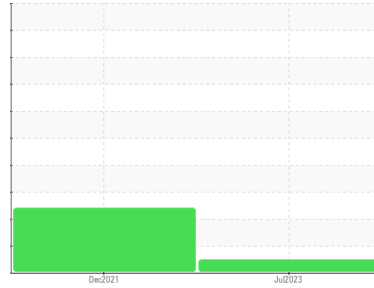




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
162229

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	IL05931882	IL05443773	---
Sample Date	Client Info	26 Jul 2023	20 Dec 2021	---
Machine Age	hrs	Client Info	4594	1058
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	---
Sample Status		NORMAL	ABNORMAL	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	0.6
Glycol	WC Method		NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	32	60
Chromium	ppm	ASTM D5185m	>20	2	2
Nickel	ppm	ASTM D5185m	>4	0	<1
Titanium	ppm	ASTM D5185m		0	<1
Silver	ppm	ASTM D5185m	>3	0	1
Aluminum	ppm	ASTM D5185m	>20	7	▲ 24
Lead	ppm	ASTM D5185m	>40	4	6
Copper	ppm	ASTM D5185m	>330	2	26
Tin	ppm	ASTM D5185m	>15	1	4
Antimony	ppm	ASTM D5185m		---	0
Vanadium	ppm	ASTM D5185m		<1	0
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	250	10	33
Barium	ppm	ASTM D5185m	10	0	4
Molybdenum	ppm	ASTM D5185m	100	55	64
Manganese	ppm	ASTM D5185m		<1	5
Magnesium	ppm	ASTM D5185m	450	903	452
Calcium	ppm	ASTM D5185m	3000	1292	1739
Phosphorus	ppm	ASTM D5185m	1150	1034	935
Zinc	ppm	ASTM D5185m	1350	1261	1113
Sulfur	ppm	ASTM D5185m	4250	3276	2515

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	7	▲ 45
Sodium	ppm	ASTM D5185m	>216	2	4
Potassium	ppm	ASTM D5185m	>20	17	72

INFRA-RED

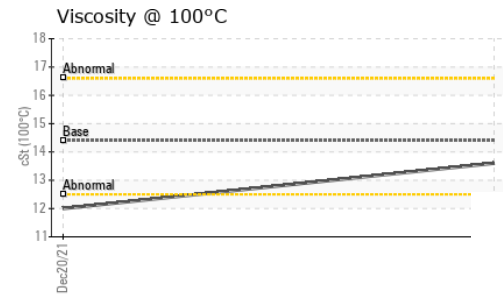
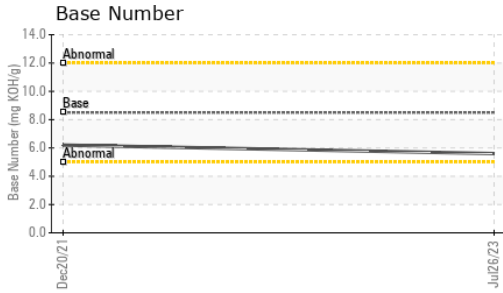
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	12.1	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.2	24.5

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	22.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.6	6.2



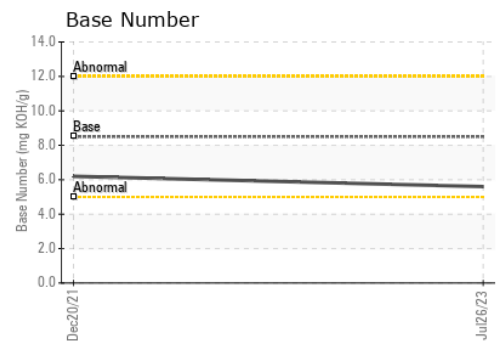
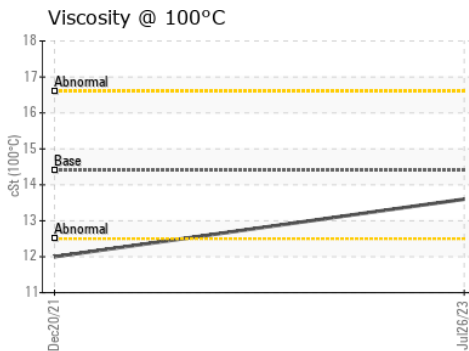
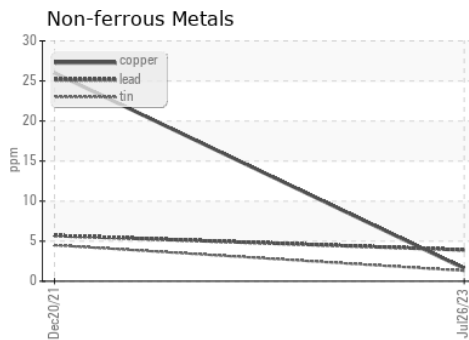
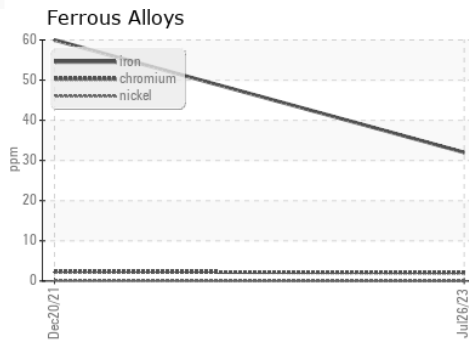
OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	13.6	12.0	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL05931882 **Received** : 23 Aug 2023
Lab Number : **05931882** **Diagnosed** : 24 Aug 2023
Unique Number : 10617153 **Diagnostician** : Angela Borella
Test Package : FLEET

RUSH TRUCK LEASING - CINCINNATI IDEALEASE
 11777 HIGHWAY DRIVE
 CINCINNATI, OH
 US 45241
 Contact: ROBERT BAIER
 baierr@rushenterprises.com
 T: (513)657-7901
 F: (513)733-0537

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)