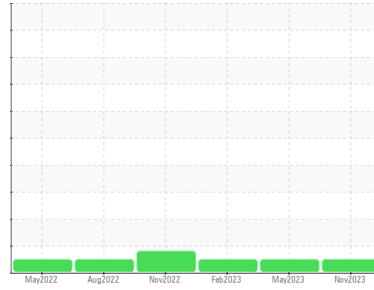




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
149563
 Component
Diesel Engine
 Fluid
VALVOLINE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2	
Sample Number	Client Info	IL0034291	IL05853000	IL05771180	
Sample Date	Client Info	01 Nov 2023	08 May 2023	06 Feb 2023	
Machine Age	mls	Client Info	245992	208328	190663
Oil Age	mls	Client Info	0	0	0
Oil Changed	Client Info	Changed	N/A	N/A	
Sample Status		NORMAL	NORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history1	history2	
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	0.0

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>100	40	20	21
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	9	9	13
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	1	0	<1
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	39	14	35	28
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm	ASTM D5185m	49	100	65	62
Manganese	ppm	ASTM D5185m	1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	616	775	804	787
Calcium	ppm	ASTM D5185m	1554	1482	1370	1240
Phosphorus	ppm	ASTM D5185m	899	848	809	703
Zinc	ppm	ASTM D5185m	1069	1097	1090	944
Sulfur	ppm	ASTM D5185m	2624	2512	3182	2787

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	8	6	6
Sodium	ppm	ASTM D5185m		5	4	3
Potassium	ppm	ASTM D5185m	>20	24	20	11
Fuel	%	ASTM D3524	>5	1.4	<1.0	<1.0

INFRA-RED

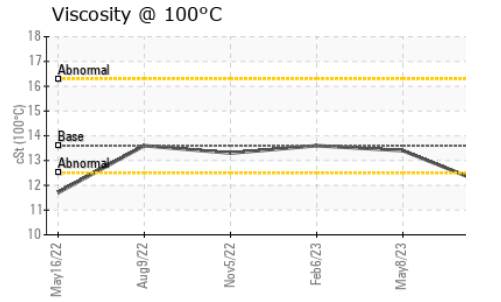
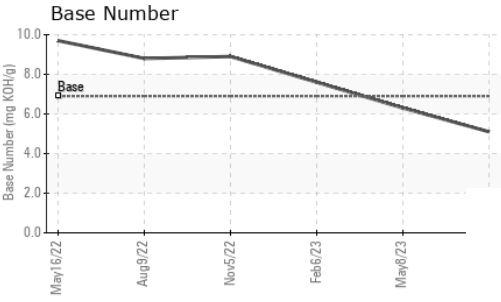
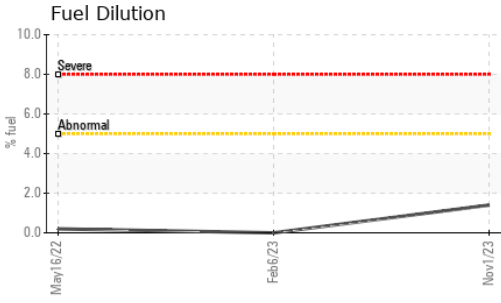
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	0.5	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	13.1	11.8	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.1	23.8	21.7

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.9	22.0	20.1
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	5.1	6.3	7.6



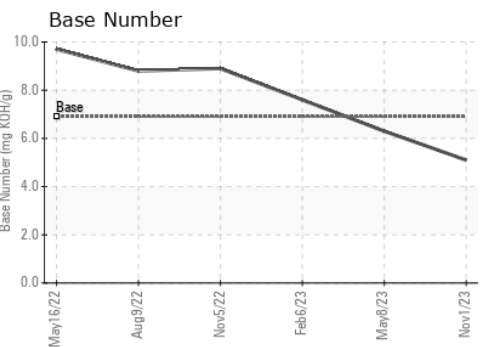
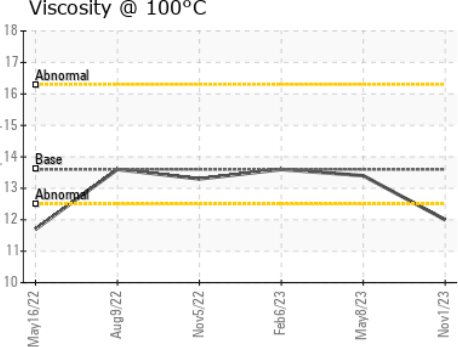
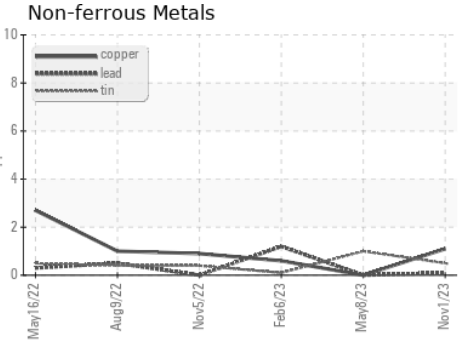
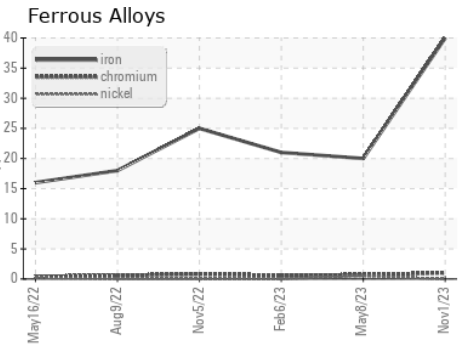
OIL ANALYSIS REPORT



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	13.6	12.0	13.4	13.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0034291 **Received** : 20 Nov 2023
Lab Number : 06011968 **Diagnosed** : 22 Nov 2023
Unique Number : 10751112 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, 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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