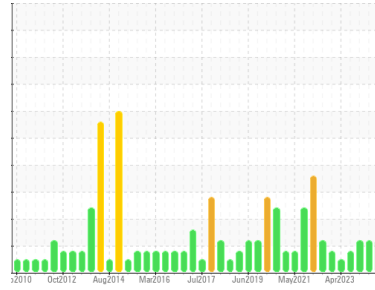




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area

System 72 - Essential Power Generation

Machine Id

Z-7201A Essential Power Diesel Engine Lube Oil

Component

Diesel Engine

Fluid

IRVING IDO UNIVERSAL SAE 15W40 (830 LTR)

DIAGNOSIS

Recommendation

We recommend that you change the oil at the next available stoppage or outage. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PP	PP	PP
Sample Date	Client Info		29 Mar 2024	06 Oct 2023	31 Aug 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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)	>100	5	4	4
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	2
Lead	ppm	ASTM D5185(m)	>40	<1	<1	1
Copper	ppm	ASTM D5185(m)	>330	7	7	6
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<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)		49	52	50
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		<1	2	2
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		16	15	15
Calcium	ppm	ASTM D5185(m)		2047	2078	2061
Phosphorus	ppm	ASTM D5185(m)		913	957	993
Zinc	ppm	ASTM D5185(m)	1300	1089	1115	1096
Sulfur	ppm	ASTM D5185(m)		2984	3065	3048
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

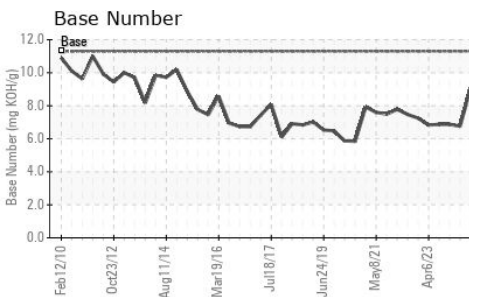
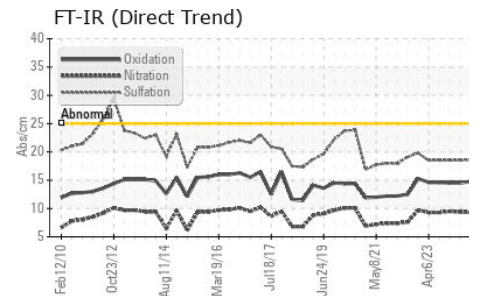
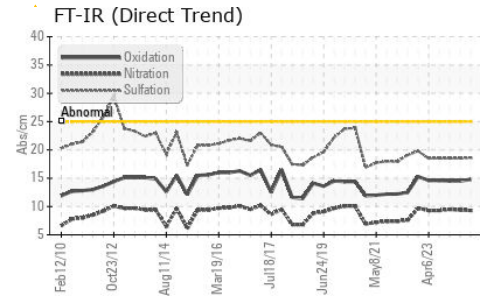
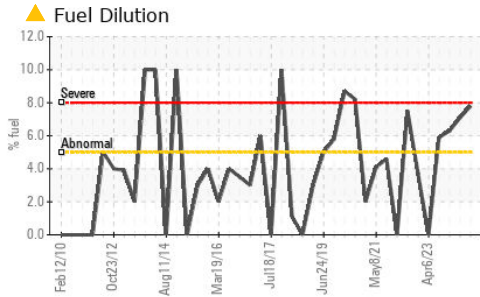
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<1	1	2
Sodium	ppm	ASTM D5185(m)		1	1	1
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Fuel	%	ASTM D7593*	>5	▲ 7.8	▲ 7.1	▲ 6.3

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.1	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.3	9.4	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.6	18.5	18.5



OIL ANALYSIS REPORT

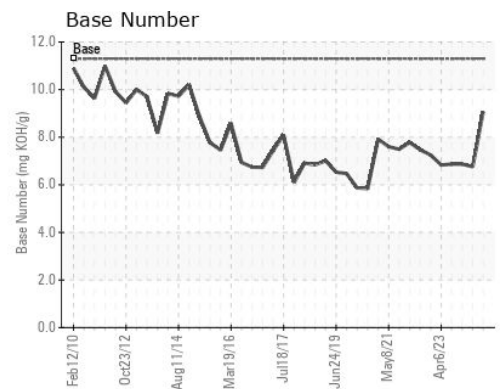
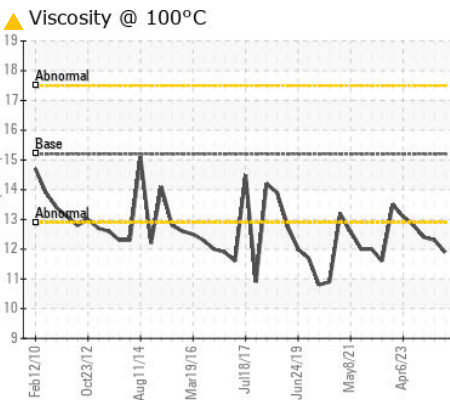
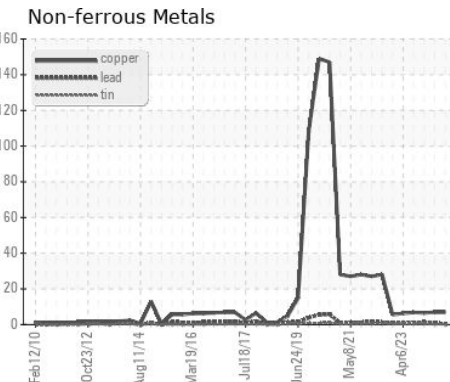
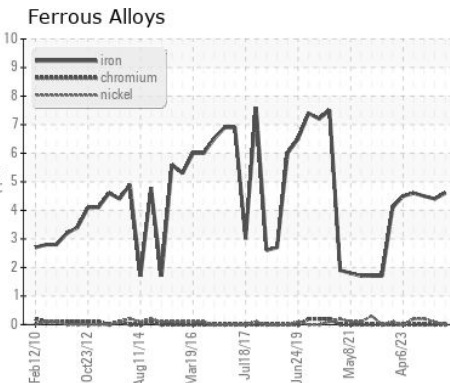


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	14.8	14.5	14.5
Base Number (BN)	mg KOH/g	ASTM D2896*	11.3	9.06	6.76	6.87

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)	15.2	▲ 11.9	▲ 12.3	▲ 12.4

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP
Lab Number : 02627778
Unique Number : 5760910
Test Package : MAR 2 (Additional Tests: PercentFuel)

HIBERNIA MGMT & DEVELOPMENT CO. LTD
 SUITE 1000,, 100 NEW GOWER STREET
 ST.JOHN'S, NL
 CA A1C 6K3

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.

Contact: Christopher Michelau
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