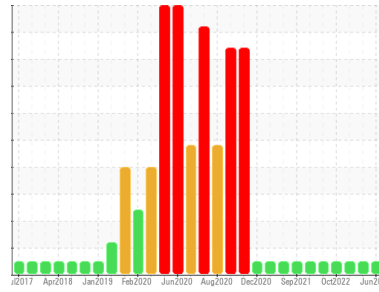


# OIL ANALYSIS REPORT



Machine Id  
**JOHN DEERE 744K LOADER 600-164**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (9 GAL)**

Sample Rating Trend



**NORMAL**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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			<b>PCA0121254</b>	PCA0106843	PCA0082147
Sample Date	Client Info			<b>26 Jun 2024</b>	04 Oct 2023	10 Jul 2023
Machine Age	hrs	Client Info		<b>16600</b>	1561	14524
Oil Age	hrs	Client Info		<b>500</b>	500	510
Oil Changed	Client Info			<b>Changed</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<b>&lt;1.0</b>	<1.0	<1.0	
Water	WC Method	>0.21	<b>NEG</b>	NEG	NEG	
Glycol	WC Method		<b>NEG</b>	NEG	NEG	

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>51	<b>7</b>	10	8
Chromium	ppm	ASTM D5185m	>11	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>31	<b>2</b>	2	0
Lead	ppm	ASTM D5185m	>26	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>26	<b>2</b>	<1	<1
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0

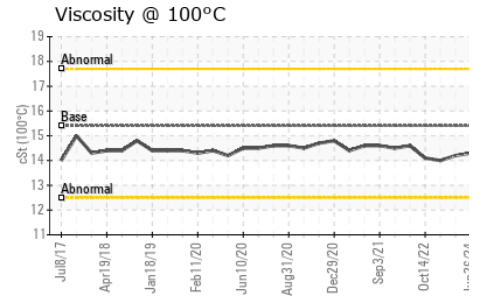
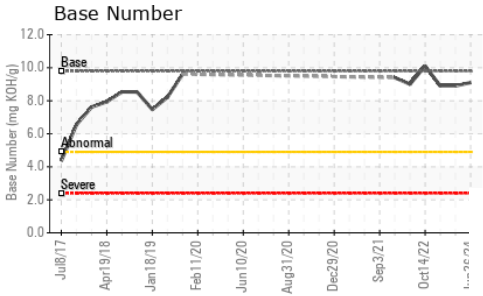
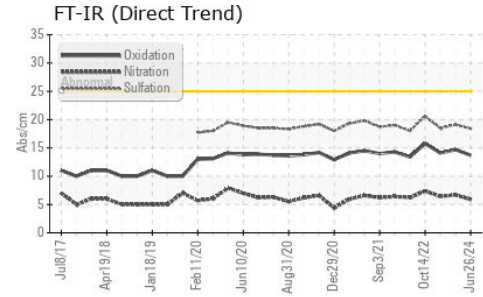
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<b>4</b>	0	8
Barium	ppm	ASTM D5185m	0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	65	62
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	1010	<b>1014</b>	1025	1023
Calcium	ppm	ASTM D5185m	1070	<b>1149</b>	1097	1146
Phosphorus	ppm	ASTM D5185m	1150	<b>1072</b>	1091	1071
Zinc	ppm	ASTM D5185m	1270	<b>1315</b>	1339	1268
Sulfur	ppm	ASTM D5185m	2060	<b>3220</b>	3894	3621

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>22	<b>4</b>	2	2
Sodium	ppm	ASTM D5185m	>31	<b>2</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.9</b>	6.7	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.4</b>	19.1	18.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	14.7	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>9.1</b>	8.9	8.9

