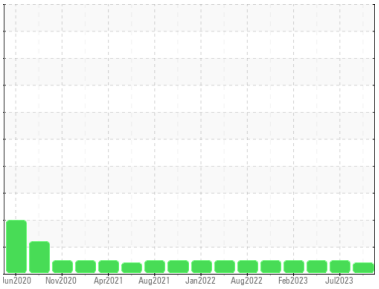
PROBLEM SUMMARY

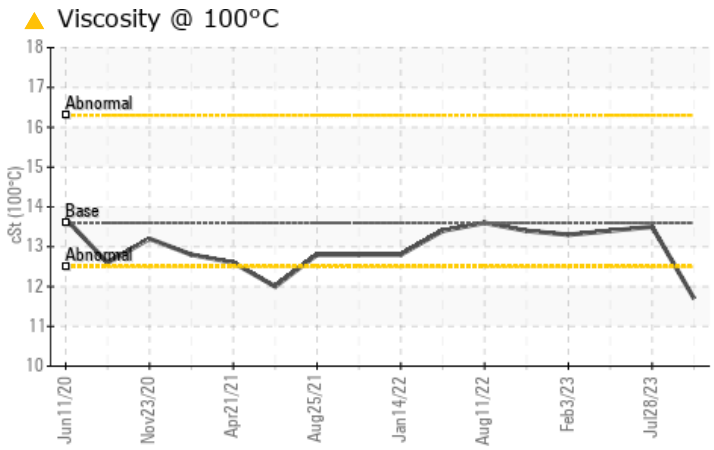
Sample Rating Trend



VISCOSITY

Machine Id
5012902
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				**ATTENTION**	NORMAL	NORMAL
Visc @ 100°C	cSt	ASTM D445	13.6	▲ **11.7**	13.5	13.4

Customer Id: IDETAMFL
Sample No.: IL0034256
Lab Number: 05996482
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

28 Jul 2023 Diag: Sean Felton

NORMAL

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

03 May 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

03 Feb 2023 Diag: Wes Davis

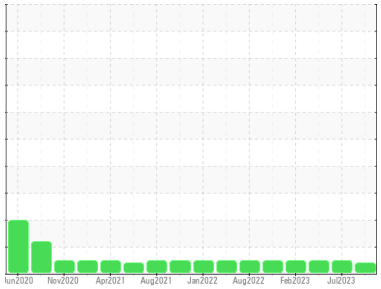
NORMAL

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
5012902
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

DIAGNOSIS

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

Wear
All component wear rates are normal.

Contamination
Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**IL0034256**	IL05934641	IL05840489
Sample Date		Client Info		**30 Oct 2023**	28 Jul 2023	03 May 2023
Machine Age	mls	Client Info		**283481**	260217	236875
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	N/A	N/A
Sample Status				**ATTENTION**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**50**	39	26
Chromium	ppm	ASTM D5185m	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**<1**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**6**	6	4
Lead	ppm	ASTM D5185m	>40	**0**	0	0
Copper	ppm	ASTM D5185m	>330	**2**	2	<1
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	39	**23**	29	28
Barium	ppm	ASTM D5185m	1	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	49	**110**	90	67
Manganese	ppm	ASTM D5185m	1	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	616	**661**	810	801
Calcium	ppm	ASTM D5185m	1554	**1477**	1642	1439
Phosphorus	ppm	ASTM D5185m	899	**872**	960	794
Zinc	ppm	ASTM D5185m	1069	**1105**	1216	1054
Sulfur	ppm	ASTM D5185m	2624	**3010**	3251	2676

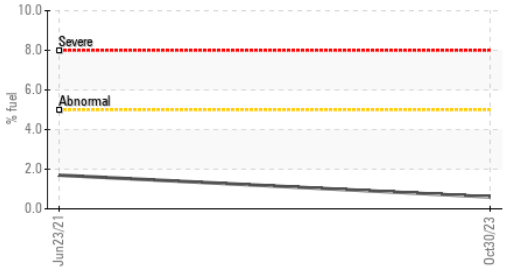
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**9**	11	5
Sodium	ppm	ASTM D5185m		**0**	5	4
Potassium	ppm	ASTM D5185m	>20	**7**	4	5
Fuel	%	ASTM D3524	>5	**0.6**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.8**	0.7	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**13.4**	13.5	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**28.6**	27.1	24.0

