



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Area  
**ETS**  
 Machine Id  
**[ETS] 61**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (24 QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0961472</b>	WC0901461	WC0843738
Sample Date		Client Info		<b>08 Jul 2024</b>	03 Apr 2024	11 Dec 2023
Machine Age	mls	Client Info		<b>91588</b>	84416	77573
Oil Age	mls	Client Info		<b>12000</b>	12000	12000
Filter Age	mls	Client Info		<b>12000</b>	12000	12000
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	MARGINAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>5</b>	8	8
Chromium	ppm	ASTM D5185m	>5	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>15	<b>&lt;1</b>	2	2
Lead	ppm	ASTM D5185m	>25	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>100	<b>1</b>	2	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

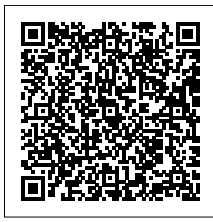
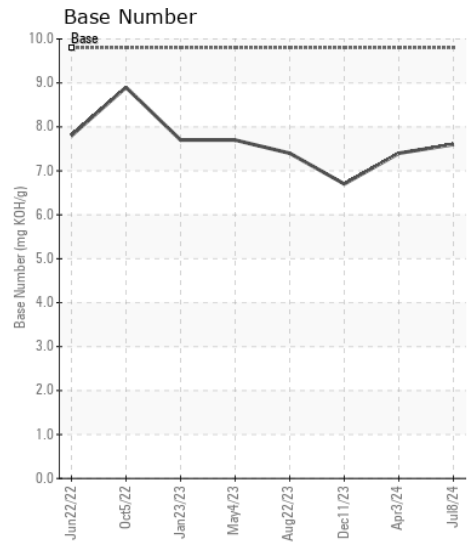
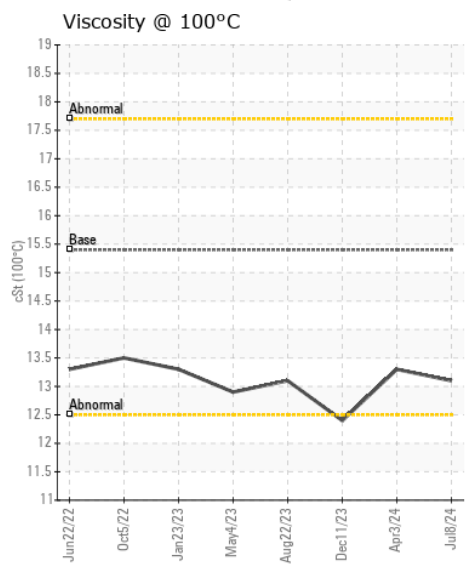
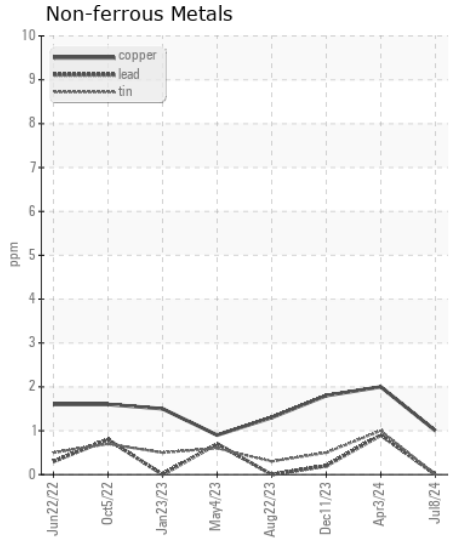
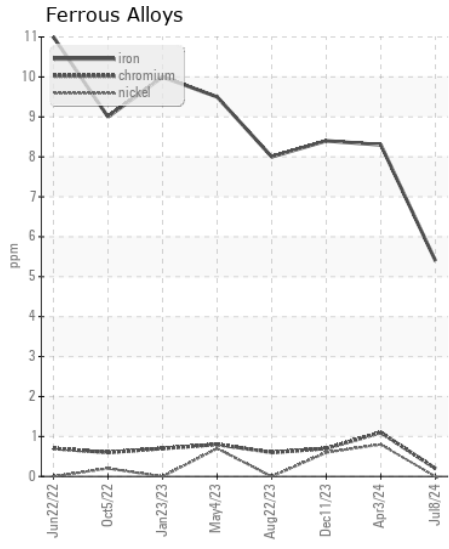
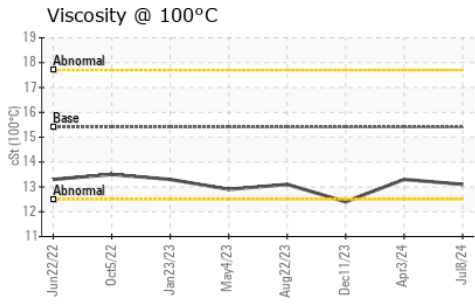
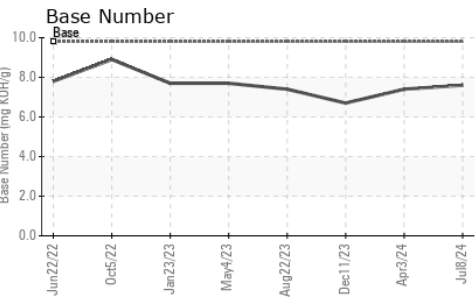
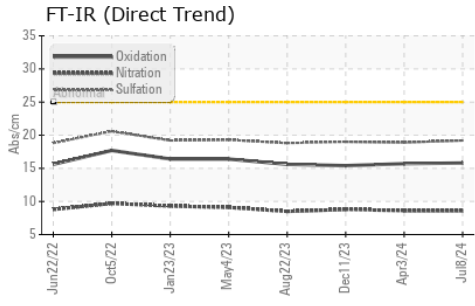
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	▲ 2.6	▲ 3.2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>6	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.2</b>	18.9	19.0
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>7</b>	6	5
Boron	ppm	ASTM D5185m	0	<b>2</b>	1	9
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	12
Molybdenum	ppm	ASTM D5185m	60	<b>58</b>	67	63
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>937</b>	1040	906
Calcium	ppm	ASTM D5185m	1070	<b>1168</b>	1159	1020
Phosphorus	ppm	ASTM D5185m	1150	<b>1045</b>	1049	973
Zinc	ppm	ASTM D5185m	1270	<b>1244</b>	1314	1199
Sulfur	ppm	ASTM D5185m	2060	<b>3368</b>	3208	2919
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.8</b>	15.7	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>7.6</b>	7.4	6.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.1</b>	13.3	▲ 12.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0961472  
**Lab Number** : 06234305  
**Unique Number** : 11123139  
**Test Package** : FLEET  
**Received** : 11 Jul 2024  
**Tested** : 12 Jul 2024  
**Diagnosed** : 12 Jul 2024 - Wes Davis

**HUMBOLDT TRANSIT AUTHORITY**  
 133 V ST  
 EUREKA, CA  
 US 95501  
 Contact: KELLY MASTERSON  
 kelly@hta.org

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)