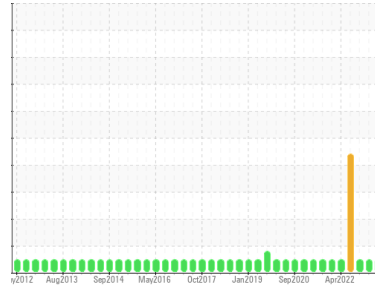




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
System 37 - Crude Loading [13884889]
 Machine Id
G-3701B Pump / Motor Lubricating Oil
 Component
Pump
 Fluid
IRVING HYDRAULIC OIL LP 32 (1190 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

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	PP	PP	PP
Sample Date	Client Info	08 Aug 2023	11 Mar 2023	29 Dec 2022
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		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185(m) >75	0	0	0
Chromium ppm	ASTM D5185(m) >5	0	0	0
Nickel ppm	ASTM D5185(m)	0	<1	<1
Titanium ppm	ASTM D5185(m)	0	0	0
Silver ppm	ASTM D5185(m)	<1	0	0
Aluminum ppm	ASTM D5185(m) >5	<1	0	0
Lead ppm	ASTM D5185(m) >10	0	<1	<1
Copper ppm	ASTM D5185(m) >15	<1	<1	0
Tin ppm	ASTM D5185(m)	0	0	<1
Antimony ppm	ASTM D5185(m)	0	0	<1
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	<1	<1
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)	52	55	54
Phosphorus ppm	ASTM D5185(m)	345	365	359
Zinc ppm	ASTM D5185(m) 400	393	400	399
Sulfur ppm	ASTM D5185(m)	972	1034	1026
Lithium ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

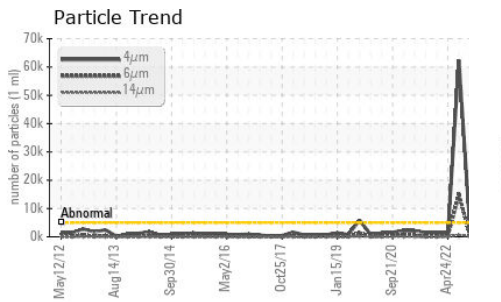
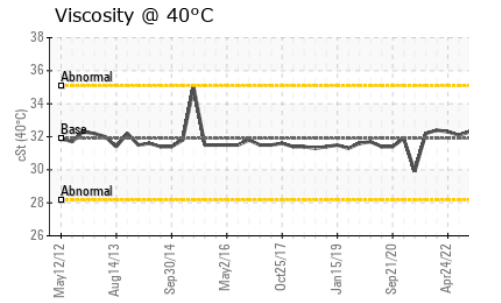
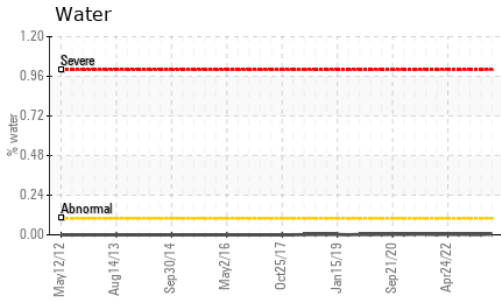
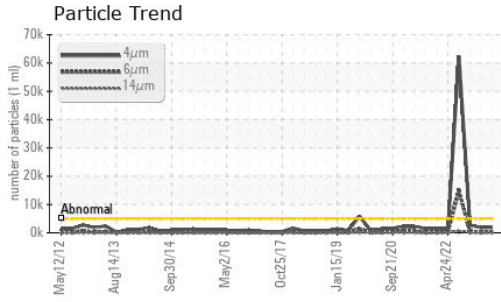
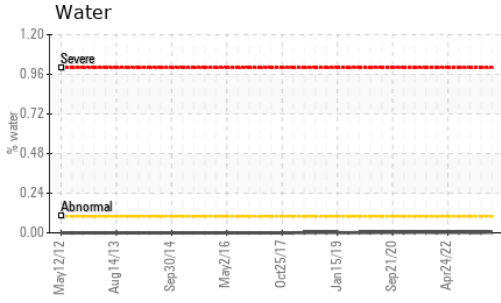
method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185(m) >20	0	0	0
Sodium ppm	ASTM D5185(m)	<1	<1	<1
Potassium ppm	ASTM D5185(m) >20	<1	0	0
Water %	ASTM D6304*	0.004	0.002	0.002
ppm Water	ASTM D6304* >.1	43.9	18.8	17.8