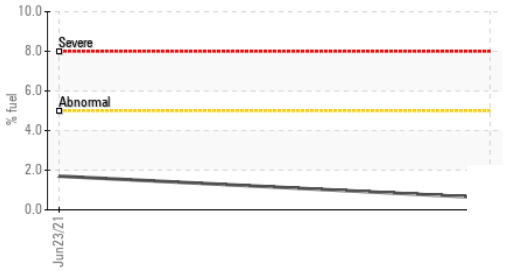
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**27.7**	26.0	24.4
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	**4.4**	4.7	4.3

OIL ANALYSIS REPORT

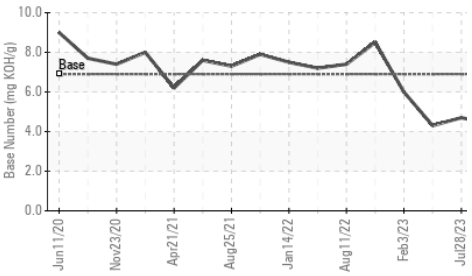
Fuel Dilution



Fuel Dilution



Base Number

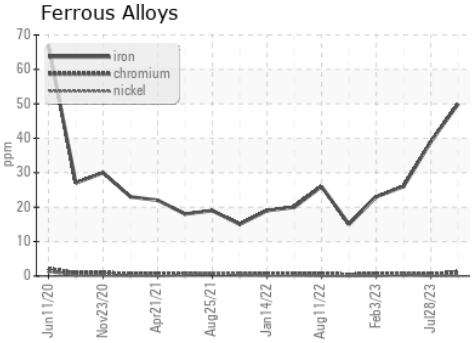


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

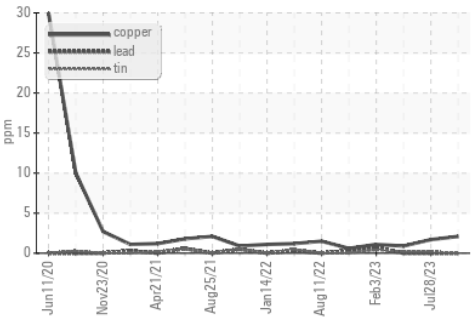
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.6	▲ **11.7**	13.5	13.4

GRAPHS

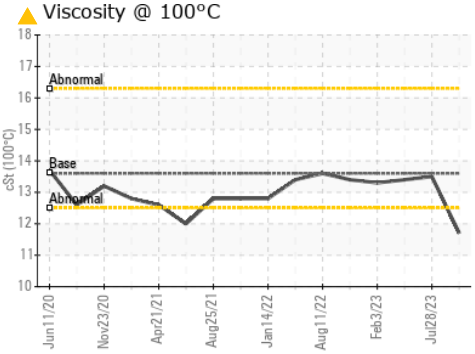
Ferrous Alloys



Non-ferrous Metals



▲ Viscosity @ 100°C



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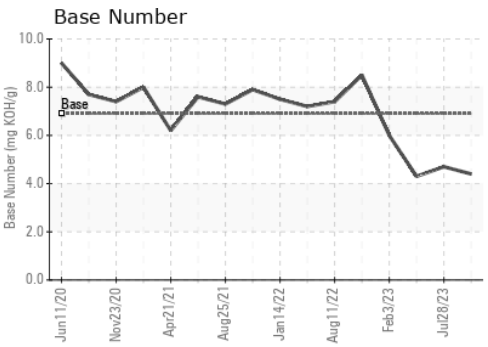

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0034256 **Received** : 02 Nov 2023
Lab Number : 05996482 **Diagnosed** : 06 Nov 2023
Unique Number : 10724842 **Diagnostician** : Jonathan Hester
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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