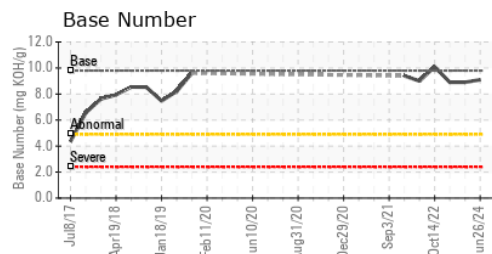
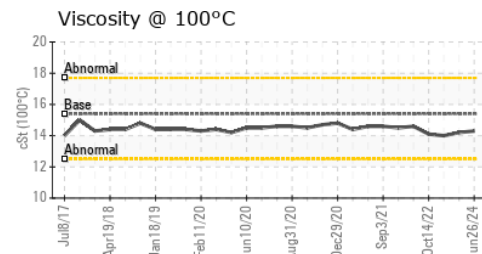
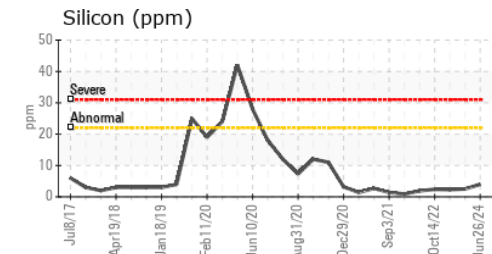
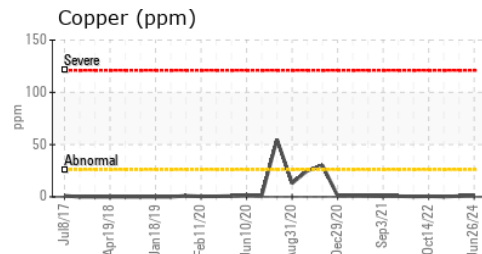
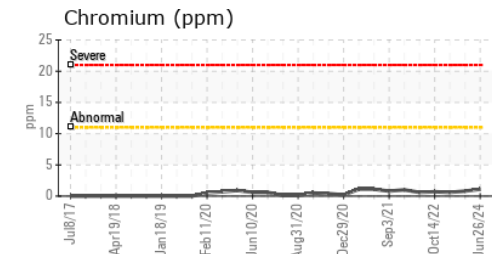
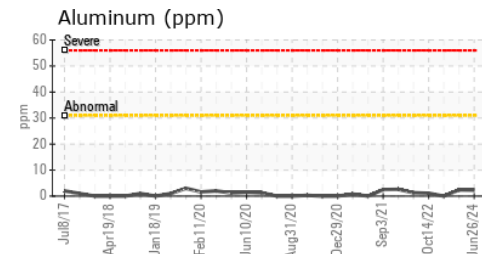
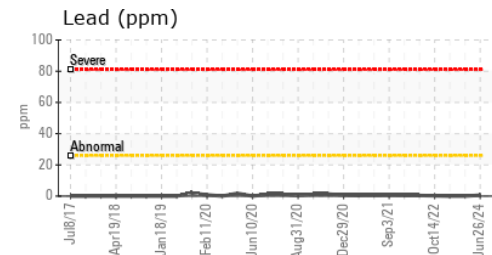
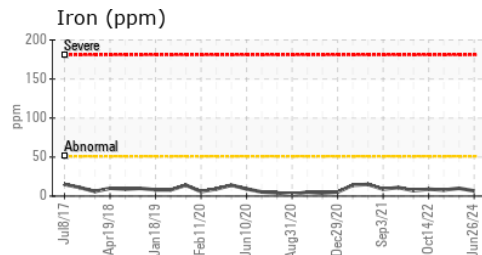
# OIL ANALYSIS REPORT



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	>0.21	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.3</b>	14.2	14.0

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0121254      **Received** : 08 Jul 2024  
**Lab Number** : 06229928      **Tested** : 09 Jul 2024  
**Unique Number** : 11113421      **Diagnosed** : 09 Jul 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**GE MARSHALL EXCAVATION**  
 1351 JOLIET RD  
 VALPARAISO, IN  
 US 46385  
 Contact: MARK STEFFEL  
 mark.steffel@gemarshall.com

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)