



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

## Area Machine Id **NSE-AL-TRACTOR (NEW SOUTH EXPRESS)**

### Component **AUTOCAR NSE21002**

### Fluid **Diesel Engine**

### **PETRO CANADA 15W40 (17 QTS)**

#### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>NL0002281</b>	NL0002046	NL0001753
Sample Date		Client Info		<b>02 Jul 2024</b>	20 Feb 2024	08 Apr 2023
Machine Age	hrs	Client Info		<b>13466</b>	11514	10405
Oil Age	hrs	Client Info		<b>607</b>	10405	2878
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

#### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>15</b>	14	41
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	7
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	0
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.

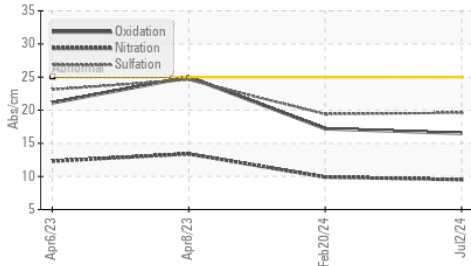
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	3	5
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	0.9	1.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.5</b>	9.9	13.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.6</b>	19.4	24.6
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

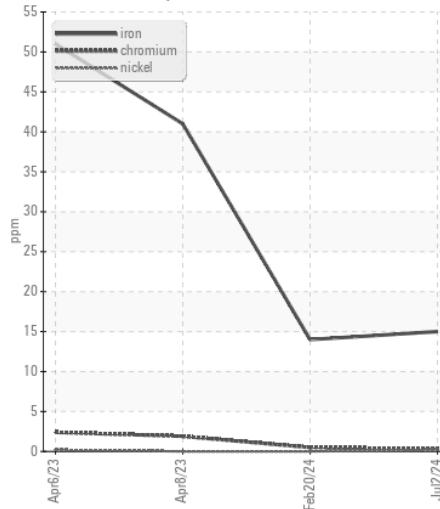
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	<1	0
Boron	ppm	ASTM D5185m		<b>2</b>	4	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	2
Molybdenum	ppm	ASTM D5185m		<b>54</b>	54	54
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>873</b>	981	802
Calcium	ppm	ASTM D5185m		<b>990</b>	1153	952
Phosphorus	ppm	ASTM D5185m		<b>1048</b>	1091	843
Zinc	ppm	ASTM D5185m		<b>1230</b>	1266	1050
Sulfur	ppm	ASTM D5185m		<b>3557</b>	3309	2712
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.5</b>	17.2	25.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.8</b>	7.6	4.7
Visc @ 100°C	cSt	ASTM D445		<b>13.8</b>	12.6	12.5

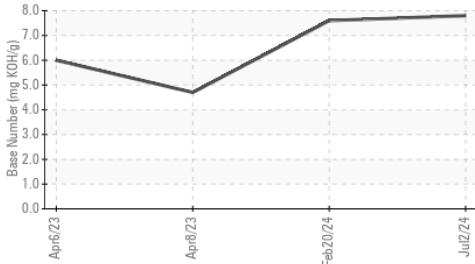
**FT-IR (Direct Trend)**



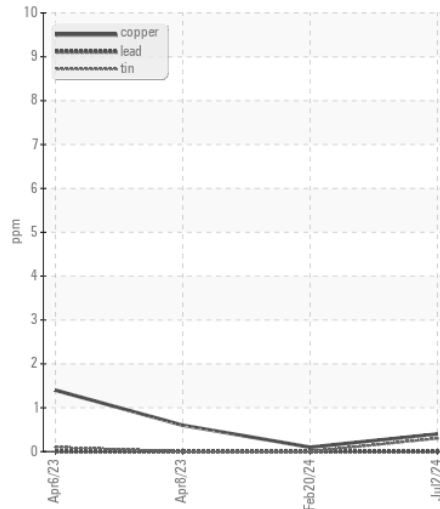
**Ferrous Alloys**



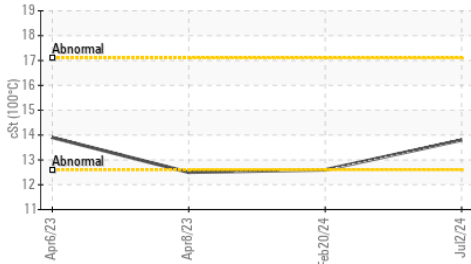
**Base Number**



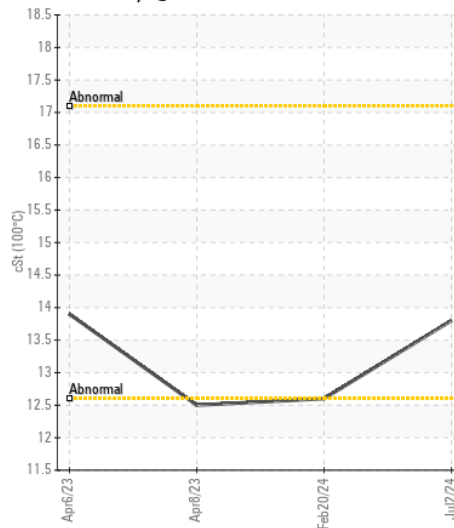
**Non-ferrous Metals**



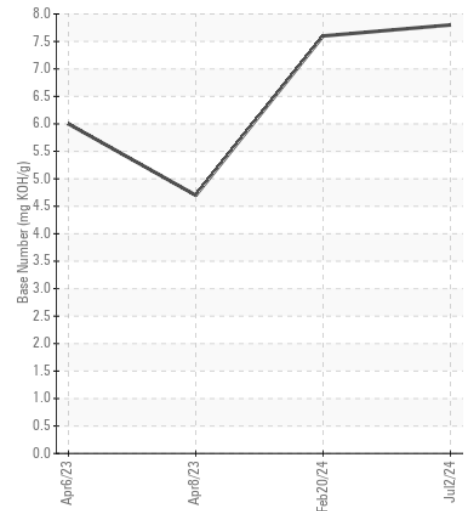
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

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

**Sample No.** : NL0002281

**Lab Number** : 06231882

**Unique Number** : 11115375

**Test Package** : FLEET

**Received** : 09 Jul 2024

**Tested** : 10 Jul 2024

**Diagnosed** : 10 Jul 2024 - Wes Davis

**KIRK NATIONALEASE - SHOP 49**

601 England Rd.

Lincoln, AL

US 35096

Contact: Skip Womack

shop49@knl.cc

T: (205)548-3004

F: (205)548-3006

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)