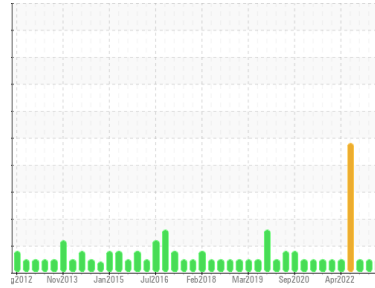




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**System 37 - Crude Loading [13884889]**  
 Machine Id  
**G-3701C 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	<b>PP</b>	PP	PP
Sample Date	Client Info	<b>08 Aug 2023</b>	11 Mar 2023	28 Dec 2022
Machine Age	hrs Client Info	<b>0</b>	0	0
Oil Age	hrs Client Info	<b>0</b>	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185(m)	>75	<b>&lt;1</b>	<1	<1
Chromium ppm ASTM D5185(m)	>5	<b>0</b>	0	0
Nickel ppm ASTM D5185(m)		<b>0</b>	0	0
Titanium ppm ASTM D5185(m)		<b>0</b>	0	0
Silver ppm ASTM D5185(m)		<b>&lt;1</b>	0	0
Aluminum ppm ASTM D5185(m)	>5	<b>0</b>	0	0
Lead ppm ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Copper ppm ASTM D5185(m)	>15	<b>2</b>	2	2
Tin ppm ASTM D5185(m)		<b>0</b>	0	<1
Antimony ppm ASTM D5185(m)		<b>0</b>	<1	<1
Vanadium ppm ASTM D5185(m)		<b>0</b>	0	0
Beryllium ppm ASTM D5185(m)		<b>0</b>	0	0
Cadmium ppm ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185(m)		<b>0</b>	<1	<1
Barium ppm ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Molybdenum ppm ASTM D5185(m)		<b>0</b>	0	0
Manganese ppm ASTM D5185(m)		<b>0</b>	0	0
Magnesium ppm ASTM D5185(m)		<b>3</b>	4	4
Calcium ppm ASTM D5185(m)		<b>22</b>	23	22
Phosphorus ppm ASTM D5185(m)		<b>296</b>	311	302
Zinc ppm ASTM D5185(m)	400	<b>309</b>	309	308
Sulfur ppm ASTM D5185(m)		<b>3663</b>	3793	3713
Lithium ppm ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

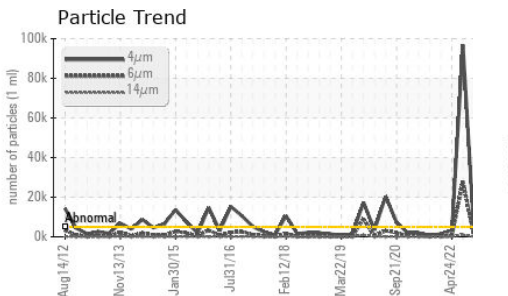
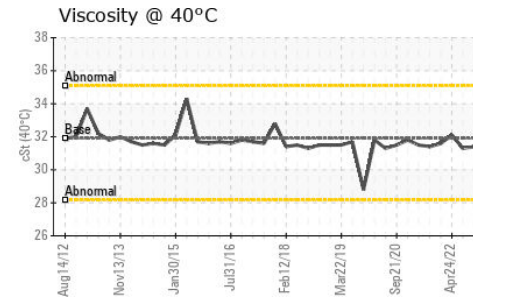
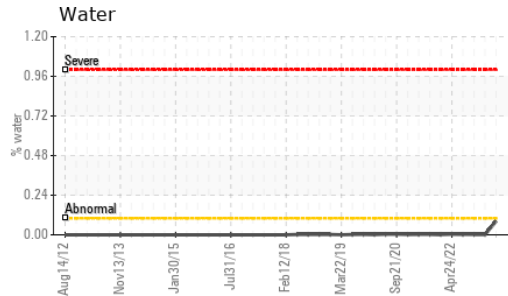
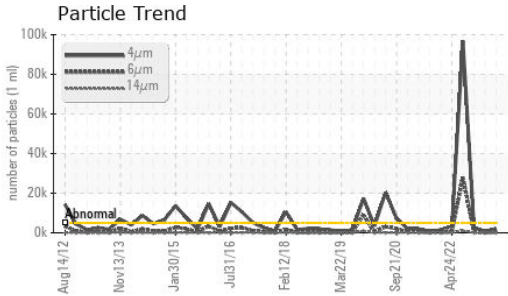
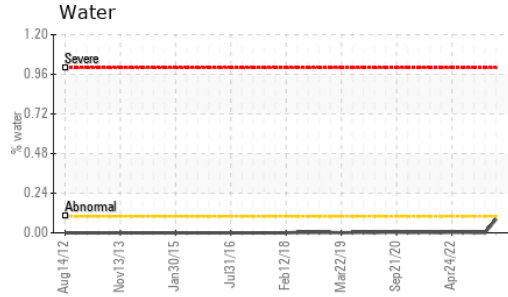
method	limit/base	current	history1	history2
Silicon ppm ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Sodium ppm ASTM D5185(m)		<b>&lt;1</b>	<1	1
Potassium ppm ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Water % ASTM D6304*		<b>0.083</b>	0.002	0.002
ppm Water ppm ASTM D6304*	>.1	<b>832.8</b>	19.3	18.4

