



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH30M 1253-123497
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0272906	LH0258294	LH0212306
Sample Date		Client Info		11 Jan 2024	16 Aug 2023	30 Dec 2021
Machine Age	hrs	Client Info		4554	3960	981
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>66	3	2	6
Chromium	ppm	ASTM D5185m	>4	0	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>8	1	<1	1
Lead	ppm	ASTM D5185m	>10	0	0	3
Copper	ppm	ASTM D5185m	>74	2	<1	▲ 249
Tin	ppm	ASTM D5185m	>4	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

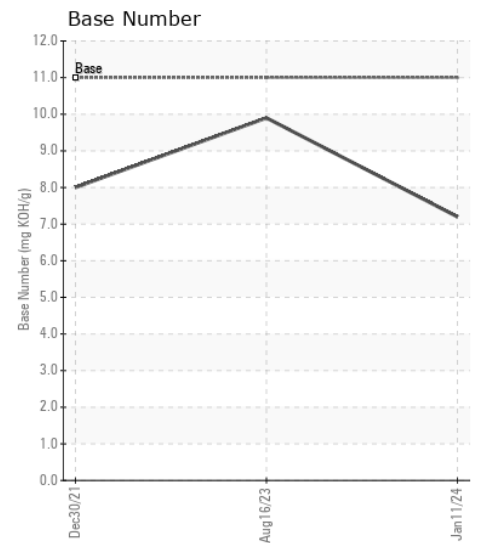
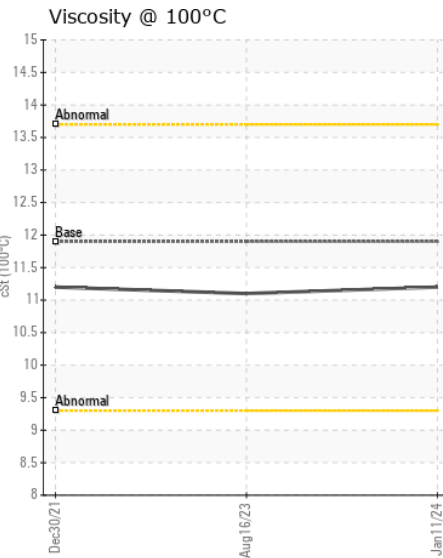
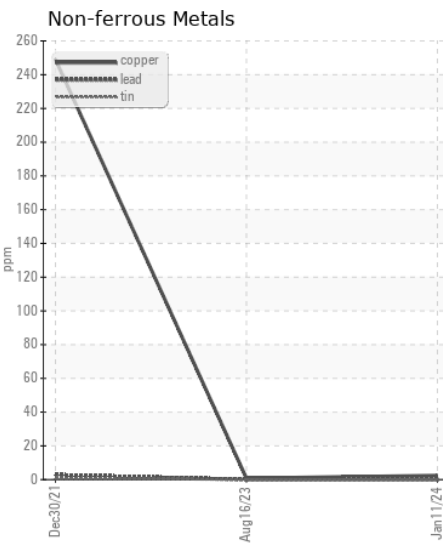
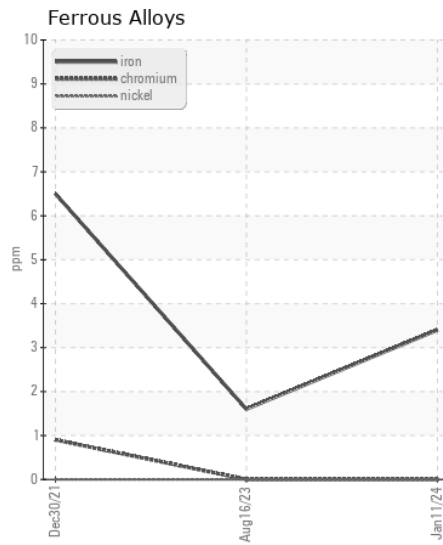
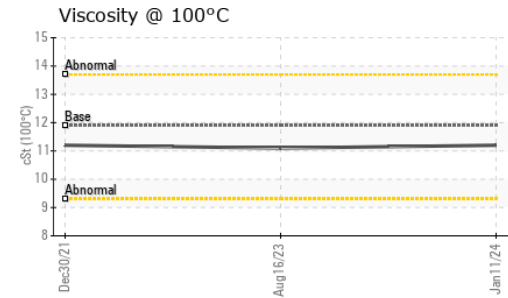
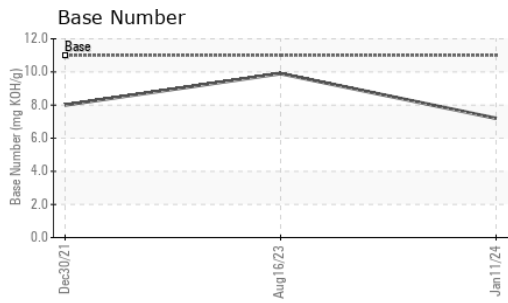
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	5	7	7
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.1	7.0	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	17.0	24.0
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	<1	4
Boron	ppm	ASTM D5185m	0	98	137	37
Barium	ppm	ASTM D5185m	0	0	0	<1
Molybdenum	ppm	ASTM D5185m	64	41	45	58
Manganese	ppm	ASTM D5185m	0	0	0	<1
Magnesium	ppm	ASTM D5185m	1160	841	898	1066
Calcium	ppm	ASTM D5185m	820	1324	1348	911
Phosphorus	ppm	ASTM D5185m	1160	695	715	983
Zinc	ppm	ASTM D5185m	1260	863	861	1235
Sulfur	ppm	ASTM D5185m	3000	2187	2712	2936
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	17.1	24.6
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	7.2	9.9	8.0
Visc @ 100°C	cSt	ASTM D445	11.9	11.2	11.1	11.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0272906 **Received** : 17 Jan 2024
Lab Number : 06062462 **Diagnosed** : 18 Jan 2024
Unique Number : 10833844 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: TBN)

SPARTAN RECYCLING
 3071 HOWARD ST
 SPARTANBURG, SC
 US 29303
 Contact: SERVICE MANAGER

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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