



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
ALS HVI 46
 Component
New (Unused) Oil
 Fluid
{not provided} (--- LTR)

RECOMMENDATION

This is a baseline read-out on the submitted sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0031233	DC0031246	DC0031284
Sample Date		Client Info		15 Feb 2024	25 Jan 2024	08 Dec 2023
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	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	NORMAL	NORMAL

WEAR

Iron	ppm	ASTM D5185m		0	0	0
Chromium	ppm	ASTM D5185m		<1	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		0	0	0
Lead	ppm	ASTM D5185m		0	0	0
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m		<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

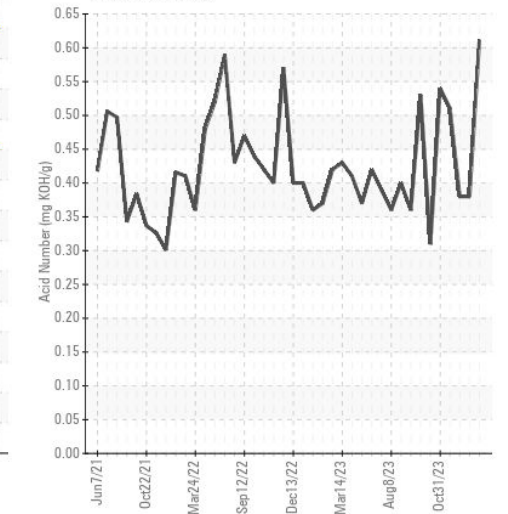
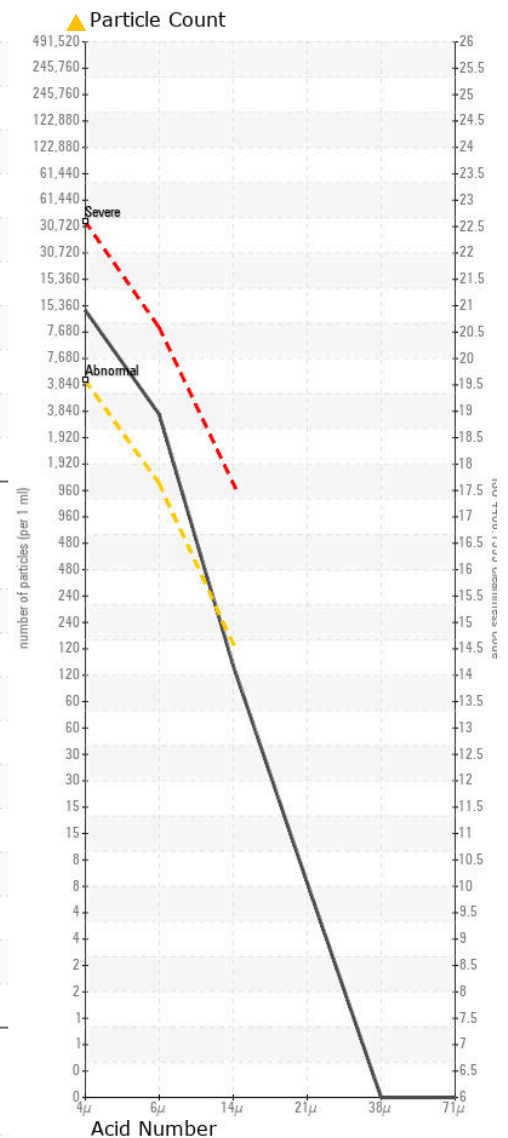
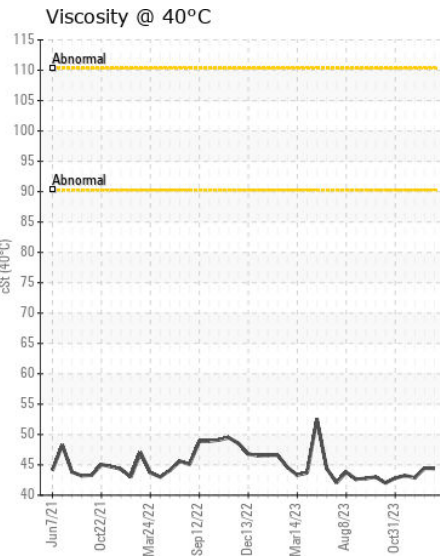
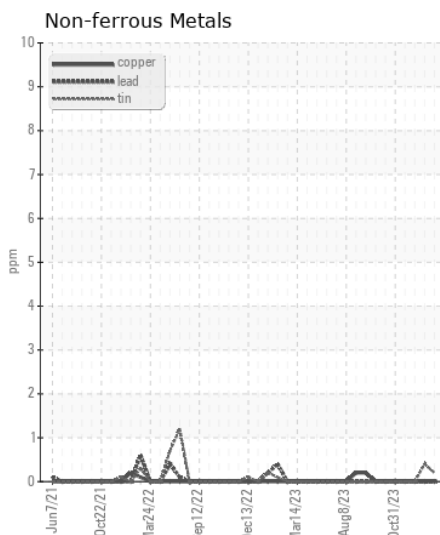
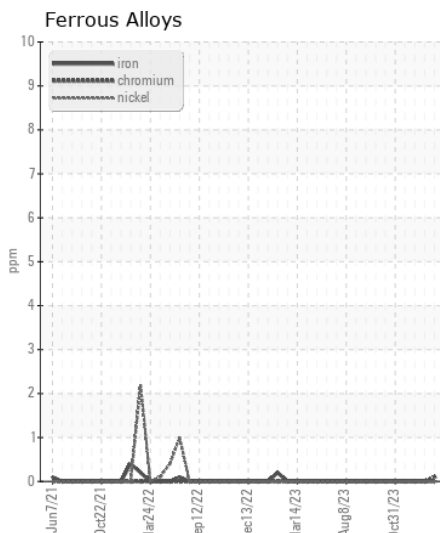
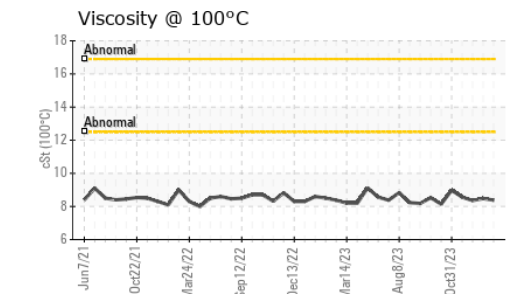
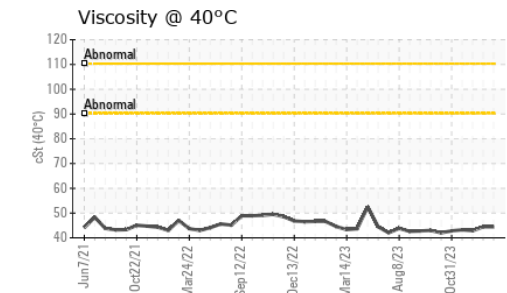
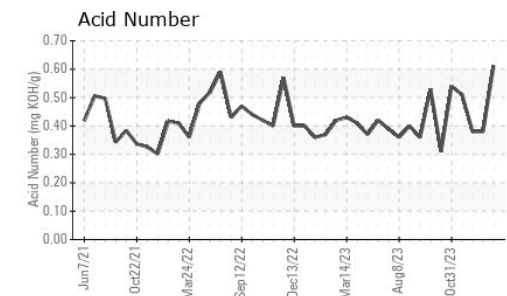
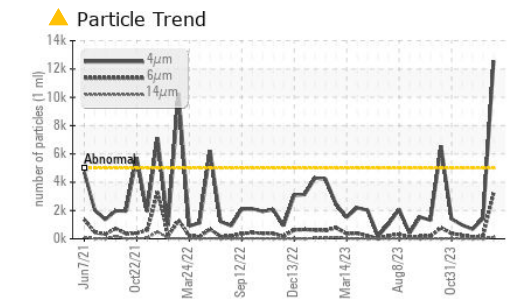
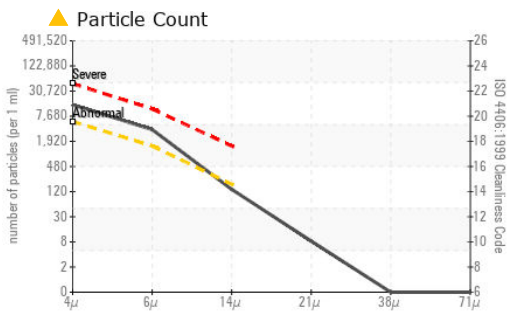
CONTAMINATION

