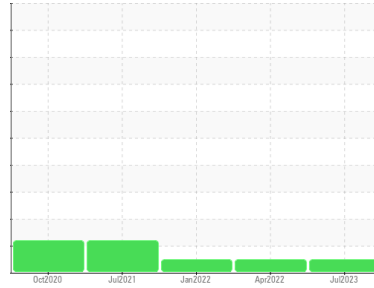




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
162115

Component
Diesel Engine

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

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			IL05931880	IL05515237	IL05481057
Sample Date	Client Info			27 Jul 2023	01 Apr 2022	20 Jan 2022
Machine Age	mls	Client Info		202150	2965	2334
Oil Age	mls	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	27	14	30
Chromium	ppm	ASTM D5185m	>20	2	1	4
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	7	4	17
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	3	4	21
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Antimony	ppm	ASTM D5185m		---	---	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<1	7	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	61	62	59
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m	450	984	901	1005
Calcium	ppm	ASTM D5185m	3000	1184	1147	1208
Phosphorus	ppm	ASTM D5185m	1150	967	1043	1086
Zinc	ppm	ASTM D5185m	1350	1237	1262	1364
Sulfur	ppm	ASTM D5185m	4250	3317	2669	2693

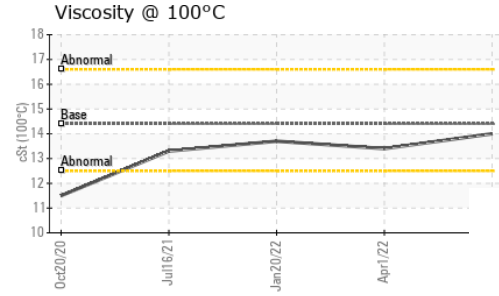
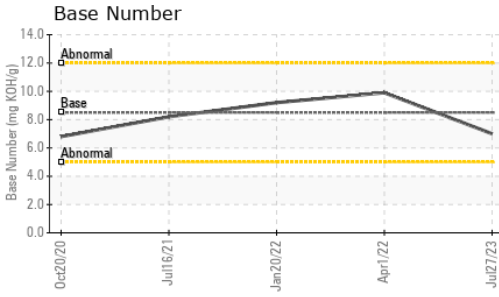
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	8	7
Sodium	ppm	ASTM D5185m	>216	3	1	1
Potassium	ppm	ASTM D5185m	>20	15	10	49

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	1.6	1.3	1.4
Nitration	Abs/cm	*ASTM D7624	>20	11.2	7.9	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.5	22.3	24.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	15.3	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.0	9.9	9.2



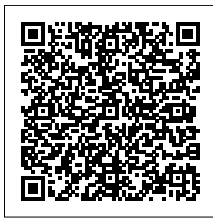
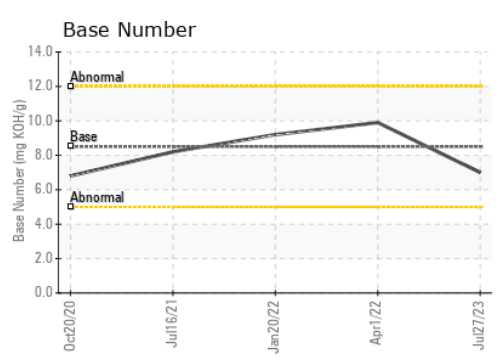
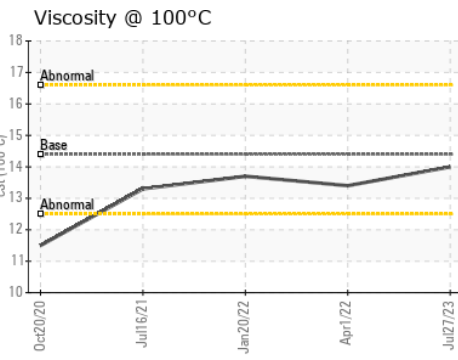
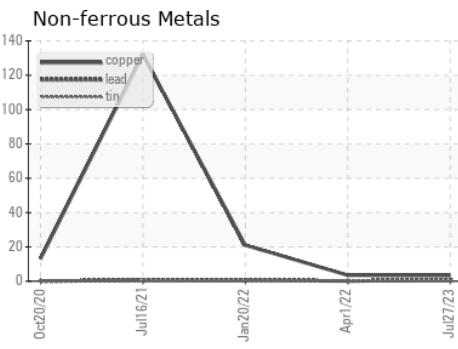
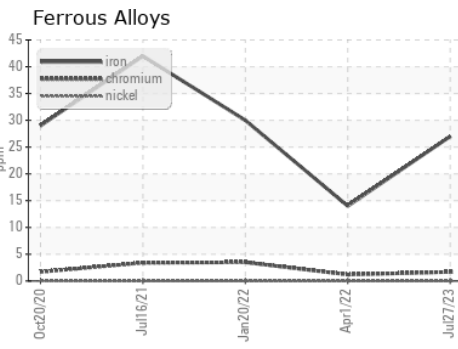
OIL ANALYSIS REPORT



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	14.4	14.0	13.4	13.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL05931880 **Received** : 23 Aug 2023
Lab Number : **05931880** **Diagnosed** : 24 Aug 2023
Unique Number : 10617151 **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

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)