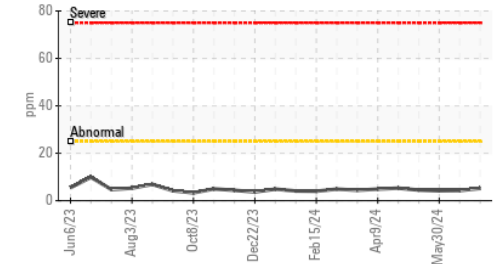
Chromium (ppm)



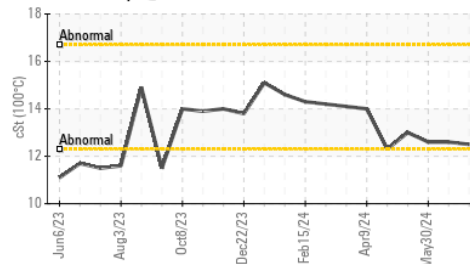
Copper (ppm)



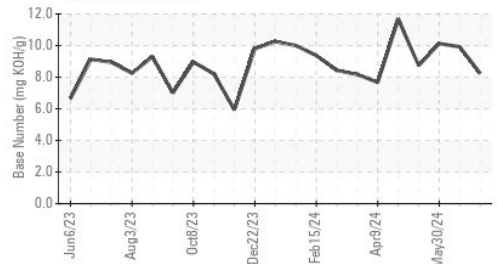
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0955700 **Received** : 08 Jul 2024
Lab Number : **02646039** **Tested** : 09 Jul 2024
Unique Number : 5811591 **Diagnosed** : 09 Jul 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: FT-IR(Diff))

WFR Technical Services
 5389 Riverside Drive
 Burlington, ON
 CA L7L 3Y1
 Contact: William Ridley
 wfr.technical.services@gmail.com

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.

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F: