



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
[8000376355]
 Machine Id
GROVE TMS745 236303
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 22 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as (GENERIC) AW HYDRAULIC OIL ISO 22, however, a fluid match indicates that this fluid is SAE 75W80 Tractor TDH Fluid. Please confirm the oil type and grade on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP352908	VCP391900	---
Sample Date		Client Info		20 Sep 2023	16 Jun 2023	---
Machine Age	hrs	Client Info		3659	3638	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Not Changd	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	1	2	---
Chromium	ppm	ASTM D5185(m)	>10	0	0	---
Nickel	ppm	ASTM D5185(m)	>10	<1	0	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)		<1	0	---
Aluminum	ppm	ASTM D5185(m)	>10	<1	<1	---
Lead	ppm	ASTM D5185(m)	>10	0	0	---
Copper	ppm	ASTM D5185(m)	>75	1	2	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

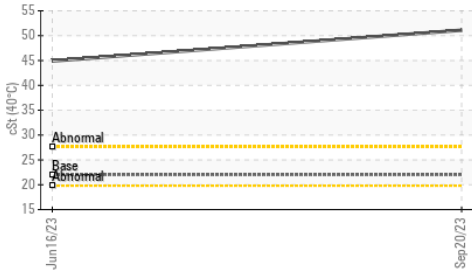
Silicon	ppm	ASTM D5185(m)	>20	6	9	---
Potassium	ppm	ASTM D5185(m)	>20	2	10	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	3538	1191	---
Particles >6µm		ASTM D7647	>1300	918	504	---
Particles >14µm		ASTM D7647	>160	77	59	---
Particles >21µm		ASTM D7647	>40	30	15	---
Particles >38µm		ASTM D7647	>10	1	1	---
Particles >71µm		ASTM D7647	>3	0	1	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	19/17/13	17/16/13	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	---

FLUID CONDITION

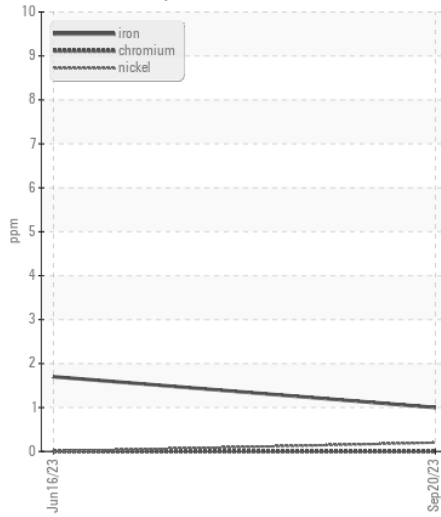
Viscosity of sample indicates oil is within SAE 75W80 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		6	10	---
Boron	ppm	ASTM D5185(m)	5	87	67	---
Barium	ppm	ASTM D5185(m)	5	0	0	---
Molybdenum	ppm	ASTM D5185(m)	5	1	16	---
Manganese	ppm	ASTM D5185(m)		0	<1	---
Magnesium	ppm	ASTM D5185(m)	25	13	11	---
Calcium	ppm	ASTM D5185(m)	200	3089	2593	---
Phosphorus	ppm	ASTM D5185(m)	300	1018	964	---
Zinc	ppm	ASTM D5185(m)	370	1293	1127	---
Sulfur	ppm	ASTM D5185(m)	2500	2506	2397	---
Visc @ 40°C	cSt	ASTM D7279(m)	22	▲ 51.1	44.9	---

