

Area
LUBES
Machine Id
467
Component
Front Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (42 QTS)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0098659	PCA0098666	WC0570562
Sample Date		Client Info		17 Jun 2024	29 Sep 2023	08 Jun 2023
Machine Age	mls	Client Info		68435	32689	14463
Oil Age	mls	Client Info		16000	16000	14177
Filter Age	mls	Client Info		16000	16000	14177
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Moderate concentration of visible metal present. All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	26	42	49
Chromium	ppm	ASTM D5185m	>6	4	11	2
Nickel	ppm	ASTM D5185m	>3	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>50	18	89	31
Lead	ppm	ASTM D5185m	>10	<1	2	0
Copper	ppm	ASTM D5185m	>50	51	▲ 222	● 151
Tin	ppm	ASTM D5185m	>6	<1	3	5
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	▲ MODER	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

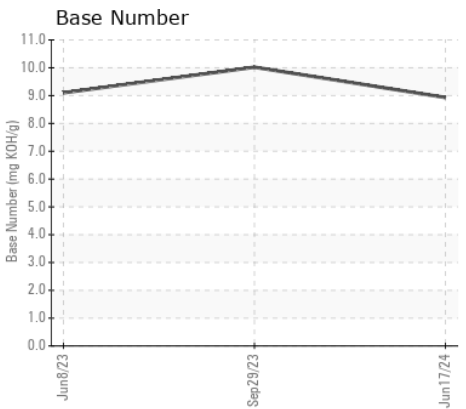
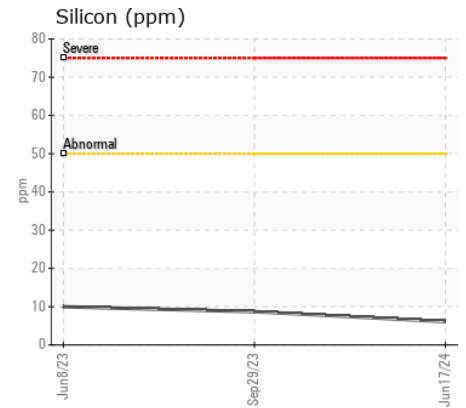
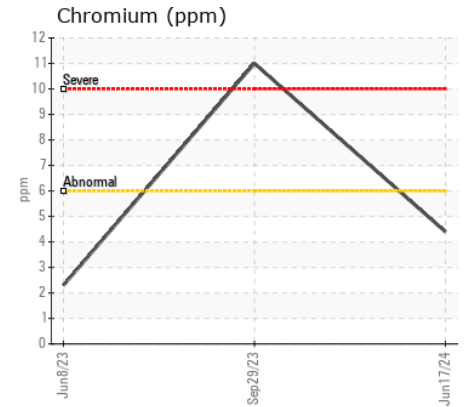
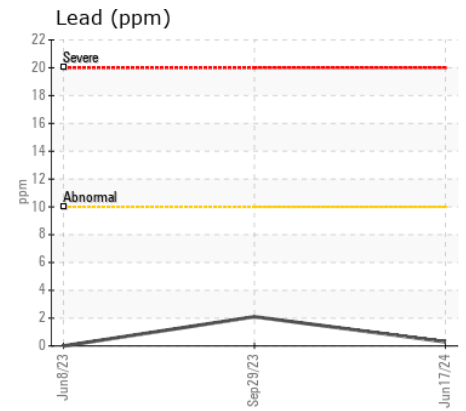
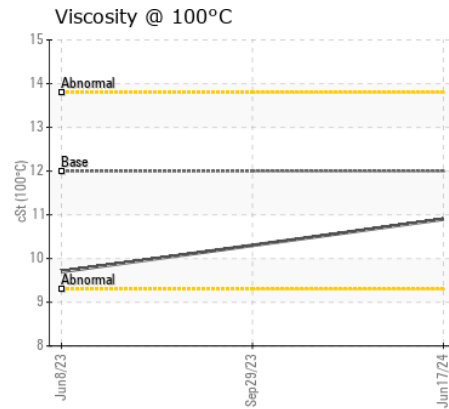
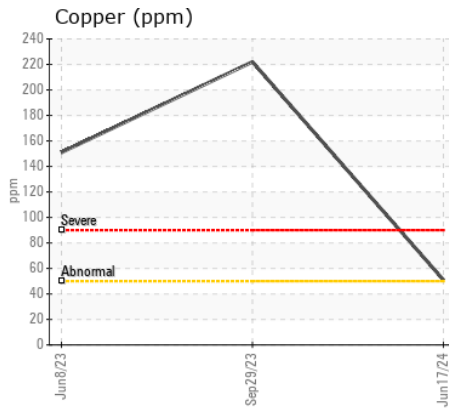
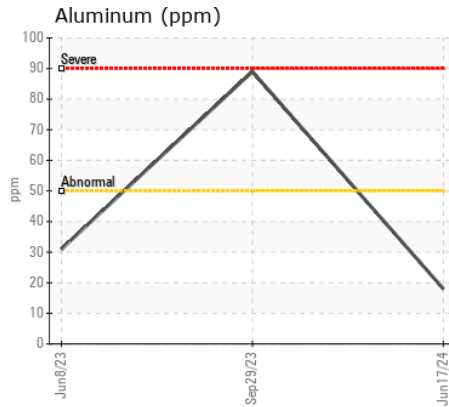
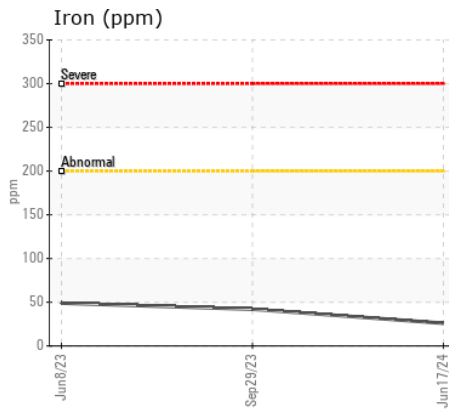
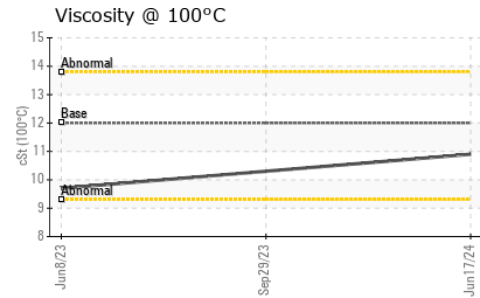
