



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
DURALENE MV 5W20
 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		DC0035520	DC0031213	DC0025904
Sample Date		Client Info		11 Apr 2024	07 Mar 2024	16 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

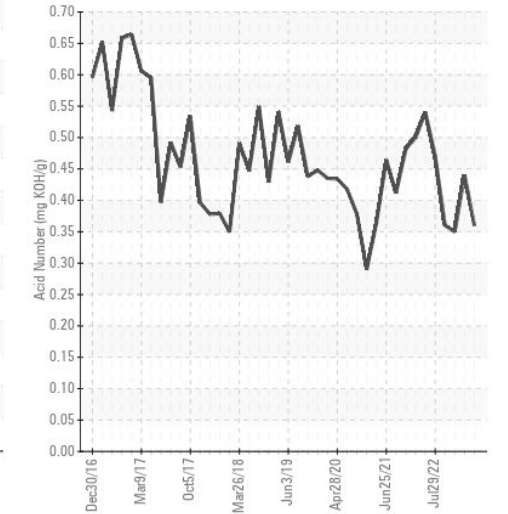
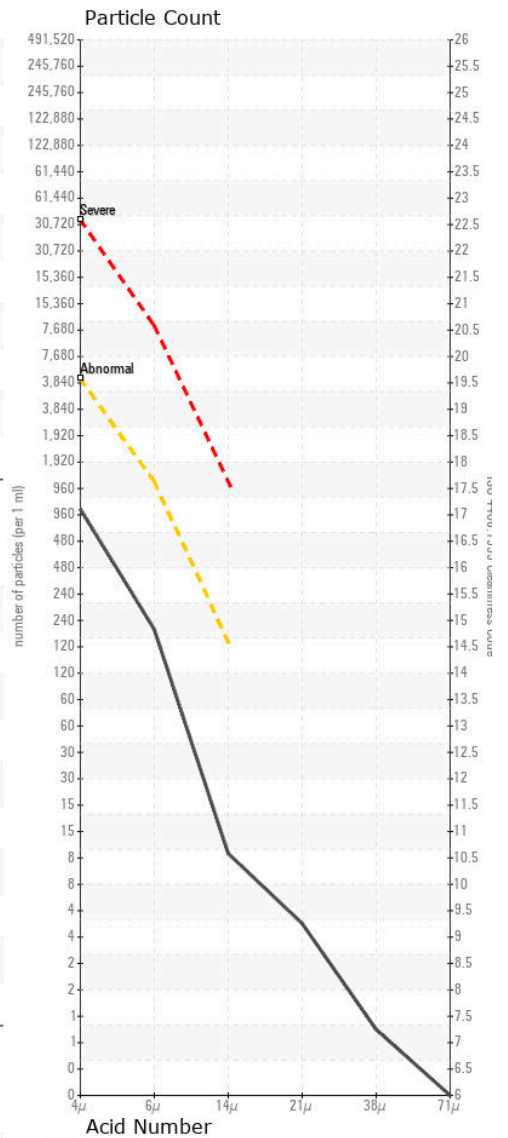
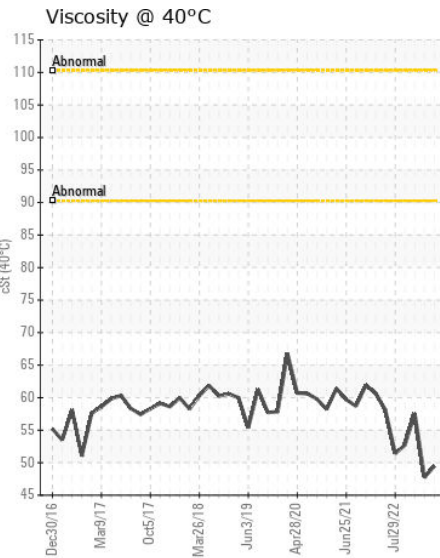
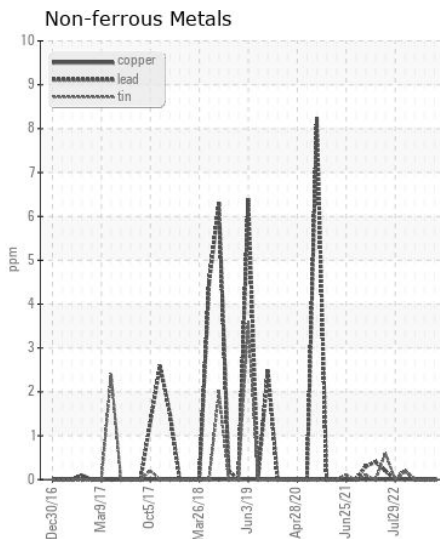
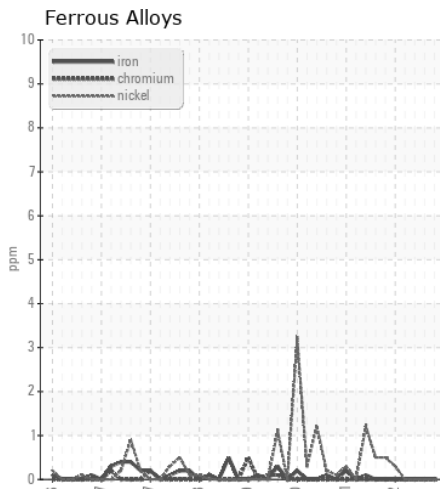
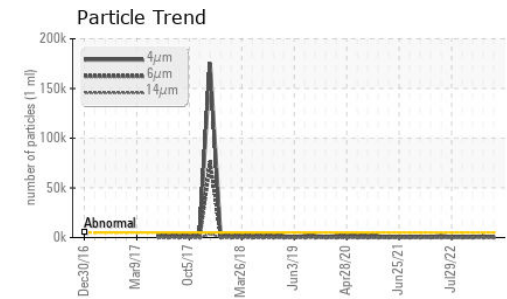
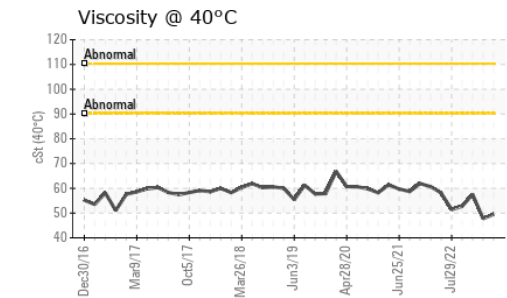
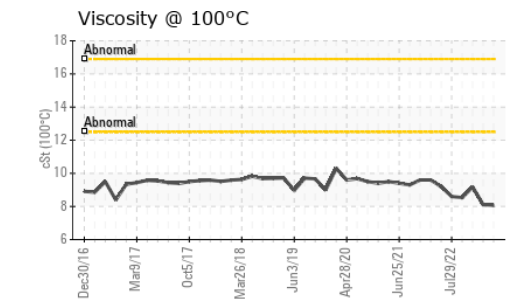
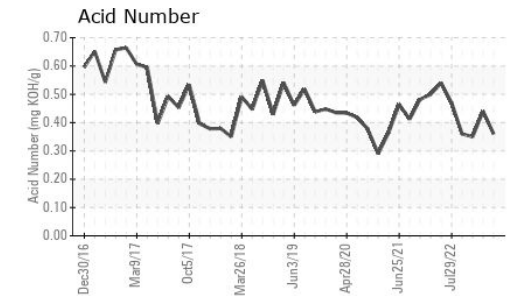
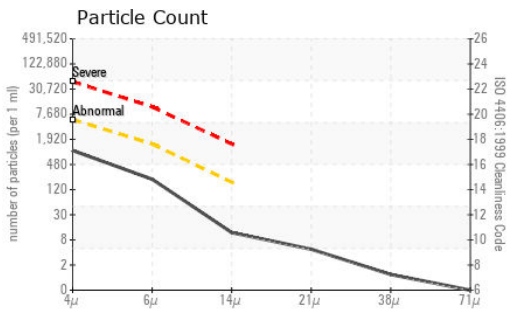
Iron	ppm	ASTM D5185m		0	0	0
Chromium	ppm	ASTM D5185m		0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m		0	<1	0
Lead	ppm	ASTM D5185m		0	0	0
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m		0	0	0
Vanadium	ppm	ASTM D5185m		0	0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

