



Machine Id
923013-566

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (27 QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

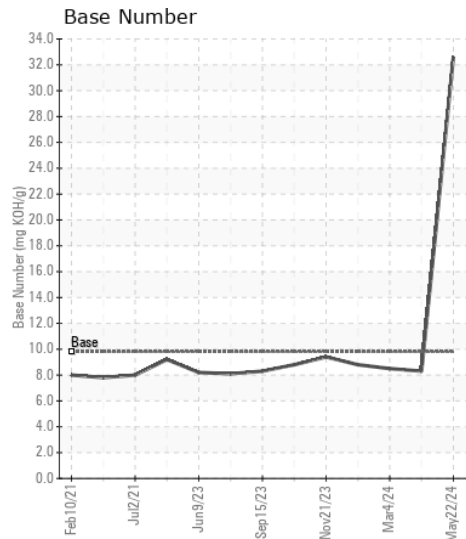
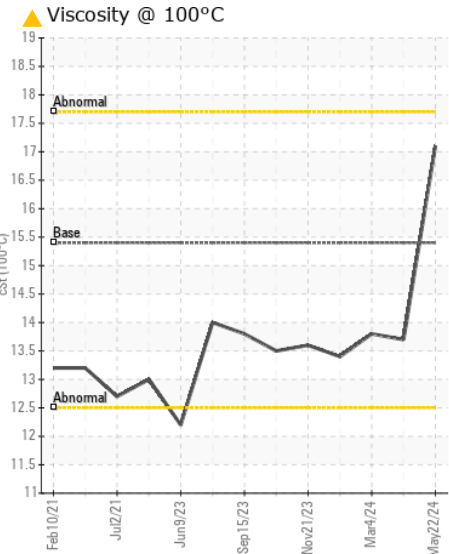
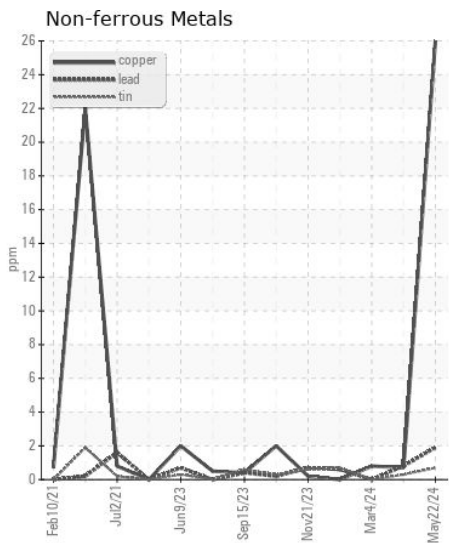
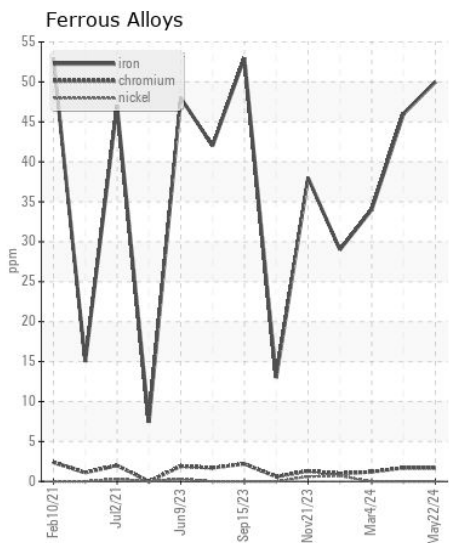
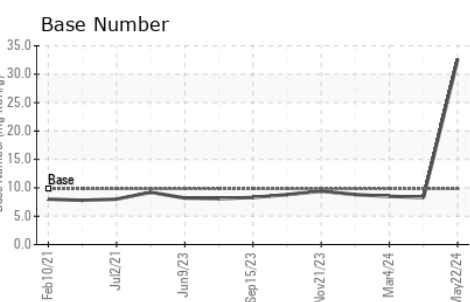
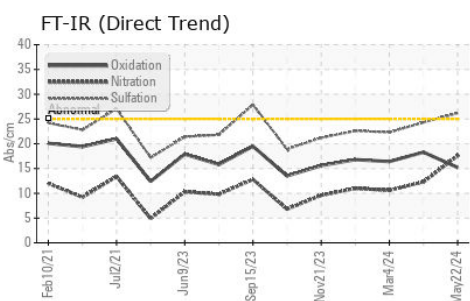
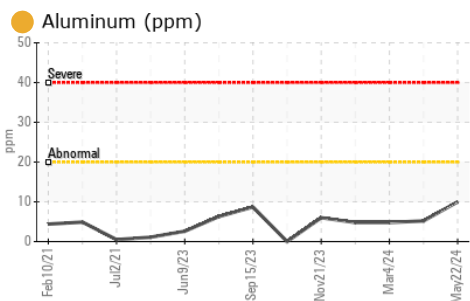
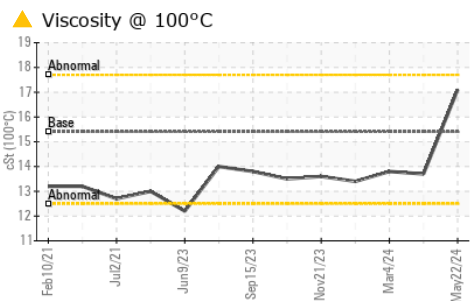
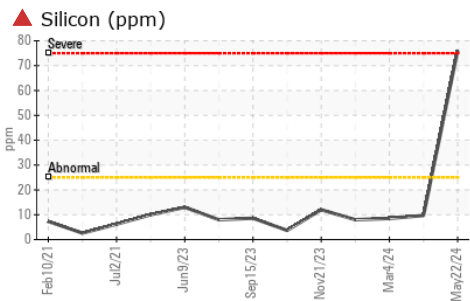
CONTAMINATION

Sodium and/or potassium levels are high. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0103057	GFL0110326	GFL0110284
Sample Date		Client Info		22 May 2024	11 Apr 2024	04 Mar 2024
Machine Age	hrs	Client Info		23614	23399	23244
Oil Age	hrs	Client Info		580	580	416
Filter Age	hrs	Client Info		580	580	416
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				SEVERE	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	50	46	34
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	10	5	5
Lead	ppm	ASTM D5185m	>40	2	<1	0
Copper	ppm	ASTM D5185m	>330	26	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	▲ 76	10	8
Potassium	ppm	ASTM D5185m	>20	▲ 111	▲ 34	12
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.1	1.6	1.2
Nitration	Abs/cm	*ASTM D7624	>20	17.6	12.3	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.2	24.3	22.3
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
Sodium	ppm	ASTM D5185m		▲ 4890	▲ 562	▲ 423
Boron	ppm	ASTM D5185m	0	267	14	5
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	272	82	81
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	944	921	943
Calcium	ppm	ASTM D5185m	1070	1135	1147	1149
Phosphorus	ppm	ASTM D5185m	1150	1149	997	973
Zinc	ppm	ASTM D5185m	1270	1363	1193	1211
Sulfur	ppm	ASTM D5185m	2060	4255	3369	2976
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	18.3	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	32.6	8.3	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 17.1	13.7	13.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103057
Lab Number : 06193260
Unique Number : 11050012
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 622 - Traverse City Hauling
 160 Hughes Dr
 Traverse City, MI
 US 49686
 Contact: GARY BREWER

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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