



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
WCLSNC
Machine Id
QC230801DE
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0929369	WC0929366	WC0929365
Sample Date		Client Info		15 Apr 2024	12 Apr 2024	11 Apr 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>11	9	8	9
Chromium	ppm	ASTM D5185m	>3	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>5	2	2	2
Lead	ppm	ASTM D5185m	>2	0	3	<1
Copper	ppm	ASTM D5185m	>7	4	4	4
Tin	ppm	ASTM D5185m	>2	0	1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

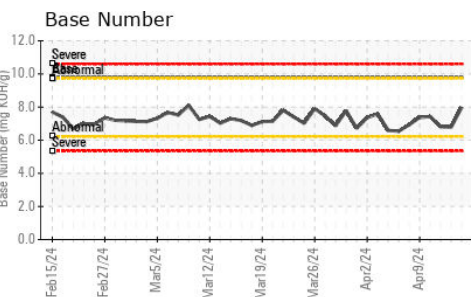
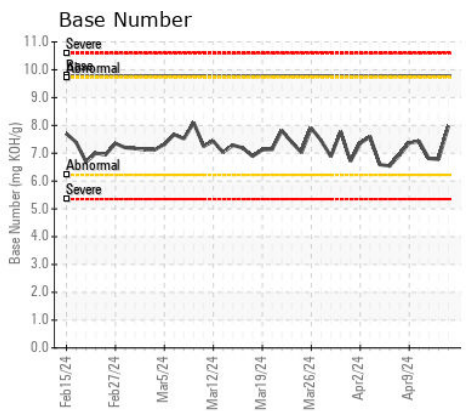
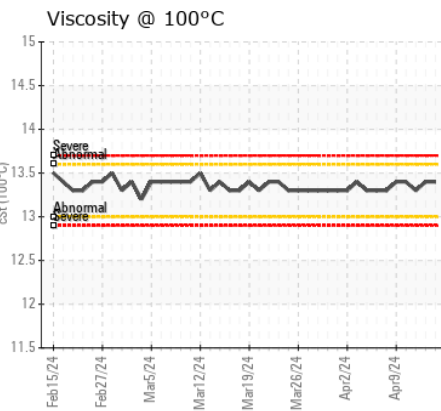
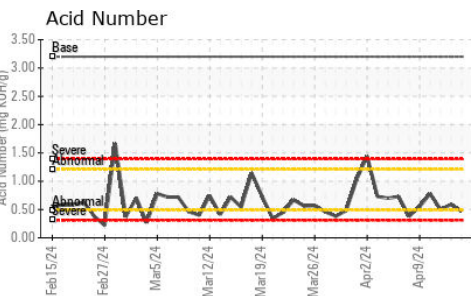
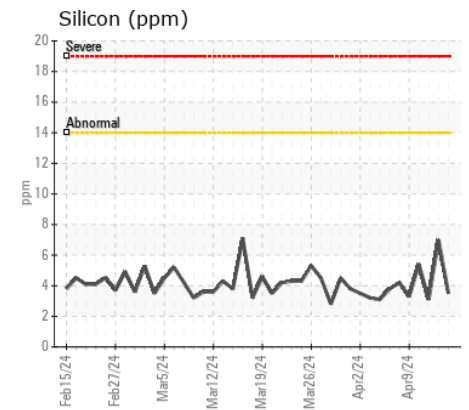
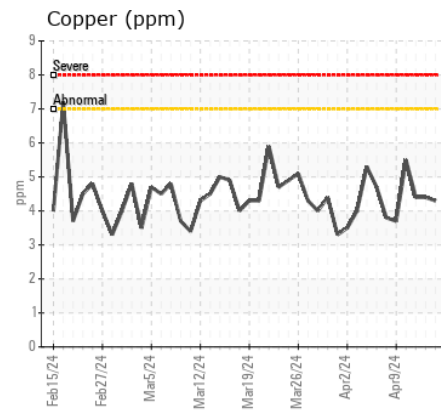
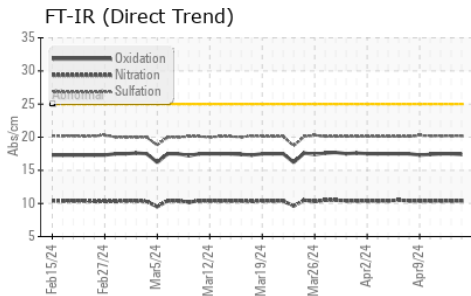
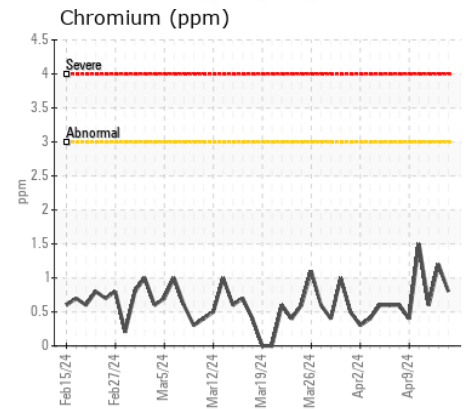
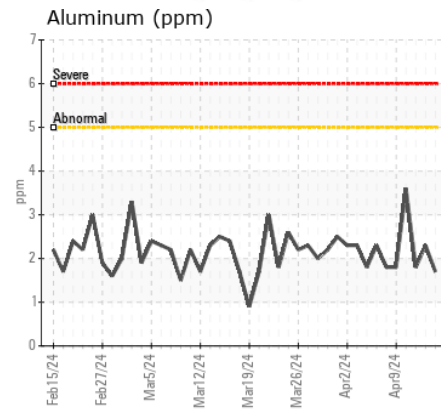
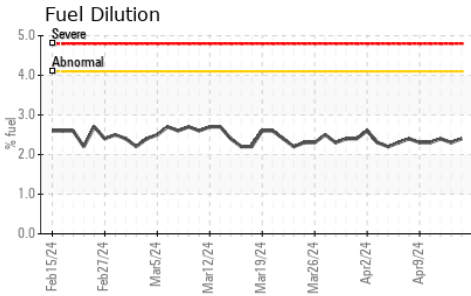
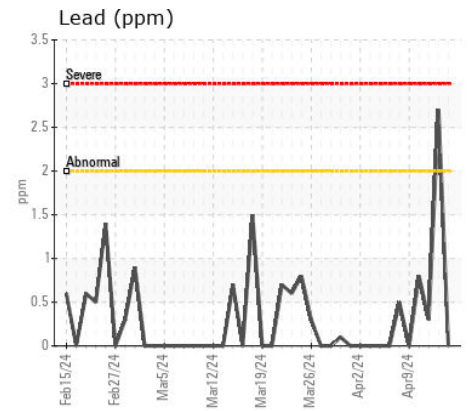
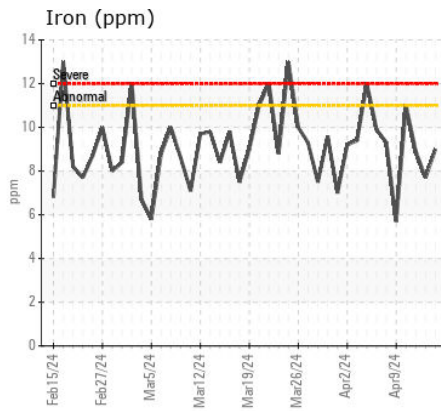
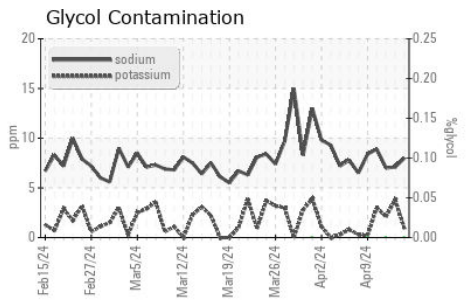
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>14	4	7	3
Potassium	ppm	ASTM D5185m	>20	<1	4	2
Fuel	%	ASTM D3524	>4.1	2.4	2.3	2.4
Water	%	ASTM D6304	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.0	NEG	0.0
