



OIL ANALYSIS REPORT

Sample Rating Trend

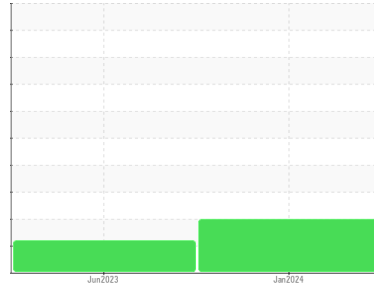
FUEL



Machine Id
SHUTTLELIFT 3330FL CD2366 (S/N 322366)

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		HPL0003800	HPL0003248	---
Sample Date	Client Info		04 Jan 2024	09 Jun 2023	---
Machine Age	hrs	Client Info	1395	1155	---
Oil Age	hrs	Client Info	0	409	---
Oil Changed	Client Info		N/A	Changed	---
Sample Status			SEVERE	ABNORMAL	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	54	79	---
Chromium	ppm	ASTM D5185m >20	3	5	---
Nickel	ppm	ASTM D5185m >4	<1	1	---
Titanium	ppm	ASTM D5185m	0	<1	---
Silver	ppm	ASTM D5185m >3	0	0	---
Aluminum	ppm	ASTM D5185m >20	7	4	---
Lead	ppm	ASTM D5185m >40	6	4	---
Copper	ppm	ASTM D5185m >330	3	3	---
Tin	ppm	ASTM D5185m >15	5	6	---
Vanadium	ppm	ASTM D5185m	0	<1	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	5	48	---
Barium	ppm	ASTM D5185m 10	<1	0	---
Molybdenum	ppm	ASTM D5185m 100	427	150	---
Manganese	ppm	ASTM D5185m	<1	1	---
Magnesium	ppm	ASTM D5185m 450	781	409	---
Calcium	ppm	ASTM D5185m 3000	1864	1183	---
Phosphorus	ppm	ASTM D5185m 1150	860	603	---
Zinc	ppm	ASTM D5185m 1350	1028	765	---
Sulfur	ppm	ASTM D5185m 4250	6116	2721	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	17	22	---
Sodium	ppm	ASTM D5185m	2	2	---
Potassium	ppm	ASTM D5185m >20	<1	1	---
Fuel	%	ASTM D3524 >5	12.4	6.5	---

INFRA-RED

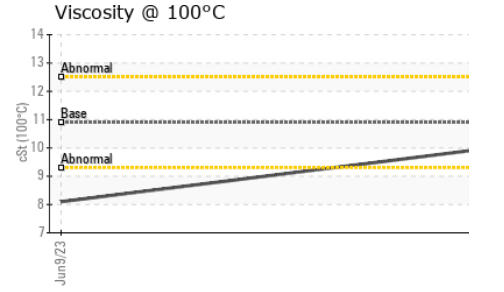
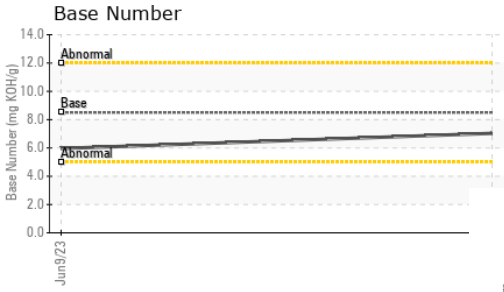
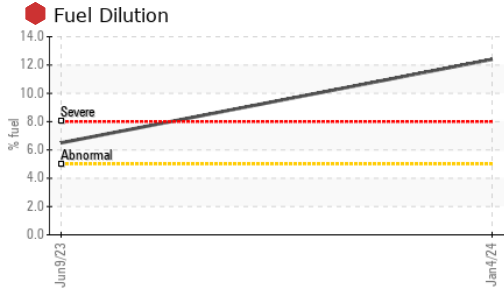
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624 >20	15.8	9.0	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	36.1	19.2	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	39.5	13.7	---
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	7.03	5.96	---



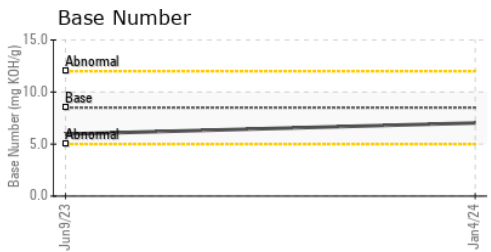
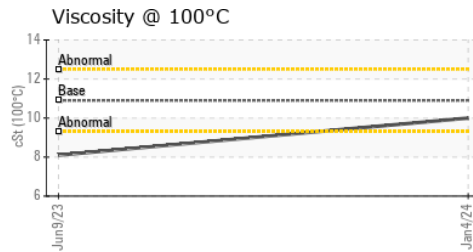
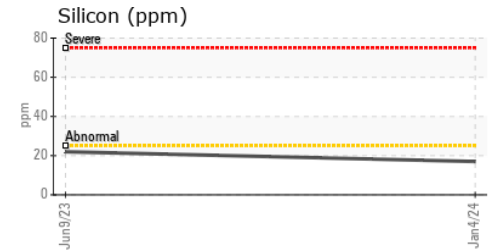
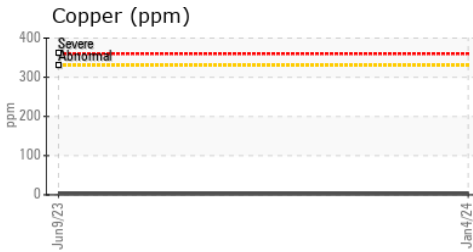
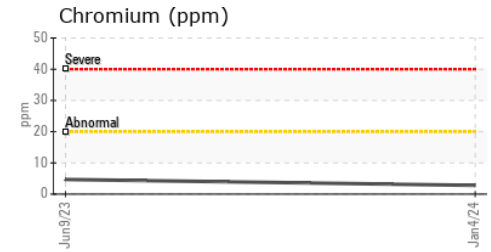
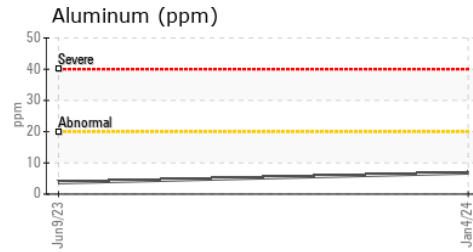
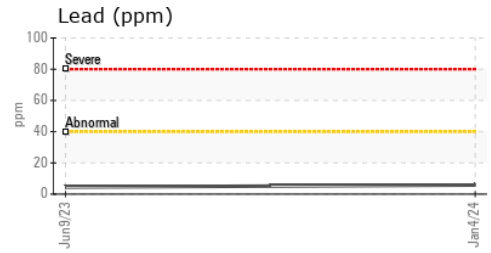
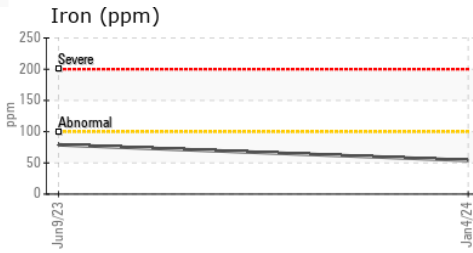
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	10.0	▲ 8.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL0003800 **Recieved** : 08 Jan 2024
Lab Number : 06054148 **Diagnosed** : 11 Jan 2024
Unique Number : 10820097 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: PercentFuel)

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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