



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

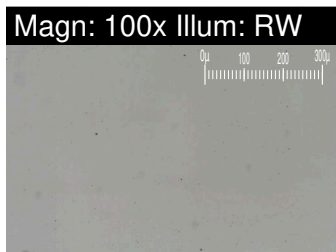
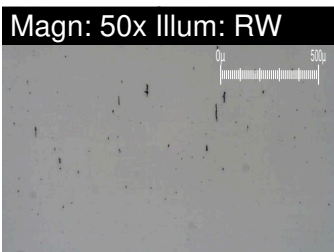
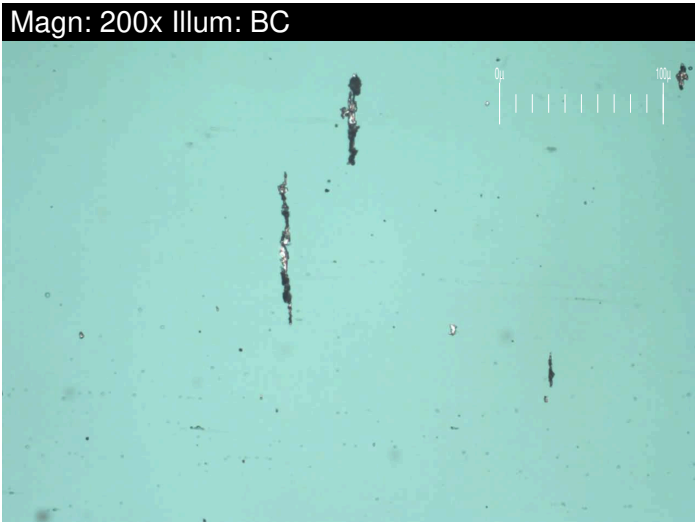
Area
System 33 - Gas Compression [01565753]
 Machine Id
Z-3301A Gas Compressor Seal Oil Train A (S/N D-3310B)
 Component
Compressor
 Fluid
IRVING D & E ISO 32 (9785 LTR)

RECOMMENDATION

Resample at the next service interval to monitor. NOTE: This is Irving D&E 32 not Hydraulic LP 32.

WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.



Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC	PP	PP
Sample Date		Client Info		15 Jun 2024	04 Apr 2024	24 Sep 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL
PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>50	2	1	2
Chromium	ppm	ASTM D5185(m)	>5	0	0	0
Nickel	ppm	ASTM D5185(m)		<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>15	0	0	<1
Lead	ppm	ASTM D5185(m)	>65	0	0	<1
Copper	ppm	ASTM D5185(m)	>65	<1	0	<1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Large Particles		DR-Ferr*		1.4	---	3.7
Small Particles		DR-Ferr*		2.0	---	2.7
Total Particles		DR-Ferr*	>---	3.4	---	6.4
Large Particles Percentage	%	DR-Ferr*		0	---	15.6
Severity Index		DR-Ferr*		1	---	4
Ferrous Rubbing	Scale 0-10	ASTM D7684*		2		2
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		1		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		1		
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				

CONTAMINANTS

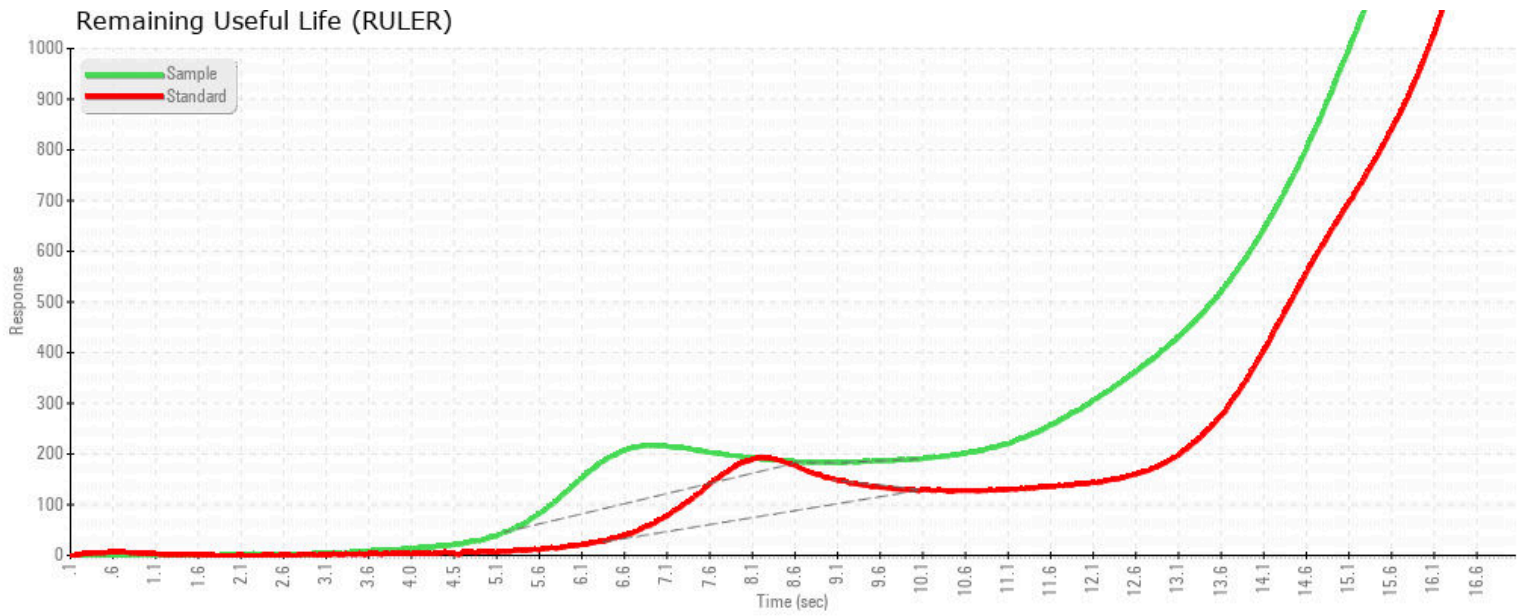
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>35	0	0	<1
Potassium	ppm	ASTM D5185(m)	>20	0	<1	0
Water	%	ASTM D6304*	>0.1	0.001	0.001	0.00
ppm Water	ppm	ASTM D6304*	>1000	14	4	0.00
Soot %	%	ASTM D7844*		0	---	0
Nitration	Abs/cm	ASTM D7624*		2.8	---	2.7
Sulfation	Abs/.1mm	ASTM D7415*		11.2	---	11.6
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	9	---	▲ 16
Particles >4µm		ASTM D7647		1677	---	437
Particles >6µm		ASTM D7647	>2500	411	---	118
Particles >14µm		ASTM D7647	>320	26	---	15
Particles >21µm		ASTM D7647	>80	4	---	4
Particles >38µm		ASTM D7647	>20	1	---	1
Particles >71µm		ASTM D7647	>4	0	---	0
Oil Cleanliness		ISO 4406 (c)	>-/18/15	18/16/12	---	16/14/11
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	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*	>0.1	NEG	NEG	NEG
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		1		2
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		1		