Soot %	%	*ASTM D7844	>0.3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>10.8	10.4	10.4	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>20.8	20.2	20.2	20.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>13	8	7	7
Boron	ppm	ASTM D5185m	0	5	5	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	52	50	47
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	564	562	519
Calcium	ppm	ASTM D5185m	1070	1639	1635	1520
Phosphorus	ppm	ASTM D5185m	1150	702	772	684
Zinc	ppm	ASTM D5185m	1270	917	1004	900
Sulfur	ppm	ASTM D5185m	2060	2986	2855	2592
Oxidation	Abs/.1mm	*ASTM D7414	>17.9	17.4	17.5	17.5
Acid Number (AN)	mg KOH/g	ASTM D8045	3.2	0.47	0.59	0.50
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.98	6.78	6.81
Visc @ 40°C	cSt	ASTM D445	113.9	98.6	98.5	98.4
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.4	13.3
Viscosity Index (VI)	Scale	ASTM D2270	142	135	135	133



Certificate L2367

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

Sample No. : WC0929369

Lab Number : 06148875

Unique Number : 10978953

Test Package : MOB 2 (Additional Tests: FuelDilution, Glycol, KF, KV40, PercentFuel, VI)

Received : 15 Apr 2024

Tested : 19 Apr 2024

Diagnosed : 19 Apr 2024 - Jonathan Hester

WEARCHECK LUBRICATION SERVICES QA ACCOUNT

501 Madison Ave

Cary, NC

US 27513

Contact: WCLS CARY NC

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)

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