



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DURALENE DM 15W40
 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		DC0033754	DC0003226	DC0001062
Sample Date		Client Info		11 Jun 2024	17 Mar 2020	31 Dec 2019
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

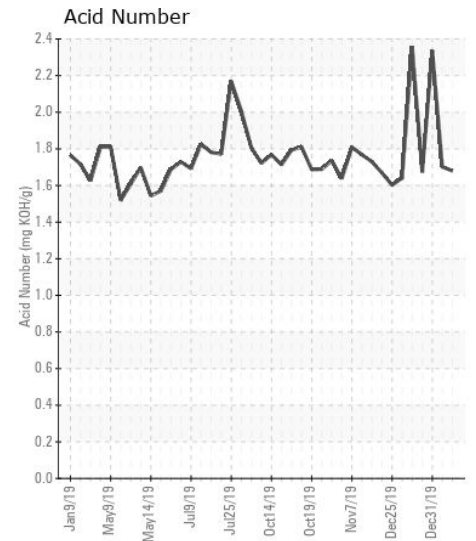
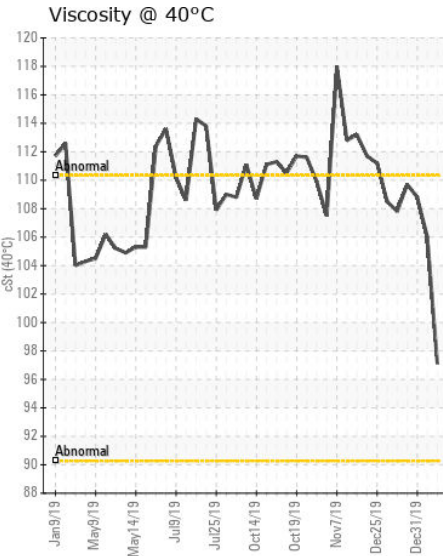
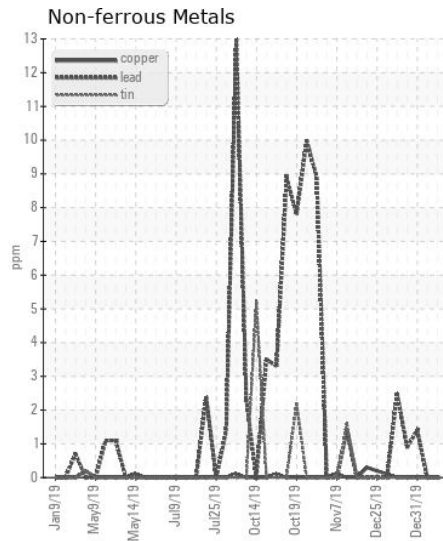
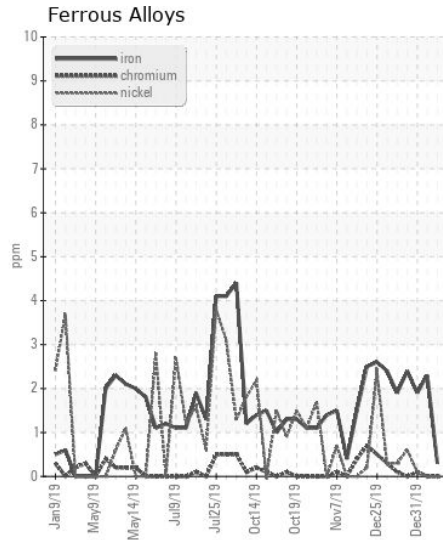
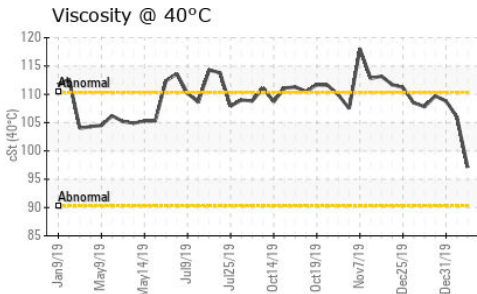
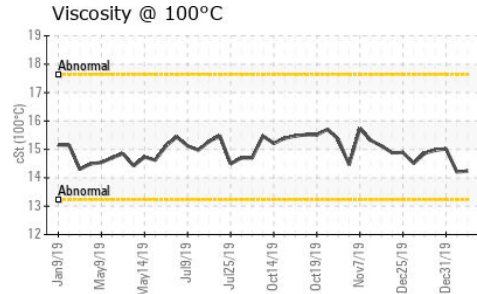
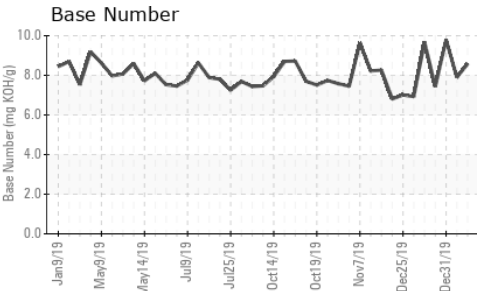
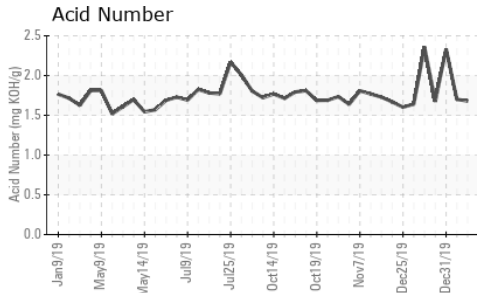
Iron	ppm	ASTM D5185m		<1	2	2
Chromium	ppm	ASTM D5185m		0	0	<1
Nickel	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m		<1	1	2
Lead	ppm	ASTM D5185m		0	0	2
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m	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

CONTAMINATION

Silicon	ppm	ASTM D5185m		6	12	12
Potassium	ppm	ASTM D5185m	>20	2	11	0
Water		WC Method		NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	---	17521	---
Particles >6µm		ASTM D7647	>1300	---	3687	---
Particles >14µm		ASTM D7647	>160	---	79	---
Particles >21µm		ASTM D7647	>40	---	13	---
Particles >38µm		ASTM D7647	>10	---	3	---
Particles >71µm		ASTM D7647	>3	---	1	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	---	21/19/13	---
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	4	6
Boron	ppm	ASTM D5185m		<1	7	20
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		<1	15	115
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		24	164	1896
Calcium	ppm	ASTM D5185m		2522	4141	2754
Phosphorus	ppm	ASTM D5185m		981	1667	2218
Zinc	ppm	ASTM D5185m		1177	1829	2619
Sulfur	ppm	ASTM D5185m		4801	5724	5661
Acid Number (AN)	mg KOH/g	ASTM D8045		1.68	1.701	2.335
Base Number (BN)	mg KOH/g	ASTM D2896		8.58	7.90	9.79
Visc @ 40°C	cSt	ASTM D445		97.1	106	108.8
Visc @ 100°C	cSt	ASTM D445		14.24	14.2	15.02
Viscosity Index (VI)	Scale	ASTM D2270		150	136	143



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : DC0033754

Lab Number : 06212255

Unique Number : 11085119

Test Package : MOB 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, TBN, Viscosity)

Received : 17 Jun 2024

Tested : 20 Jun 2024

Diagnosed : 20 Jun 2024 - Jonathan Hester

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)

T:

F: (410)327-7695