



OIL ANALYSIS REPORT

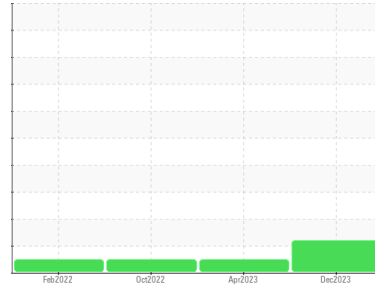
Sample Rating Trend

DEGRADATION

Machine Id
FSP 133838

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN level is low.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0874091	WC0797906	WC0738736
Sample Date	Client Info		05 Dec 2023	19 Apr 2023	10 Oct 2022
Machine Age	mls	Client Info	0	0	276224
Oil Age	mls	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	51	41	76
Chromium	ppm	ASTM D5185m >20	1	<1	2
Nickel	ppm	ASTM D5185m >4	1	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	7	5	8
Lead	ppm	ASTM D5185m >40	0	0	<1
Copper	ppm	ASTM D5185m >330	<1	1	2
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	<1	0	1
Barium	ppm	ASTM D5185m 10	0	0	0
Molybdenum	ppm	ASTM D5185m 100	75	75	77
Manganese	ppm	ASTM D5185m	<1	<1	1
Magnesium	ppm	ASTM D5185m 450	1179	1071	1210
Calcium	ppm	ASTM D5185m 3000	1229	1223	1493
Phosphorus	ppm	ASTM D5185m 1150	1218	1163	1319
Zinc	ppm	ASTM D5185m 1350	1536	1442	1644
Sulfur	ppm	ASTM D5185m 4250	3071	3444	3414

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	5	9
Sodium	ppm	ASTM D5185m >158	2	<1	2
Potassium	ppm	ASTM D5185m >20	5	6	9

INFRA-RED

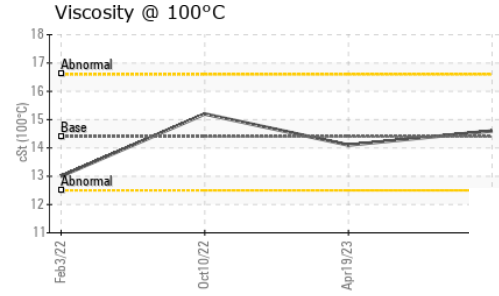
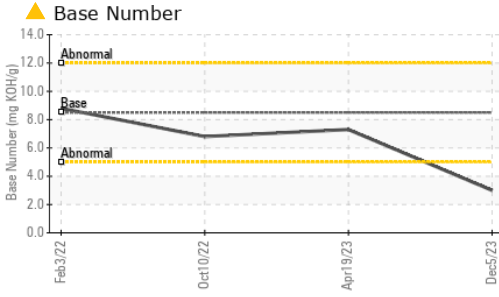
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.4	1.1	2.3
Nitration	Abs/cm	*ASTM D7624 >20	13.6	14.0	18.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	27.1	27.1	37.5

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	24.7	23.4	33.2
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	3.0	7.3	6.8



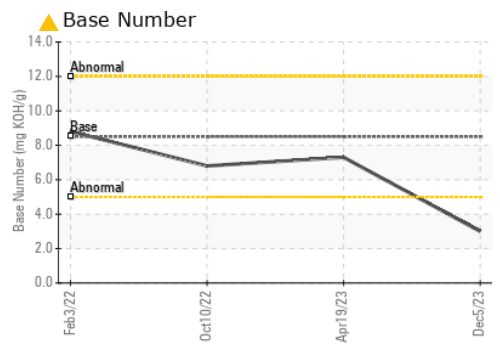
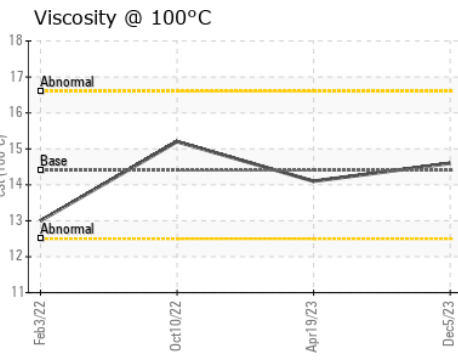
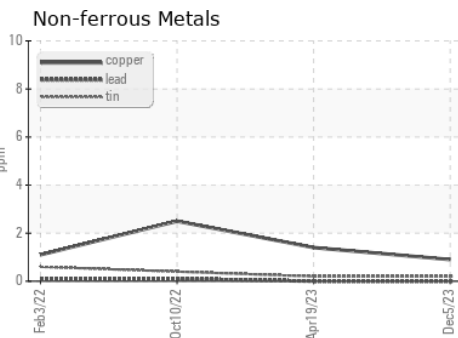
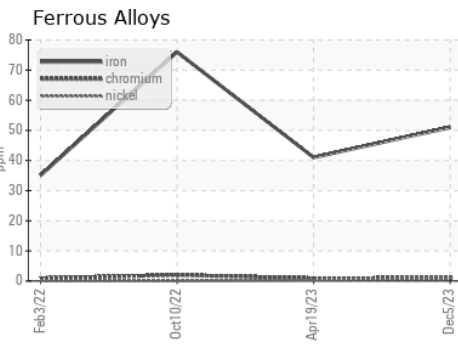
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	14.6	14.1	15.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874091 **Recieved** : 30 Jan 2024
Lab Number : **06074459** **Diagnosed** : 31 Jan 2024
Unique Number : 10856550 **Diagnostician** : Sean Felton
Test Package : FLEET

FRESHPOINT
 8801 EXCHANGE DRIVE
 ORLANDO, FL
 US 32809
 Contact: CRAIG EVANS
 evans_craig@sbcglobal.net
 T:
 F:

Certificate L2367
 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)