



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**162102**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

### RECOMMENDATION

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL06241305</b>	IL05951243	IL05811283
Sample Date		Client Info		<b>02 Jul 2024</b>	10 Aug 2023	27 Feb 2023
Machine Age	hrs	Client Info		<b>9729</b>	7801	665
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>18</b>	21	14
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	6	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the oil.

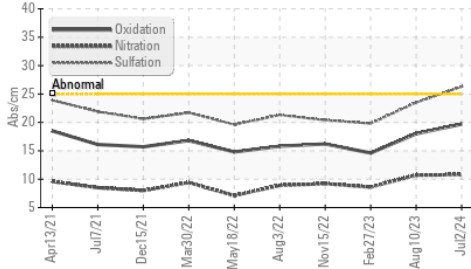
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	6
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.1</b>	1.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.8</b>	10.7	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.3</b>	23.5	19.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

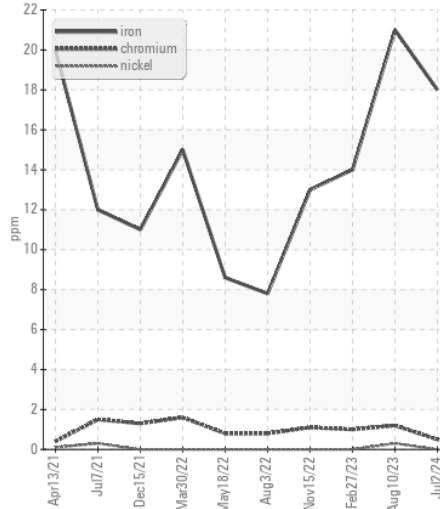
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	<b>4</b>	3	2
Boron	ppm	ASTM D5185m	250	<b>16</b>	4	1
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>44</b>	58	54
Manganese	ppm	ASTM D5185m		<b>2</b>	1	<1
Magnesium	ppm	ASTM D5185m	450	<b>405</b>	937	863
Calcium	ppm	ASTM D5185m	3000	<b>1818</b>	1291	1139
Phosphorus	ppm	ASTM D5185m	1150	<b>921</b>	1012	971
Zinc	ppm	ASTM D5185m	1350	<b>1110</b>	1300	1184
Sulfur	ppm	ASTM D5185m	4250	<b>3492</b>	3790	3205
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	18.0	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>5.5</b>	7.4	8.8
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.0</b>	13.6	13.5

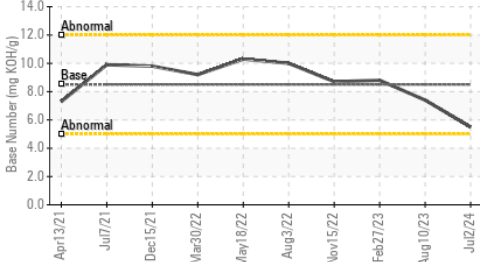
**FT-IR (Direct Trend)**



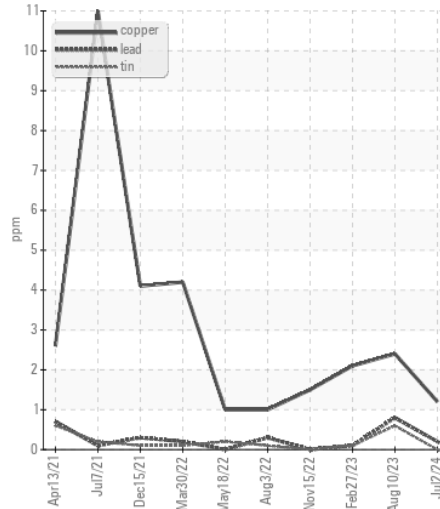
**Ferrous Alloys**



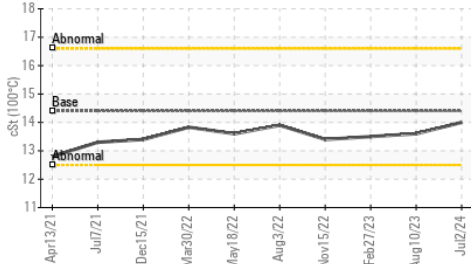
**Base Number**



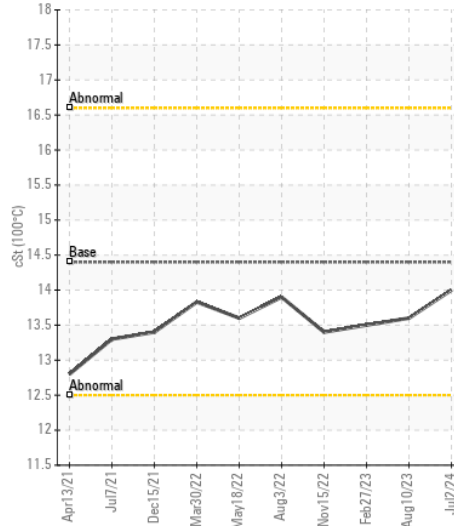
**Non-ferrous Metals**



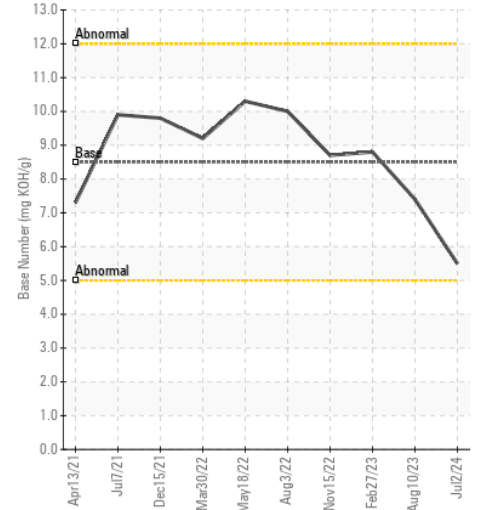
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : IL06241305

**Lab Number** : 06241305

**Unique Number** : 11130139

**Test Package** : FLEET

**Received** : 19 Jul 2024

**Tested** : 20 Jul 2024

**Diagnosed** : 20 Jul 2024 - Wes Davis

**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)