



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
ALS UTH
 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		DC0031255	DC0031222	DC0031221
Sample Date		Client Info		21 Feb 2024	14 Feb 2024	08 Feb 2024
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	ABNORMAL	NORMAL

WEAR

Iron	ppm	ASTM D5185m		<1	0	0
Chromium	ppm	ASTM D5185m		0	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		1	1	2
Lead	ppm	ASTM D5185m		<1	<1	<1
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m		0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

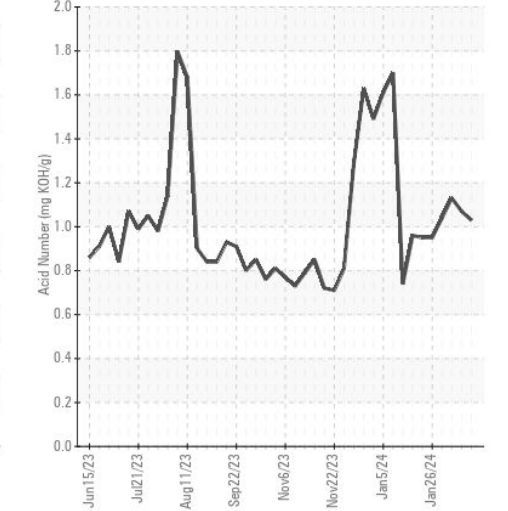
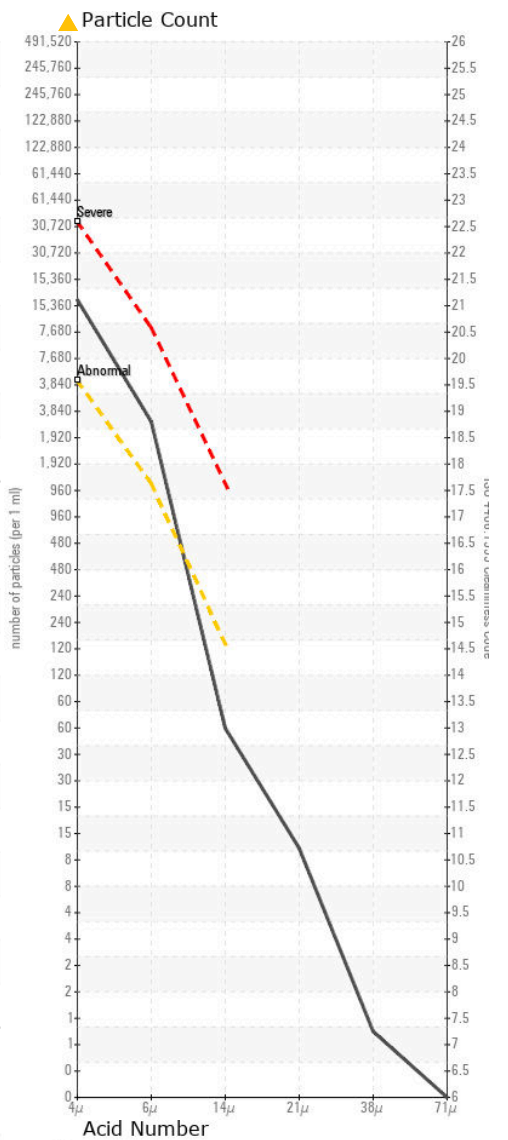
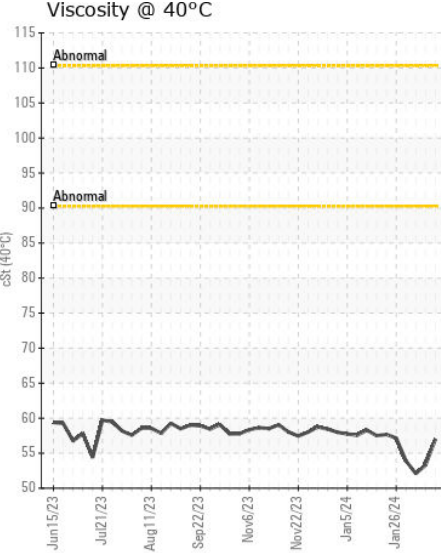
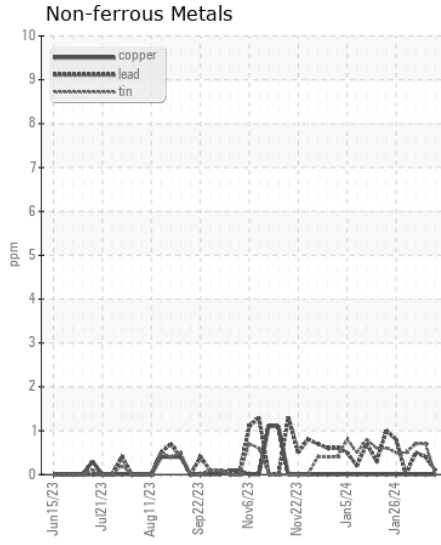
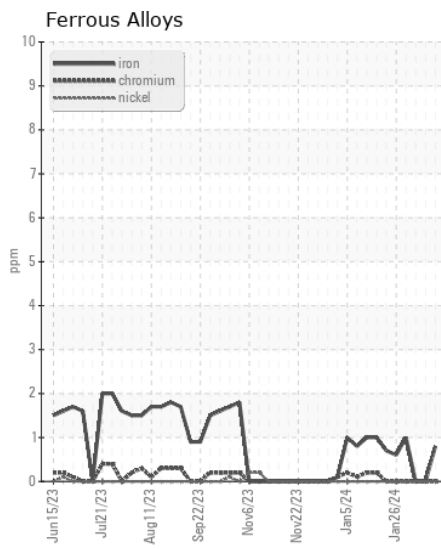
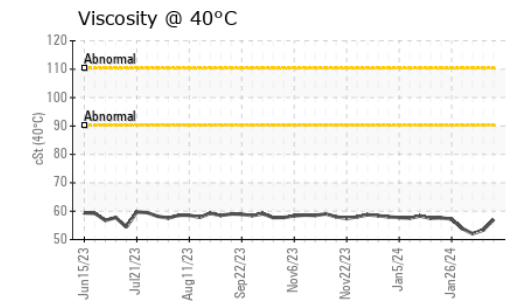
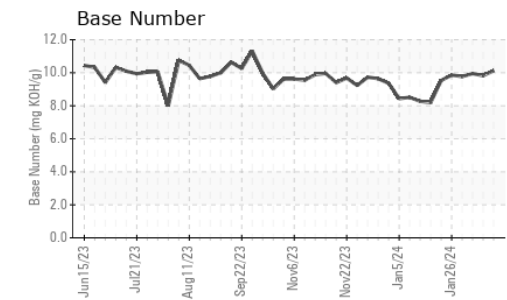
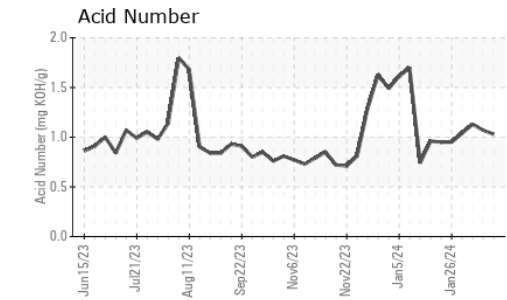
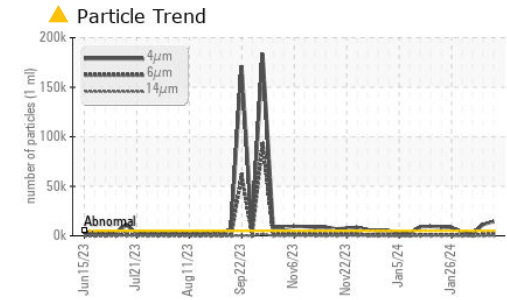
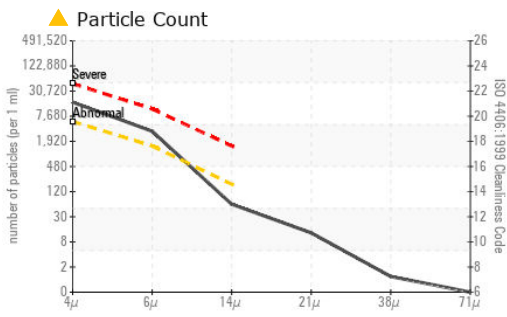
CONTAMINATION

