



Machine Id
825041-609
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (8 LTR)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0066298	GFL0060522	GFL0066189
Sample Date		Client Info		09 Apr 2024	25 Jul 2023	07 Jun 2023
Machine Age	hrs	Client Info		0	1140	500
Oil Age	hrs	Client Info		0	0	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	15	27	25
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>25	3	<1	2
Lead	ppm	ASTM D5185m	>45	4	0	0
Copper	ppm	ASTM D5185m	>85	2	2	0
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

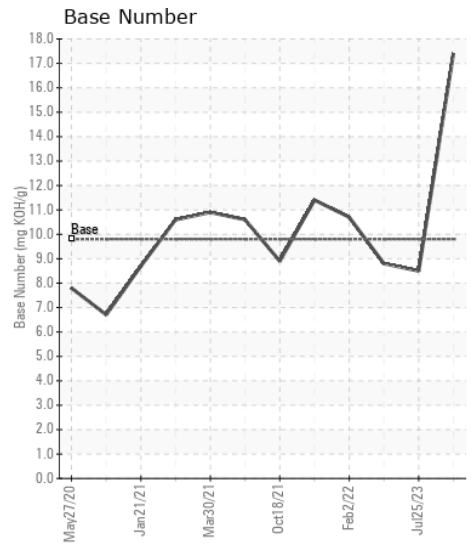
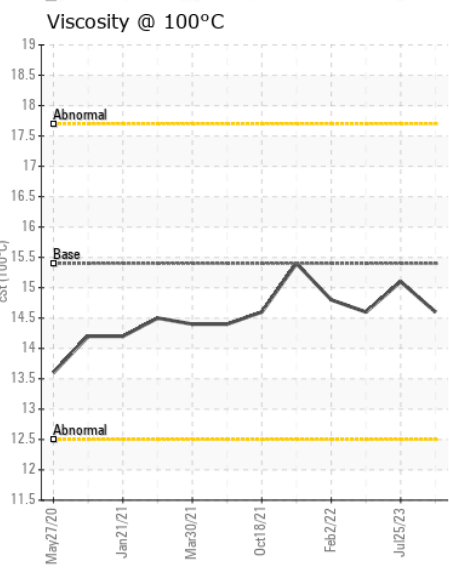
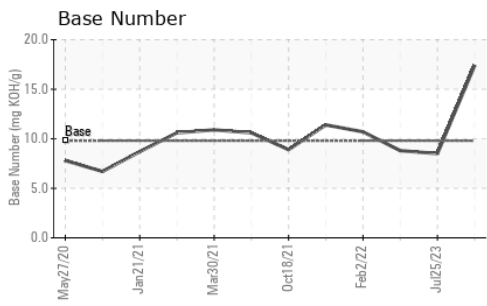
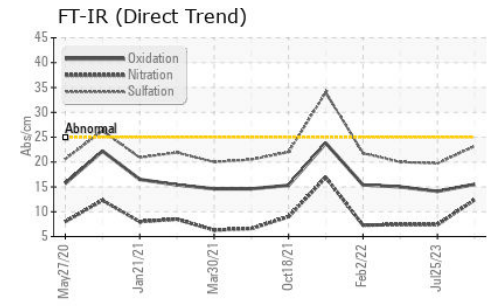
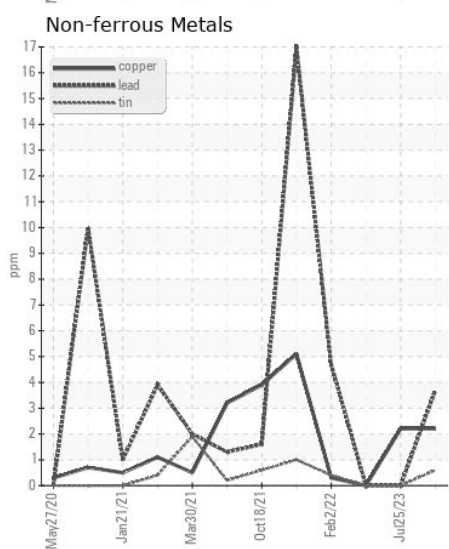
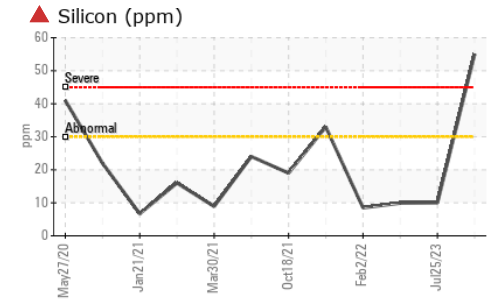
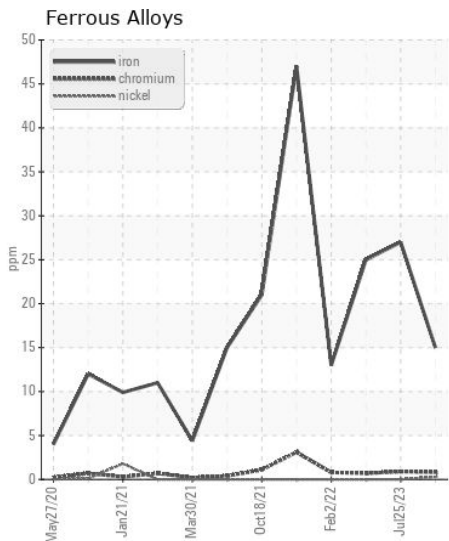
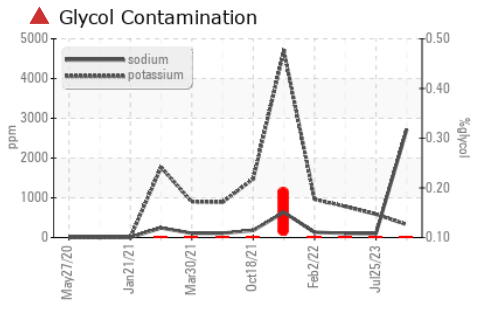
Sodium and/or potassium levels are high. Test for glycol is positive. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>30	▲ 55	10	10
Potassium	ppm	ASTM D5185m	>20	▲ 328	▲ 589	▲ 783
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.10	▲ 0.10	▲ 0.10
Soot %	%	*ASTM D7844	>3	0.7	1.1	1
Nitration	Abs/cm	*ASTM D7624	>20	12.4	7.4	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	19.7	20.0
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 is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		● 2716	▲ 100	▲ 105
Boron	ppm	ASTM D5185m	0	48	6	10
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	193	126	150
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	995	981	958
Calcium	ppm	ASTM D5185m	1070	1162	1125	1029
Phosphorus	ppm	ASTM D5185m	1150	1040	1012	1072
Zinc	ppm	ASTM D5185m	1270	1246	1246	1279
Sulfur	ppm	ASTM D5185m	2060	3228	3648	3859
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	14.1	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	17.4	8.5	8.8
Visc @ 100°C	cSt	ASTM D445	15.4	14.6	15.1	14.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066298
Lab Number : 06148299
Unique Number : 10978377
Test Package : FLEET
Received : 15 Apr 2024
Tested : 16 Apr 2024
Diagnosed : 17 Apr 2024 - Sean Felton

GFL Environmental - 938 - Hager City
 W9724 WIS-35
 HAGER CITY, WI
 US 54014
 Contact: ANDY KANE

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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 F: