MAR II

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
System 33 - Gas Compression
Machine Id
Z-3301B Turbine Hydraulic Starter Oil Train B (S/N F-33204)
Component
Hydraulic System
Fluid
IRVING HYDRAULIC OIL LP 32 (290 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

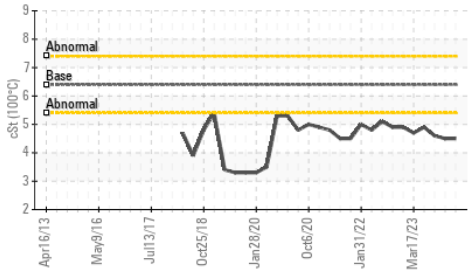
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

FLUID CONDITION

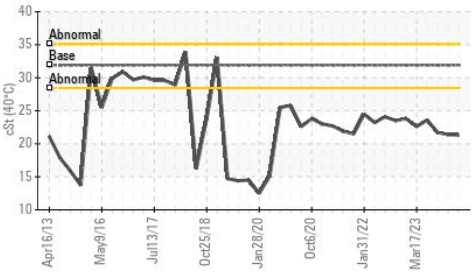
Viscosity of sample indicates oil is within ISO 22 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PP	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				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>20	0	0	0
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	<1	0	0
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>20	0	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
Silicon	ppm	ASTM D5185(m)	>15	0	0	0
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0
Water	%	ASTM D6304*	>0.05	0.003	0.001	0.003
ppm Water	ppm	ASTM D6304*	>500	26	12	30.9
Particles >4µm		ASTM D7647	>5000	2740	4357	2924
Particles >6µm		ASTM D7647	>1300	800	1396	837
Particles >14µm		ASTM D7647	>160	64	148	69
Particles >21µm		ASTM D7647	>40	18	36	18
Particles >38µm		ASTM D7647	>10	3	3	1
Particles >71µm		ASTM D7647	>3	1	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/17/13	19/18/14	19/17/13
Pentane Insolubles	%	ASTM D893(m)*		0.032	0.042	0.044
Silt	scalar	Visual*	NONE	NONE	VLITE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	VLITE
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*	>0.05	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		0	0	<1
Boron	ppm	ASTM D5185(m)		<1	0	<1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		0	0	0
Calcium	ppm	ASTM D5185(m)		<1	0	<1
Phosphorus	ppm	ASTM D5185(m)		4	4	2
Zinc	ppm	ASTM D5185(m)	400	<1	<1	<1
Sulfur	ppm	ASTM D5185(m)		512	578	628
Acid Number (AN)	mg KOH/g	ASTM D974*		0.40	0.39	0.55
Visc @ 40°C	cSt	ASTM D7279(m)	31.9	21.3	21.4	21.7
Visc @ 100°C	cSt	ASTM D7279(m)	6.4	4.5	4.5	4.6
Viscosity Index (VI)	Scale	ASTM D2270*	151	125	124	130