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>5000	<b>1976</b>	760	2534
Particles >6µm ASTM D7647	>1300	<b>478</b>	148	565
Particles >14µm ASTM D7647	>160	<b>43</b>	8	28
Particles >21µm ASTM D7647	>40	<b>14</b>	1	6
Particles >38µm ASTM D7647	>10	<b>1</b>	0	0
Particles >71µm ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness ISO 4406 (c)	>19/17/14	<b>18/16/13</b>	17/14/10	19/16/12



# OIL ANALYSIS REPORT

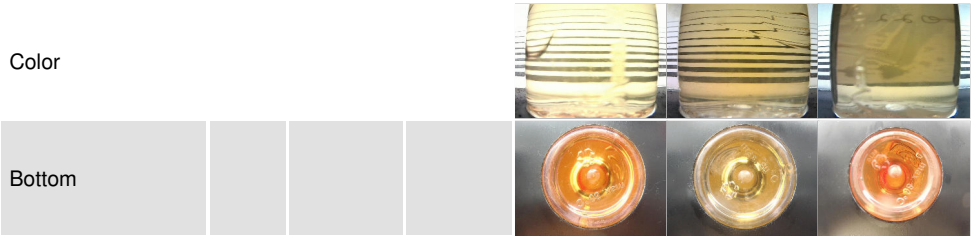


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		<b>0.44</b>	0.34	0.28

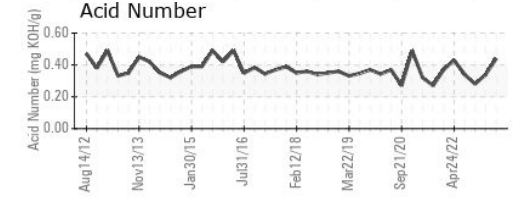
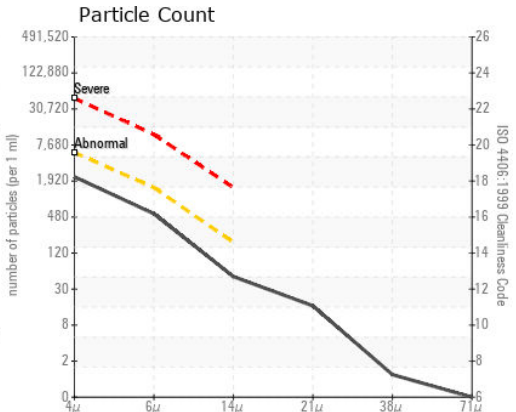
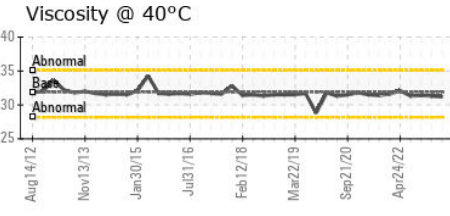
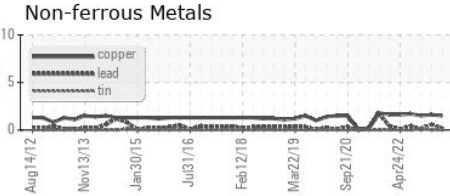
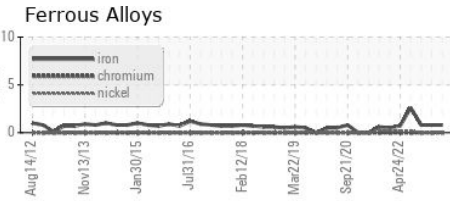
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	<b>31.2</b>	31.3	31.4

SAMPLE IMAGES		method	limit/base	current	history1	history2
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## 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** : 02577515 **Diagnosed** : 23 Aug 2023 **ST. JOHNS, NL**  
**Unique Number** : 5630575 **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.*  
*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.* **christopher.j.michelau@exxonmobil.com**  
**F: (709)722-3766**