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	1914	1827	2708
Particles >6µm	ASTM D7647 >1300	309	185	523
Particles >14µm	ASTM D7647 >160	17	5	30
Particles >21µm	ASTM D7647 >40	5	1	7
Particles >38µm	ASTM D7647 >10	0	0	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	18/15/11	18/15/10	19/16/12



OIL ANALYSIS REPORT

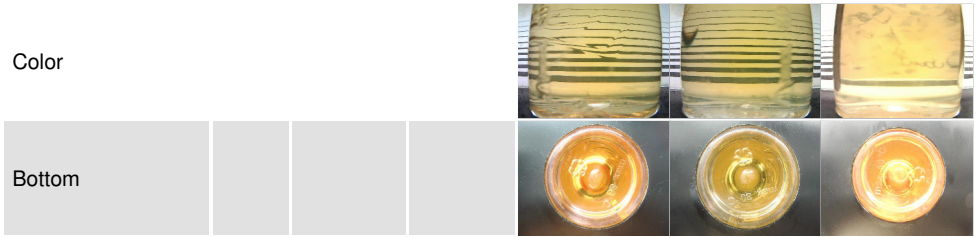


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		0.56	0.48	0.47

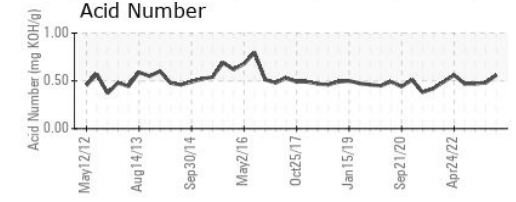
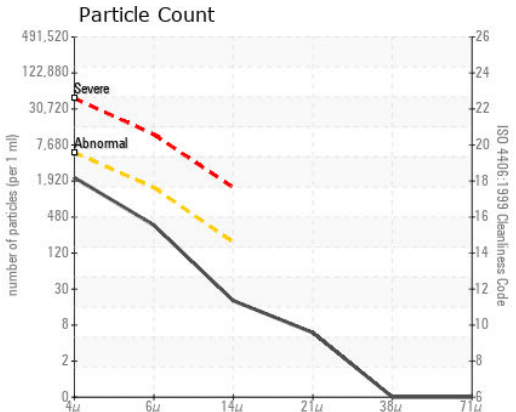
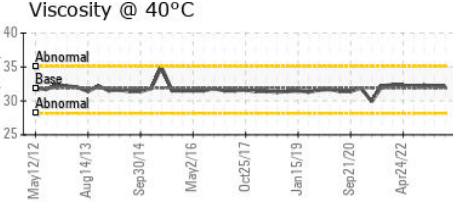
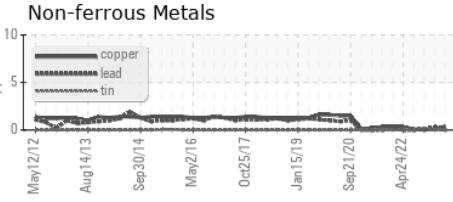
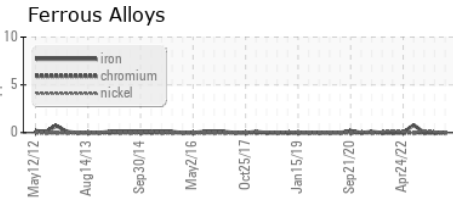
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*		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	32.1	32.2	32.3

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **HIBERNIA MGMT & DEVELOPMENT CO. LTD**
Sample No. : PP **Received** : 22 Aug 2023 **SUITE 1000,, 100 NEW GOWER STREET**
Lab Number : 02577512 **Diagnosed** : 23 Aug 2023 **ST. JOHNS, NL**
Unique Number : 5630572 **Diagnostician** : Wes Davis **CA A1C 6K3**
Test Package : MAR 2 (Additional Tests: KF, TAN Man) **Contact: Christopher Michelau**
 To discuss this sample report, contact Customer Service at 1-800-268-2131. **christopher.j.michelau@exxonmobil.com**
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. **T:**
 Validity of results and interpretation are based on the sample and information as supplied. **F: (709)722-3766**