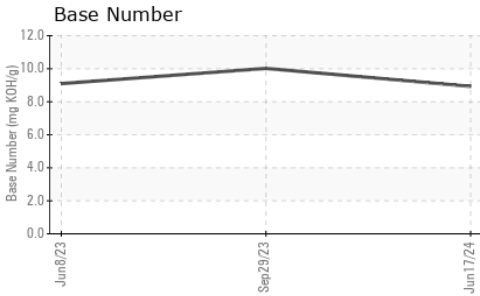
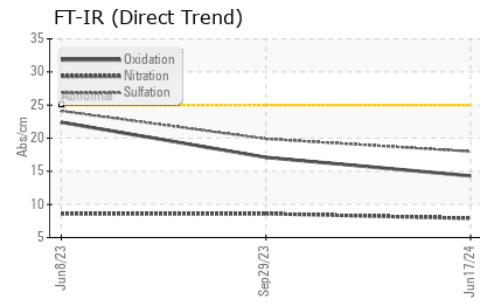
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	6	9	10
Potassium	ppm	ASTM D5185m	>20	40	216	96
Fuel		WC Method	>3.0	<1.0	<1.0	0.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.9	8.6	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	19.9	24.1
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		0	3	<1
Boron	ppm	ASTM D5185m	2	5	9	48
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	63	61	46
Manganese	ppm	ASTM D5185m	0	<1	2	3
Magnesium	ppm	ASTM D5185m	950	973	951	513
Calcium	ppm	ASTM D5185m	1050	1145	1205	1836
Phosphorus	ppm	ASTM D5185m	995	926	920	771
Zinc	ppm	ASTM D5185m	1180	1252	1153	973
Sulfur	ppm	ASTM D5185m	2600	2407	2221	2556
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	17.1	22.4
Base Number (BN)	mg KOH/g	ASTM D2896		8.93	10.02	9.10
Visc @ 100°C	cSt	ASTM D445	12.00	10.9	10.3	▲ 9.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0098659
Lab Number : 06230406
Unique Number : 11113899
Test Package : MOB 2
Received : 08 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 10 Jul 2024 - Don Baldrige

DENNIS K BURKE INC - INTERNAL SAMPLES
 555 CONSTITUTION DR
 TAUNTON, MA
 US 02780
 Contact: GREG DUNKER

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)