



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
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		DC0025972	DC0025987	DC0025986
Sample Date		Client Info		10 Feb 2023	03 Feb 2023	03 Feb 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				NORMAL	NORMAL	NORMAL

WEAR

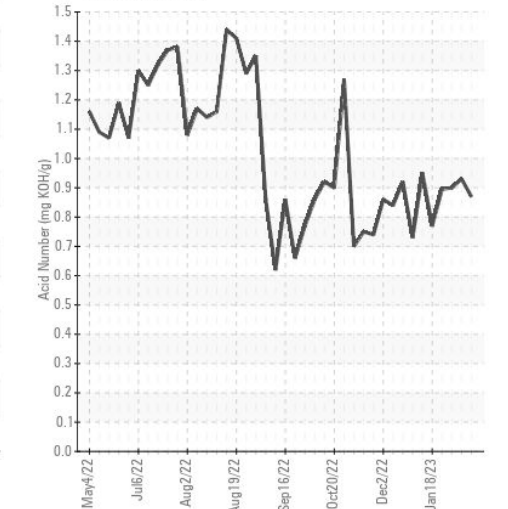
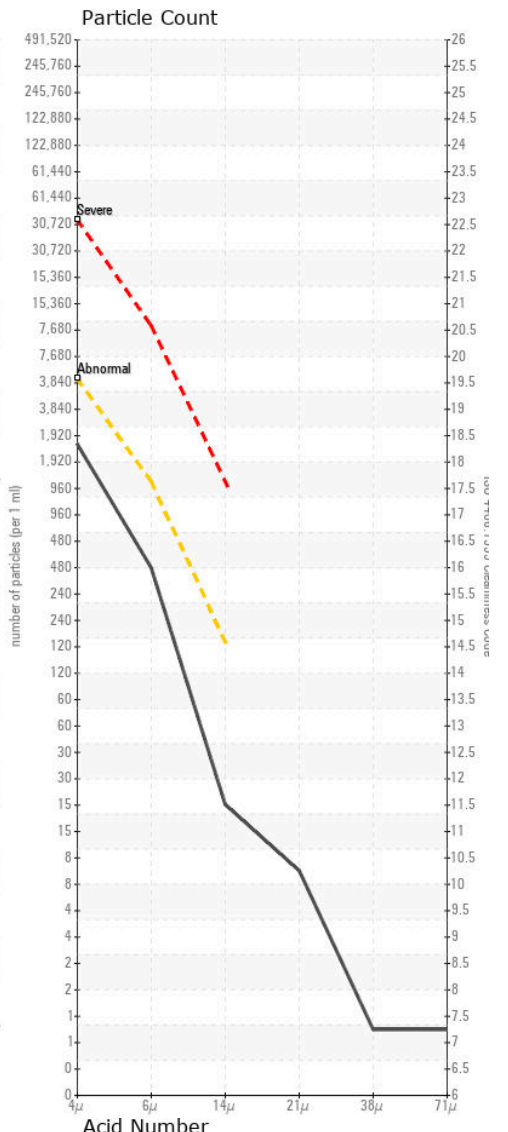
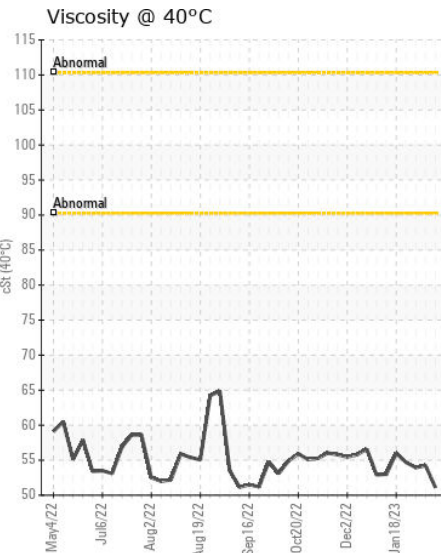
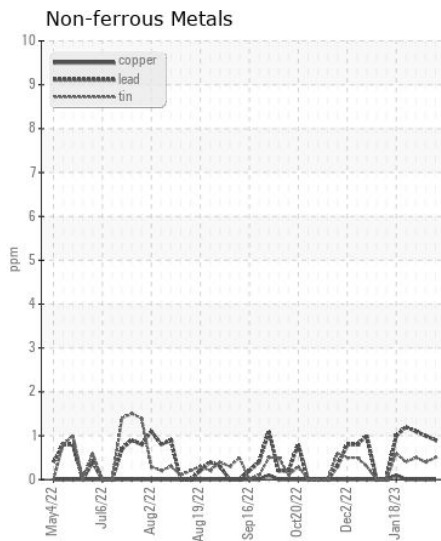
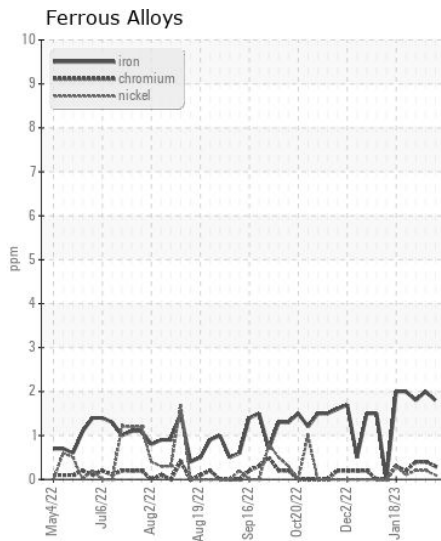
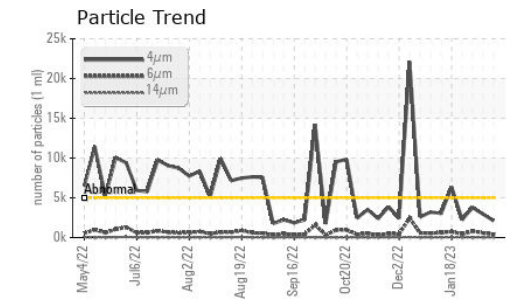
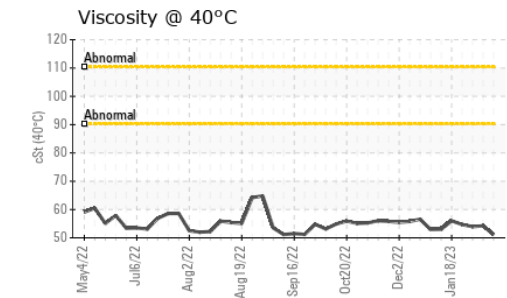
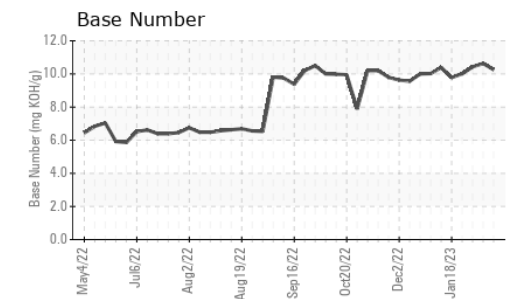
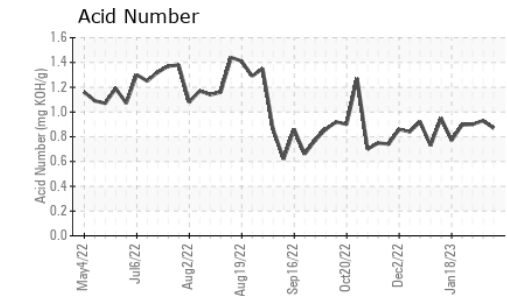
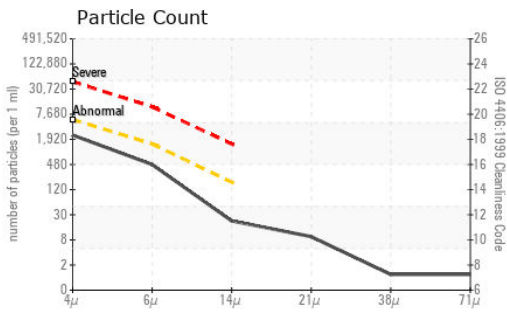
Iron	ppm	ASTM D5185m		2	2	2
Chromium	ppm	ASTM D5185m		<1	<1	<1
Nickel	ppm	ASTM D5185m		<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		0	0	0
Lead	ppm	ASTM D5185m		<1	1	1
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m		<1	<1	<1
Vanadium	ppm	ASTM D5185m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

