



Machine Id
22294
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (7 QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0123633	PCA0075787	PCA0067944
Sample Date		Client Info		15 May 2024	01 Aug 2022	10 Mar 2022
Machine Age	mls	Client Info		153350	135186	129207
Oil Age	mls	Client Info		6100	6000	8000
Filter Age	mls	Client Info		6100	6000	8000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	69	26	20
Chromium	ppm	ASTM D5185m	>20	4	2	1
Nickel	ppm	ASTM D5185m	>4	3	2	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	15	4	4
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	13	8	5
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

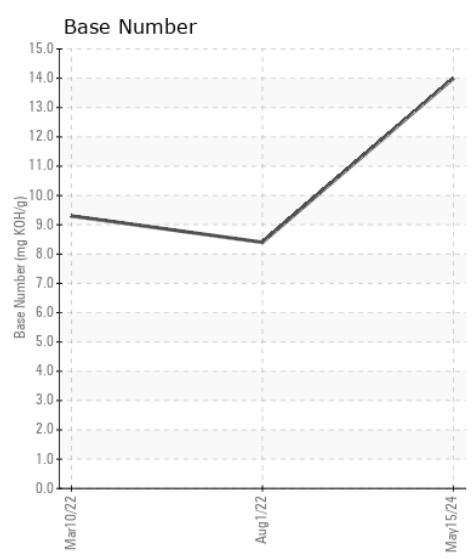
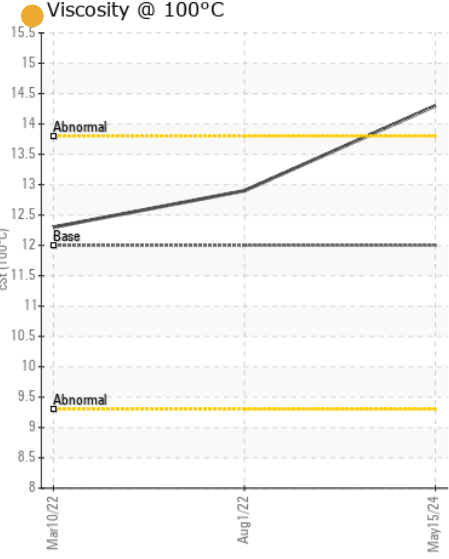
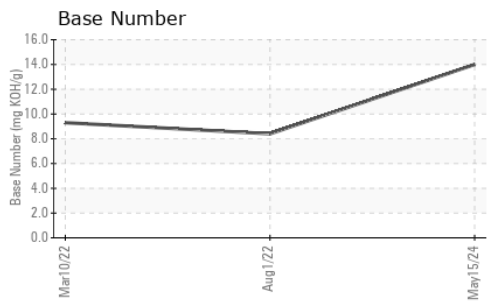
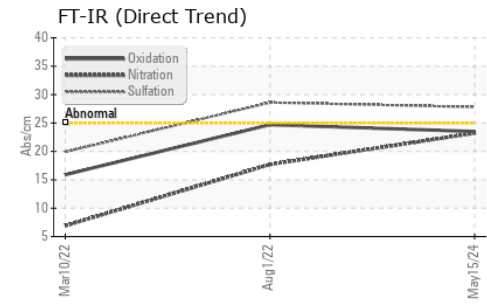
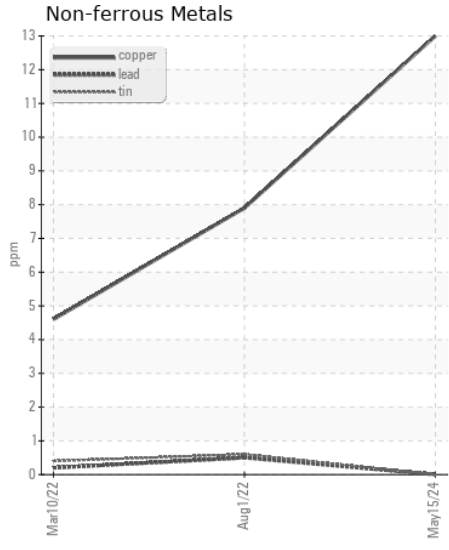
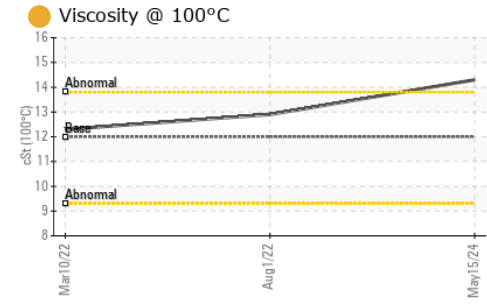
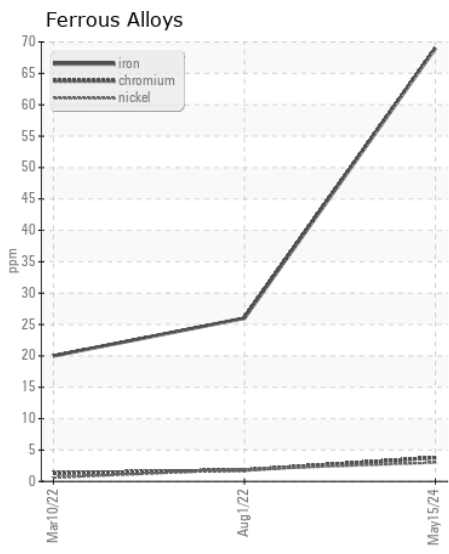
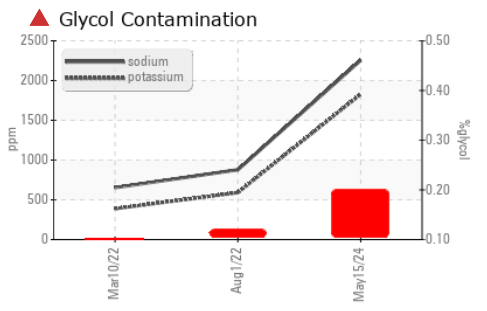
Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	20	11	11
Potassium	ppm	ASTM D5185m	>20	▲ 1828	▲ 590	▲ 388
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.20	▲ 0.12	▲ 0.10
Soot %	%	*ASTM D7844	>3	0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	23.2	17.7	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.8	28.6	19.9
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 oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		▲ 2254	▲ 878	● 653
Boron	ppm	ASTM D5185m	2	20	18	16
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	186	91	85
Manganese	ppm	ASTM D5185m	0	6	<1	<1
Magnesium	ppm	ASTM D5185m	950	943	804	910
Calcium	ppm	ASTM D5185m	1050	1112	1017	1095
Phosphorus	ppm	ASTM D5185m	995	963	700	874
Zinc	ppm	ASTM D5185m	1180	1240	1111	1162
Sulfur	ppm	ASTM D5185m	2600	3498	2615	2748
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.5	24.7	15.9
Base Number (BN)	mg KOH/g	ASTM D2896		14.0	8.4	9.3
Visc @ 100°C	cSt	ASTM D445	12.00	● 14.3	12.9	12.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0123633 **Received** : 18 Jul 2024
Lab Number : 06240113 **Tested** : 19 Jul 2024
Unique Number : 11128947 **Diagnosed** : 19 Jul 2024 - Don Baldrige
Test Package : FLEET

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 US 29536
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Certificate L2367
 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)