CONTAMINATION

Silicon	ppm	ASTM D5185m		0	<1	<1
Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
Water		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		---	---	---
Nitration	Abs/cm	*ASTM D7624		---	---	---
Sulfation	Abs/.1mm	*ASTM D7415		---	---	---
Particles >4µm		ASTM D7647	>5000	909	1316	1130
Particles >6µm		ASTM D7647	>1300	188	342	334
Particles >14µm		ASTM D7647	>160	10	31	27
Particles >21µm		ASTM D7647	>40	4	7	6
Particles >38µm		ASTM D7647	>10	1	0	2
Particles >71µm		ASTM D7647	>3	0	0	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/10	18/16/12	17/16/12
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	2
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		91	72	86
Calcium	ppm	ASTM D5185m		158	52	92
Phosphorus	ppm	ASTM D5185m		343	265	270
Zinc	ppm	ASTM D5185m		429	338	366
Sulfur	ppm	ASTM D5185m		5190	4453	4507
Oxidation	Abs/.1mm	*ASTM D7414		---	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.36	0.44	0.35
Visc @ 40°C	cSt	ASTM D445		49.48	47.76	57.54
Visc @ 100°C	cSt	ASTM D445		8.07	8.11	9.17
Viscosity Index (VI)	Scale	ASTM D2270		134	142	139



Certificate L2367

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

Sample No. : DC0035520

Lab Number : 06158655

Unique Number : 10994078

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

Received : 23 Apr 2024

Tested : 29 Apr 2024

Diagnosed : 29 Apr 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