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m		<1	<1	0
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method		NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 12556	1436	675
Particles >6µm		ASTM D7647	>1300	▲ 3215	189	136
Particles >14µm		ASTM D7647	>160	120	8	6
Particles >21µm		ASTM D7647	>40	7	2	2
Particles >38µm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/19/14	18/15/10	17/14/10
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	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

FLUID CONDITION

Sodium	ppm	ASTM D5185m		0	<1	0
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		<1	3	2
Calcium	ppm	ASTM D5185m		59	78	86
Phosphorus	ppm	ASTM D5185m		330	275	340
Zinc	ppm	ASTM D5185m		430	357	447
Sulfur	ppm	ASTM D5185m		1037	1227	941
Acid Number (AN)	mg KOH/g	ASTM D8045		0.611	0.38	0.38
Visc @ 40°C	cSt	ASTM D445		44.41	44.45	42.87
Visc @ 100°C	cSt	ASTM D445		8.38	8.48	8.36
Viscosity Index (VI)	Scale	ASTM D2270		167	171	175



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0031233
Lab Number : 06103968
Unique Number : 10902198
Test Package : MOB 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, VI)

THE UNITED OIL COMPANY - OPERATIONS
 4405 E. BALTIMORE ST
 BALTIMORE, MD
 US 21224
 Contact: MICHELLE HORNING

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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