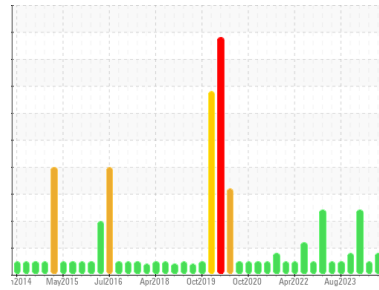




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

System 43 - Water Injection

Machine Id

Z-4305B Pump / Motor Lubricating Oil

Component

Pump

Fluid

IRVING HYDRAULIC OIL LP 32 (1950 LTR)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0936442	WC0783215	WC0873623
Sample Date	Client Info		24 Jun 2024	04 Apr 2024	13 Dec 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			ATTENTION	NORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>75	<1	0	<1
Chromium	ppm	ASTM D5185(m)	>5	0	0	0
Nickel	ppm	ASTM D5185(m)		<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>5	<1	0	<1
Lead	ppm	ASTM D5185(m)	>10	0	0	0
Copper	ppm	ASTM D5185(m)	>15	<1	<1	<1
Tin	ppm	ASTM D5185(m)		0	0	0
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

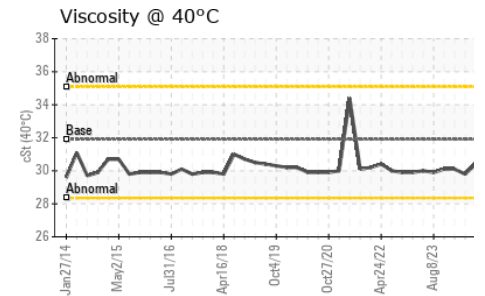
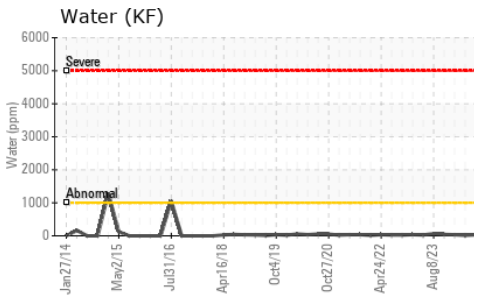
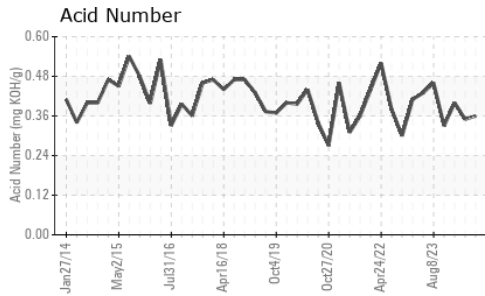
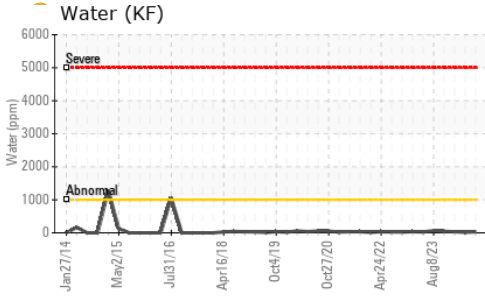
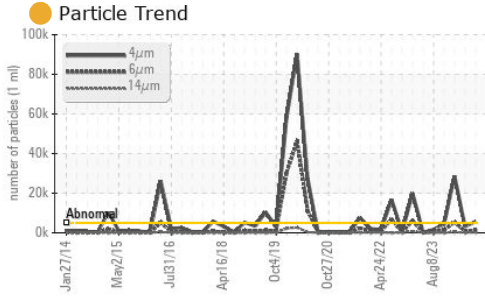
	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<1	0	0
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		<1	1	1
Calcium	ppm	ASTM D5185(m)		49	50	52
Phosphorus	ppm	ASTM D5185(m)		343	345	357
Zinc	ppm	ASTM D5185(m)	400	419	426	422
Sulfur	ppm	ASTM D5185(m)		2499	2540	2720
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	0	0	0
Sodium	ppm	ASTM D5185(m)		2	3	2
Potassium	ppm	ASTM D5185(m)	>20	1	1	3
Water	%	ASTM D6304*	>.1	0.003	0.001	0.003
ppm Water	ppm	ASTM D6304*	>1000	31	13	33

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	● 5711	3158	▲ 28561
Particles >6µm	ASTM D7647	>1300	● 1255	654	▲ 5505
Particles >14µm	ASTM D7647	>160	● 138	44	▲ 436
Particles >21µm	ASTM D7647	>40	● 55	16	▲ 154
Particles >38µm	ASTM D7647	>10	● 12	4	▲ 26
Particles >71µm	ASTM D7647	>3	● 4	1	5
Oil Cleanliness	ISO 4406 (c)	>19/17/14	● 20/17/14	19/17/13	▲ 22/20/16



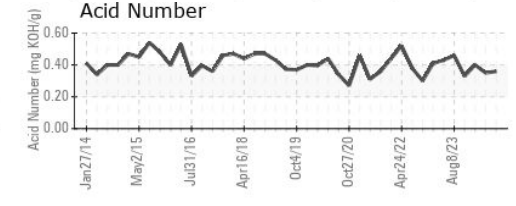
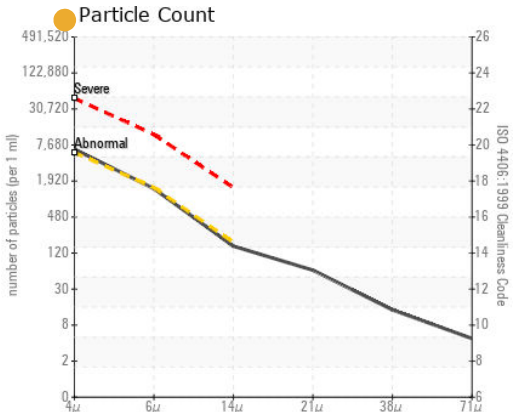
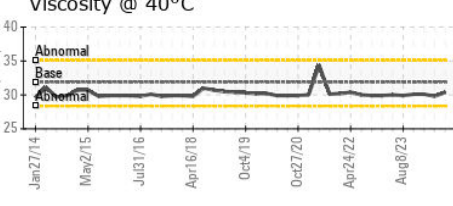
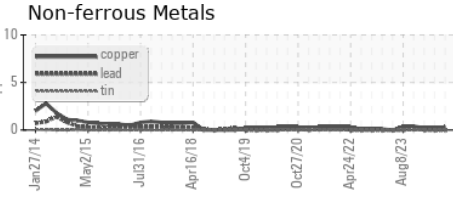
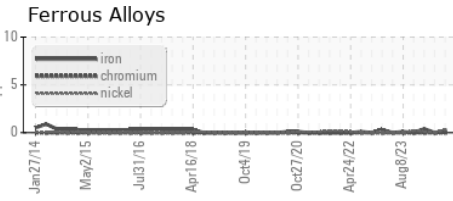
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.36	0.35	0.40

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>.1	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	30.4	29.8	30.1

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0936442
Lab Number : 02647857
Unique Number : 5813409
Test Package : MAR 2 (Additional Tests: KF)

HIBERNIA MGMT & DEVELOPMENT CO. LTD
 SUITE 1000,, 100 NEW GOWER STREET
 ST.JOHN'S, NL
 CA A1C 6K3
 Contact: Sam Nash
 samantha.m.nash@exxonmobil.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.

T:
 F: (709)722-3766