

OIL ANALYSIS REPORT

Sample Rating Trend



INTERNATIONAL 5018196

Diesel Engine Fluid VALVOLINE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

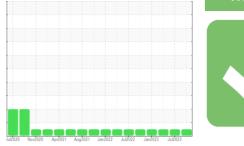
All component wear rates are normal.

Contamination

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

Fluid Condition

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

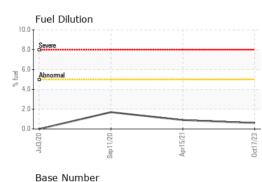


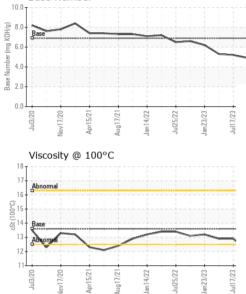


			2020 Apr2021 Aug2021		Jul2023	la i a ta se O
SAMPLE INFORM	/IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		IL0034258	IL05911764	IL05832365
Sample Date		Client Info		17 Oct 2023	17 Jul 2023	19 Apr 2023
Machine Age	mls	Client Info		266092	250811	234226
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	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	28	28	23
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	8	7
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	3	3	2
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	39	26	29	45
Barium	ppm	ASTM D5185m	1	0	0	0
Molybdenum	ppm	ASTM D5185m	49	83	84	74
Manganese	ppm	ASTM D5185m	1	0	<1	<1
Magnesium	ppm	ASTM D5185m	616	600	649	737
Calcium	ppm	ASTM D5185m	1554	1300	1384	1467
Phosphorus	ppm	ASTM D5185m	899	742	802	800
Zinc	ppm	ASTM D5185m	1069	949	1062	1136
Sulfur	ppm	ASTM D5185m	2624	2723	2605	3061
CONTAMINANTS	5	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		5	5	4
Sodium	ppm	ASTM D5185m		0	3	2
Potassium	ppm	ASTM D5185m	>20	4	4	3
Fuel	%	ASTM D3524	>5	0.6	<1.0	<1.0
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.6	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	12.2	12.7	12.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.1	24.9	24.4
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.0	22.2	21.6
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	4.9	5.2	5.3



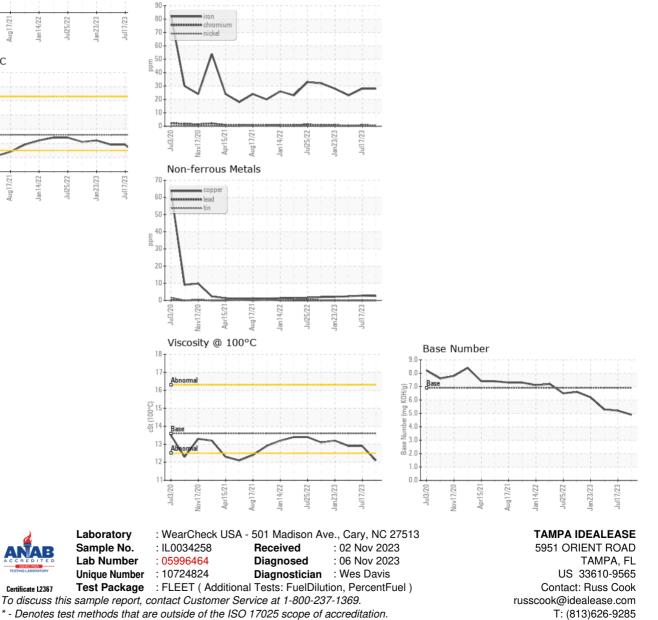
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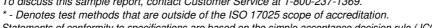




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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 PROPERT	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.6	12.1	12.9	12.9
GRAPHS						

Ferrous Alloys





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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Contact/Location: Russ Cook - IDETAMFL

F: (844)270-1356