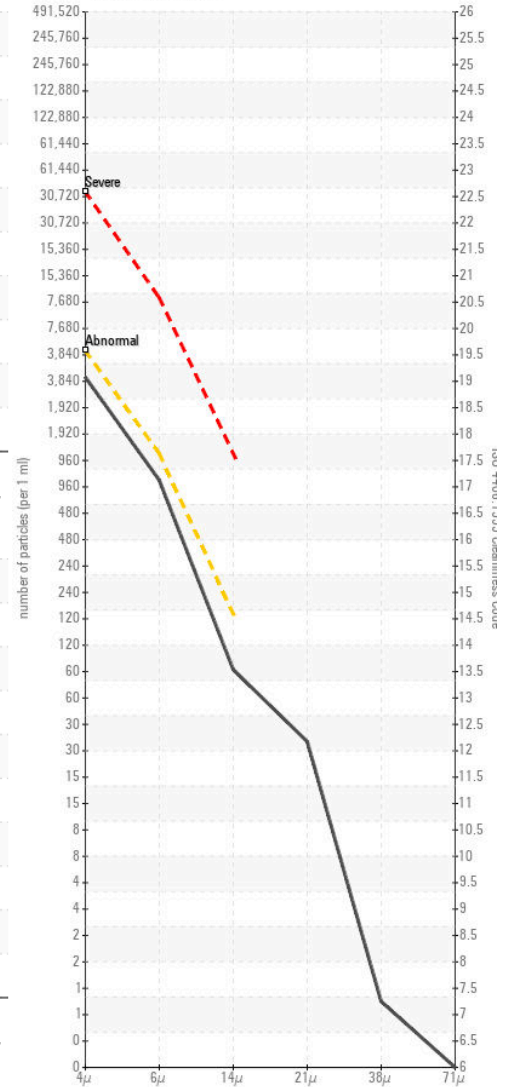
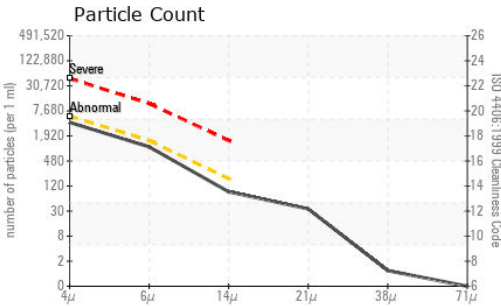
▲ Viscosity @ 40°C



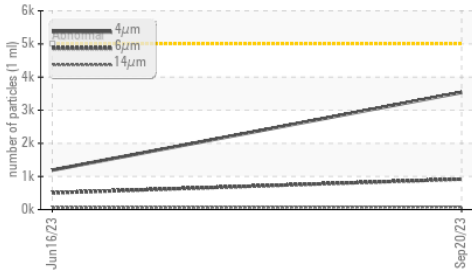
Ferrous Alloys



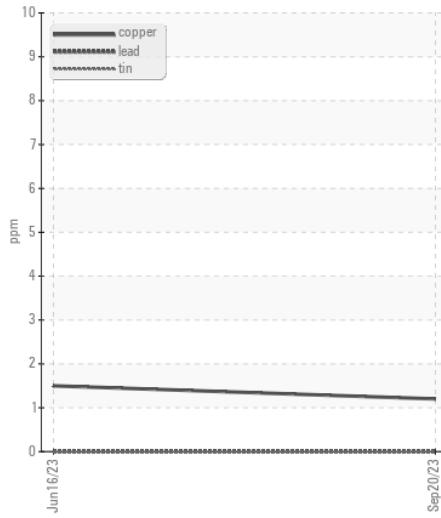
Particle Count



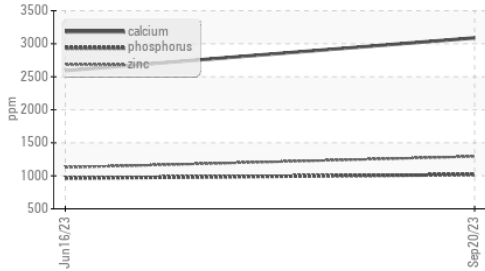
Particle Trend



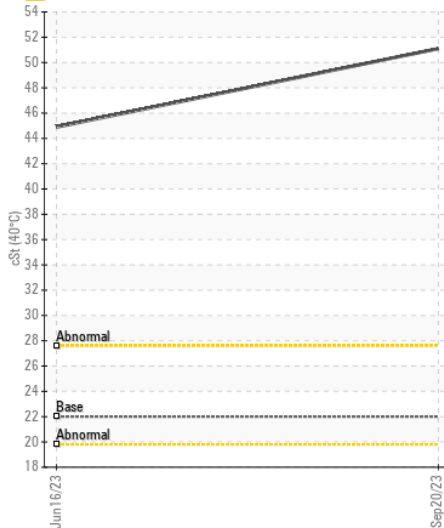
Non-ferrous Metals



Additives



▲ Viscosity @ 40°C



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : VCP352908 **Received** : 25 Sep 2023
Lab Number : 02584964 **Tested** : 26 Sep 2023
Unique Number : 5646029 **Diagnosed** : 26 Sep 2023 - Bill Quesnel
Test Package : MOB 1 (Additional Tests: PrtCount)

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.