CONTAMINATION

Silicon	ppm	ASTM D5185m		12	10	12
Potassium	ppm	ASTM D5185m	>20	2	2	2
Water		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	---	---
Nitration	Abs/cm	*ASTM D7624		2.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415		13.3	---	---
Particles >4µm		ASTM D7647	>5000	2123	3791	2937
Particles >6µm		ASTM D7647	>1300	420	791	578
Particles >14µm		ASTM D7647	>160	19	22	26
Particles >21µm		ASTM D7647	>40	8	7	8
Particles >38µm		ASTM D7647	>10	1	5	4
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/16/11	19/17/12	19/16/12
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		<1	<1	<1
Boron	ppm	ASTM D5185m		110	112	123
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		2	3	2
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		36	50	37
Calcium	ppm	ASTM D5185m		3415	3438	3651
Phosphorus	ppm	ASTM D5185m		1045	1031	1091
Zinc	ppm	ASTM D5185m		1455	1435	1509
Sulfur	ppm	ASTM D5185m		3648	3728	3972
Oxidation	Abs/.1mm	*ASTM D7414		2.6	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.87	0.93	0.90
Base Number (BN)	mg KOH/g	ASTM D2896		10.26	10.63	10.43
Visc @ 40°C	cSt	ASTM D445		51.11	54.24	53.94
Visc @ 100°C	cSt	ASTM D445		9.15	9.42	9.31
Viscosity Index (VI)	Scale	ASTM D2270		162	157	155



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DC0025972
Lab Number : 05771080
Unique Number : 10345697
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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