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

Silicon	ppm	ASTM D5185m		9	11	13
Potassium	ppm	ASTM D5185m	>20	<1	3	3
Water		WC Method		NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 14430	▲ 11486	1627
Particles >6µm		ASTM D7647	>1300	▲ 2928	1284	421
Particles >14µm		ASTM D7647	>160	53	57	23
Particles >21µm		ASTM D7647	>40	11	15	5
Particles >38µm		ASTM D7647	>10	1	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/19/13	▲ 21/17/13	18/16/12
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	0	<1
Boron	ppm	ASTM D5185m		95	98	106
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		28	26	26
Calcium	ppm	ASTM D5185m		3230	3172	3253
Phosphorus	ppm	ASTM D5185m		1136	1072	1120
Zinc	ppm	ASTM D5185m		1463	1407	1453
Sulfur	ppm	ASTM D5185m		3218	3026	3124
Acid Number (AN)	mg KOH/g	ASTM D8045		1.03	1.07	1.13
Base Number (BN)	mg KOH/g	ASTM D2896		10.13	9.82	9.95
Visc @ 40°C	cSt	ASTM D445		57.01	53.32	52.08
Visc @ 100°C	cSt	ASTM D445		9.89	9.29	10.89
Viscosity Index (VI)	Scale	ASTM D2270		160	157	206



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0031255
Lab Number : 06102129
Unique Number : 10900359
Test Package : MOB 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, TBN, Viscosity)

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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 F: (410)327-7695