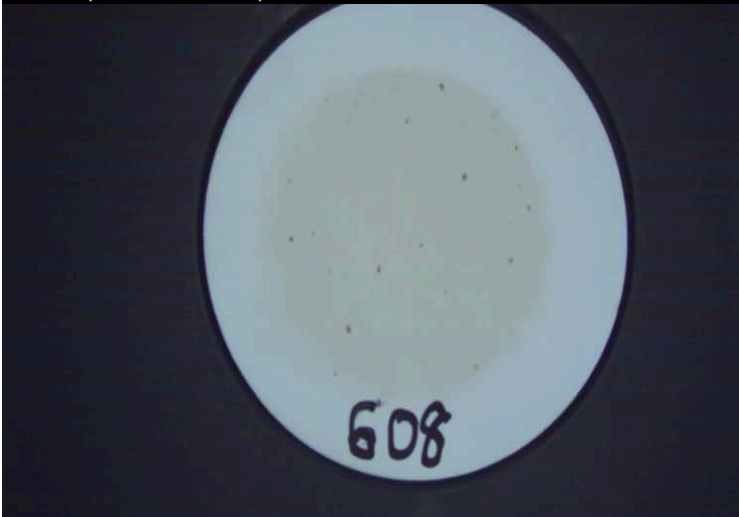
OIL CONDITION

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

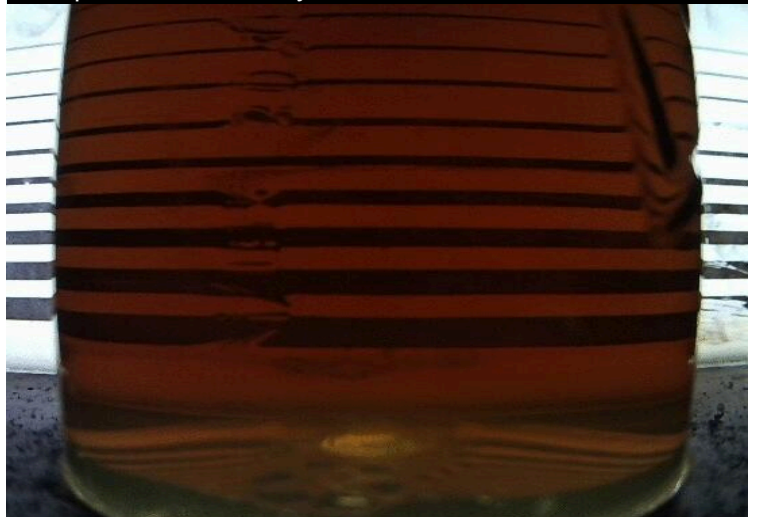
Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)	0.0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0.2	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	0.0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	0.3	0	<1	0
Calcium	ppm	ASTM D5185(m)	2.0	<1	<1	<1
Phosphorus	ppm	ASTM D5185(m)	4.6	1	1	2
Zinc	ppm	ASTM D5185(m)	7.4	1	1	2
Sulfur	ppm	ASTM D5185(m)		2499	2239	2074
Oxidation	Abs/.1mm	ASTM D7414*		3.4	---	3.5
Acid Number (AN)	mg KOH/g	ASTM D974*	0.10	0.03	0.06	0.07
Visc @ 40°C	cSt	ASTM D7279(m)	32.5	34.7	36.4	▲ 37.4
Visc @ 100°C	cSt	ASTM D7279(m)	5.4	5.8	---	6.2
Viscosity Index (VI)	Scale	ASTM D2270*	99	108	---	113
Anti-Oxidant 1	%	ASTM D6971*	<25	96	---	60
Anti-Oxidant 2	%	ASTM D6971*	<25	28	---	37
Lubricant Degradation	Scale 0-10	ASTM D7684*				



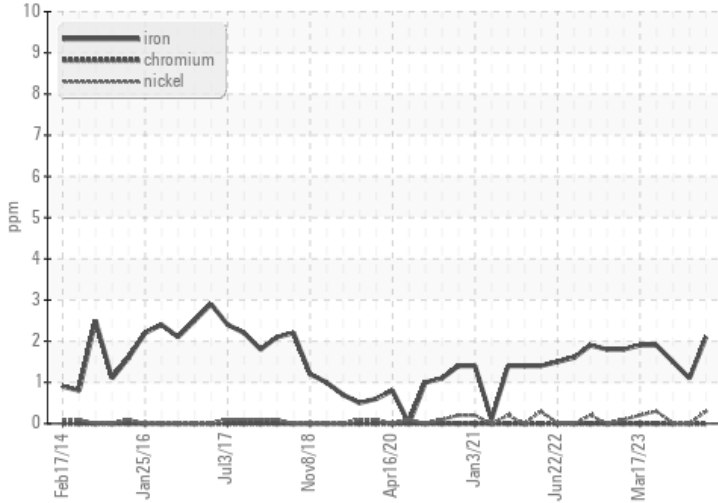
MPC (Varnish Test)



