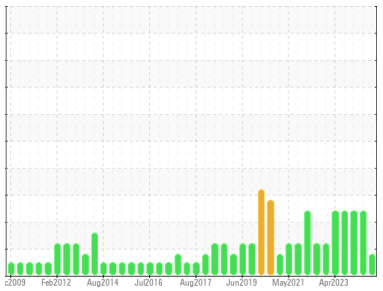
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
System 72 - Essential Power Generation
Machine Id
Z-7201D Essential Power Diesal Engine Lube Oil
Component
Diesel Engine
Fluid
IRVING IDO UNIVERSAL SAE 15W40 (830 LTR)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected 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		**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				**MARGINAL**	SEVERE	SEVERE

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	**1**	7	7
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	**2**	1	<1
Lead	ppm	ASTM D5185(m)	>40	**0**	2	2
Copper	ppm	ASTM D5185(m)	>330	**1**	10	9
Tin	ppm	ASTM D5185(m)	>15	**0**	<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

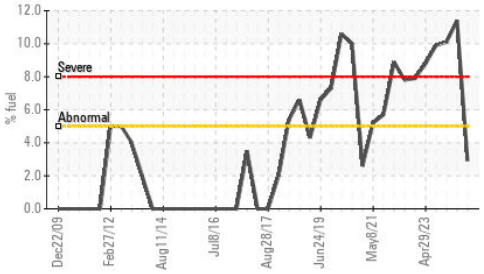
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**69**	42	42
Barium	ppm	ASTM D5185(m)		**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**1**	2	2
Manganese	ppm	ASTM D5185(m)		**0**	0	<1
Magnesium	ppm	ASTM D5185(m)		**18**	10	10
Calcium	ppm	ASTM D5185(m)		**2021**	1985	1976
Phosphorus	ppm	ASTM D5185(m)		**946**	884	944
Zinc	ppm	ASTM D5185(m)	1300	**1087**	1021	1037
Sulfur	ppm	ASTM D5185(m)		**3167**	2831	2895
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**4**	2	2
Sodium	ppm	ASTM D5185(m)		**<1**	2	2
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Fuel	%	ASTM D7593*	>5	▲ **2.9**	▲ 11.4	▲ 10.1

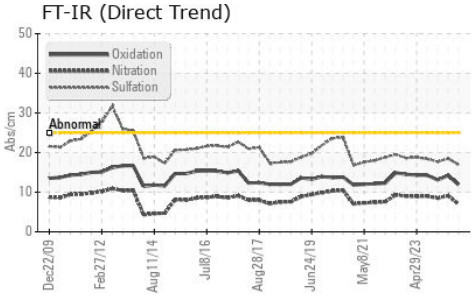
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0**	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**7.0**	9.1	8.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	**16.9**	18.5	17.7

OIL ANALYSIS REPORT

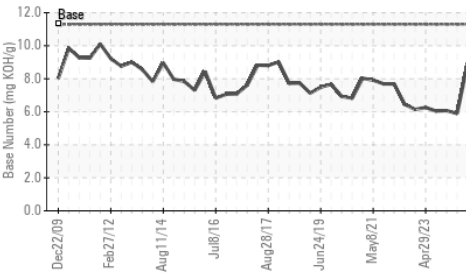
Fuel Dilution



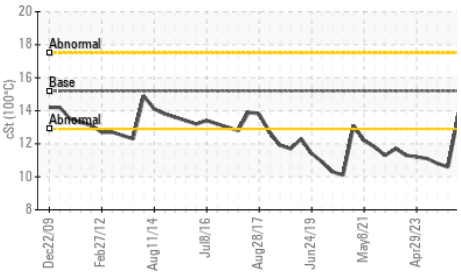
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



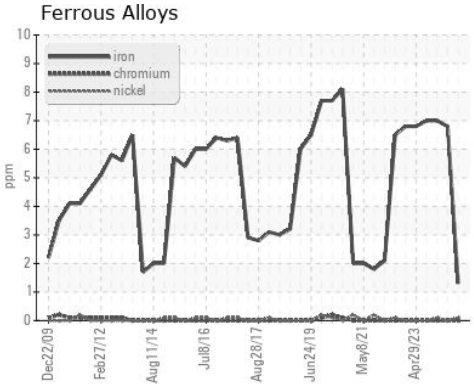
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**11.9**	14.2	13.1
Base Number (BN)	mg KOH/g	ASTM D2896*	11.3	**8.88**	5.89	6.07

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

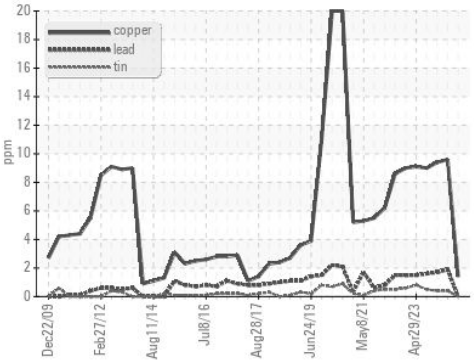
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.2	**13.8**	▲ 10.6	▲ 10.8

GRAPHS

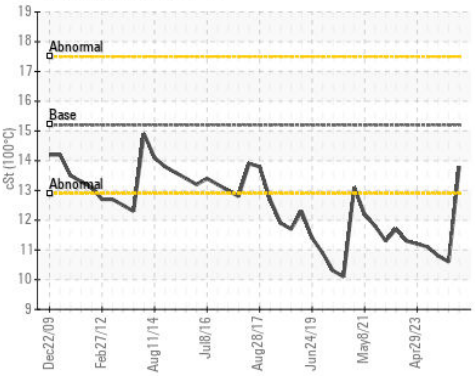
Ferrous Alloys



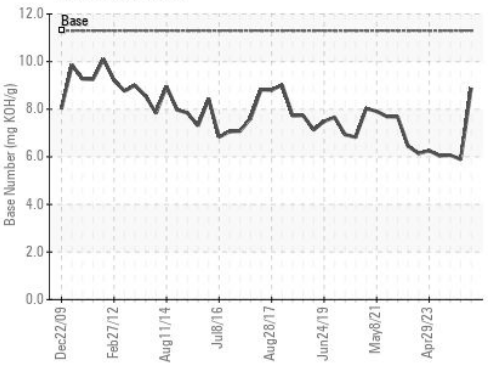
Non-ferrous Metals



Viscosity @ 100°C



Base Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP
Lab Number : 02627777
Unique Number : 5760909
Test Package : MAR 2 (Additional Tests: PercentFuel)

Received : 10 Apr 2024
Tested : 11 Apr 2024
Diagnosed : 11 Apr 2024 - Wes Davis

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.

HIBERNIA MGMT & DEVELOPMENT CO. LTD
SUITE 1000,, 100 NEW GOWER STREET
ST.JOHNS, NL
CA A1C 6K3
Contact: Christopher Michelau
christopher.j.michelau@exxonmobil.com
T:
F: (709)722-3766