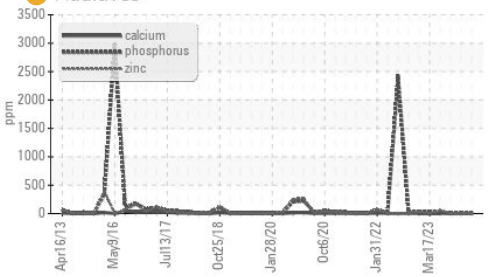
Viscosity @ 100°C



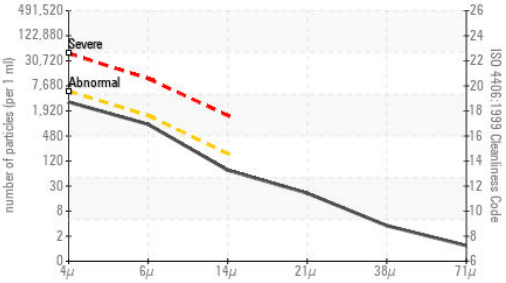
Viscosity @ 40°C



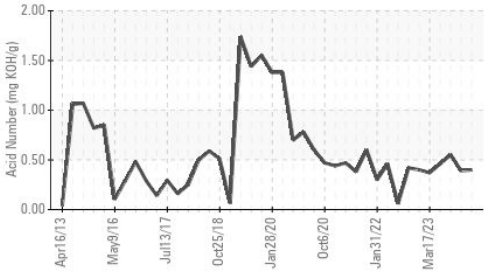
Additives



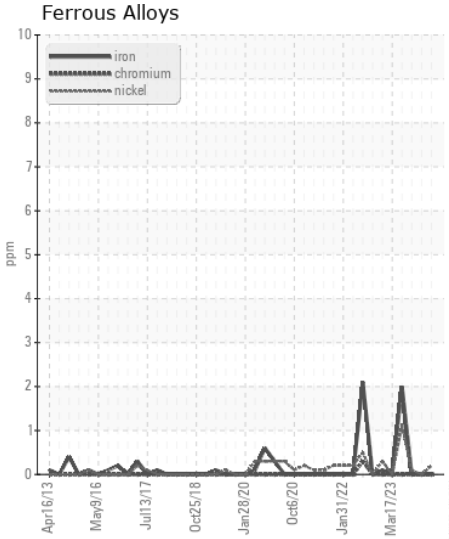
Particle Count



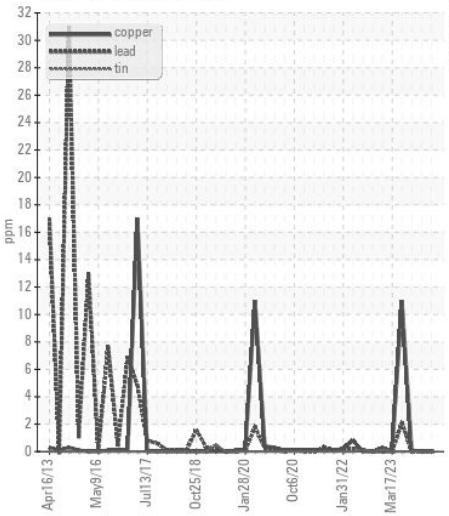
Acid Number



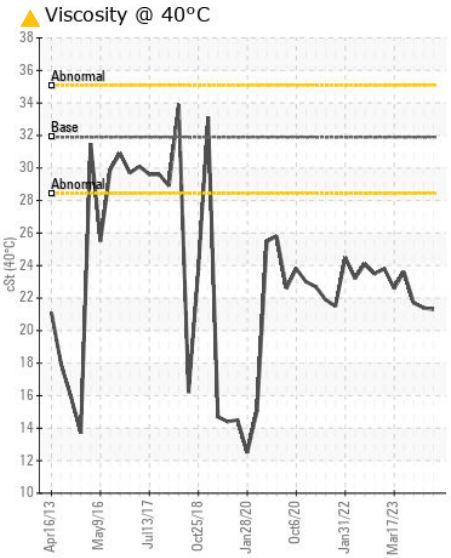
Ferrous Alloys



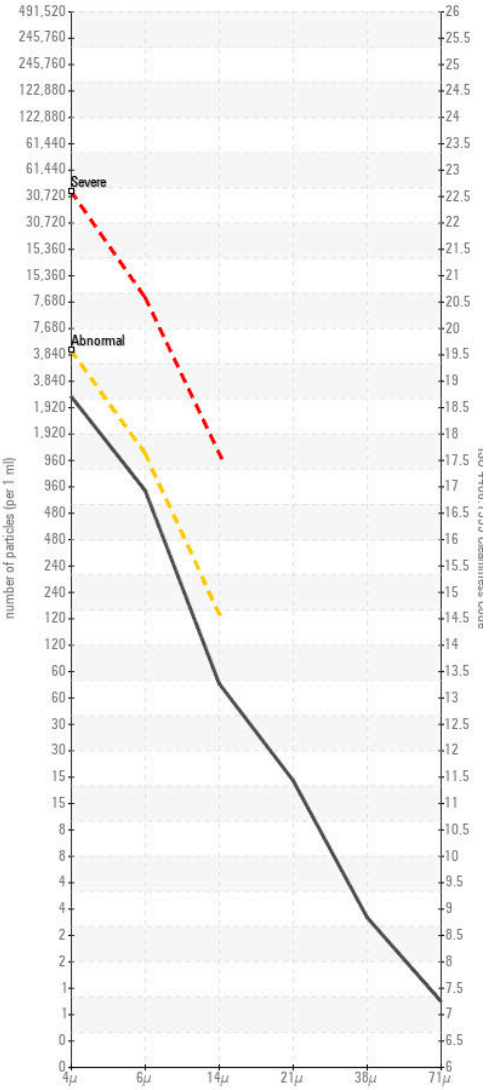
Non-ferrous Metals



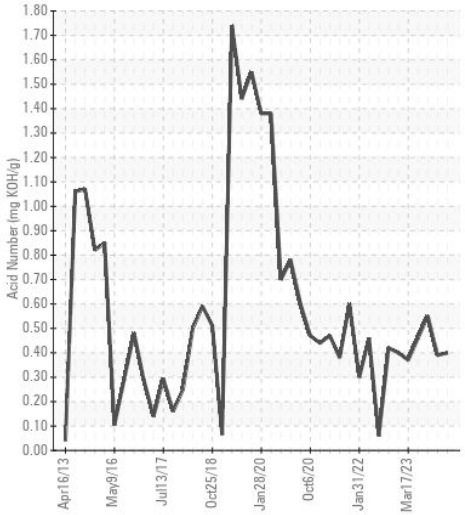
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP
Lab Number : 02644593
Unique Number : 5802132
Test Package : MAR 2 (Additional Tests: COC Flash, KF, KV100, PntInsol, VI)

Received : 28 Jun 2024
Tested : 02 Jul 2024
Diagnosed : 02 Jul 2024 - Kevin Marson

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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