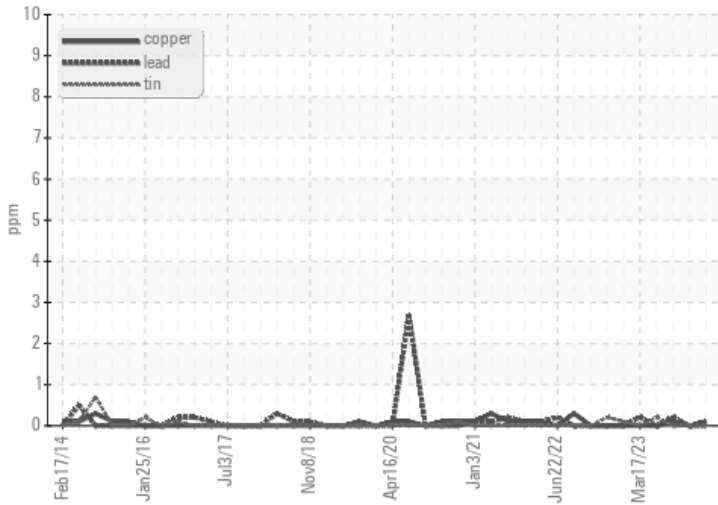
Sample Color & Clarity



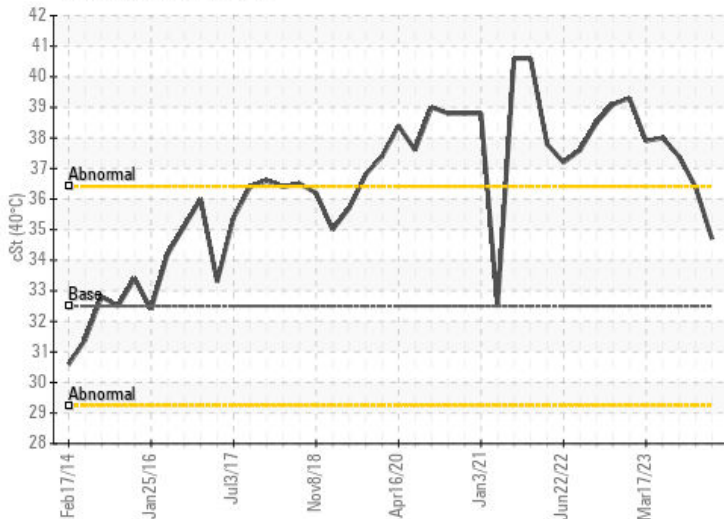
Ferrous Alloys



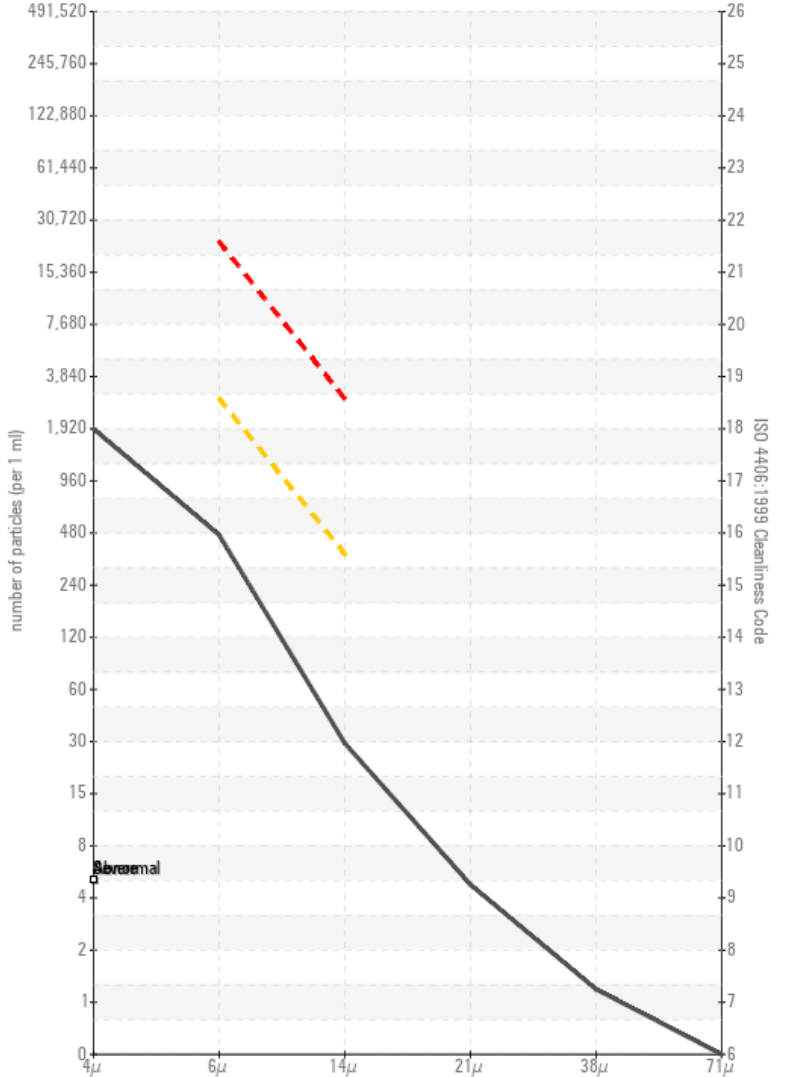
Non-ferrous Metals



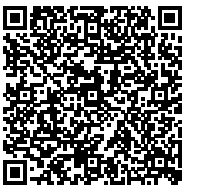
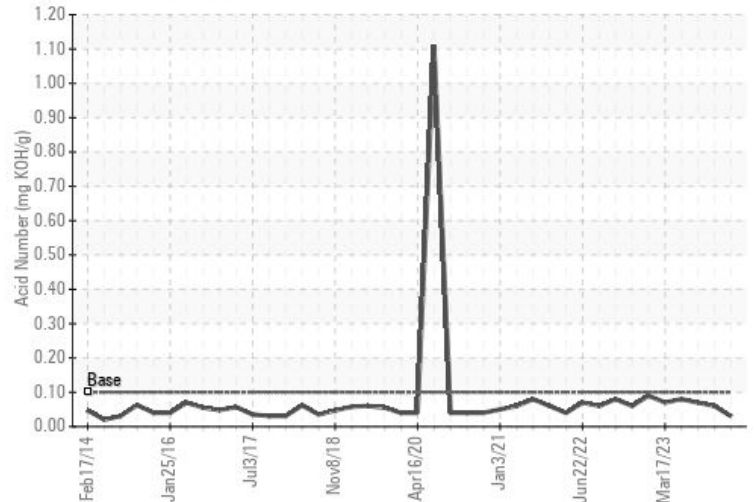
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC
Lab Number : 02644608
Unique Number : 5802147
Test Package : AOM 2

Received : 28 Jun 2024
Tested : 05 Jul 2024
Diagnosed : 05 Jul 2024 - Bill Quesnel

HIBERNIA MGMT & DEVELOPMENT CO. LTD
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 ST. JOHNS, 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.

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