



Machine Id
934073
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0118156	---	---
Sample Date		Client Info		26 Jun 2024	---	---
Machine Age	hrs	Client Info		1152	---	---
Oil Age	hrs	Client Info		1152	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	39	---	---
Chromium	ppm	ASTM D5185m	>4	5	---	---
Nickel	ppm	ASTM D5185m	>2	1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>9	30	---	---
Lead	ppm	ASTM D5185m	>30	8	---	---
Copper	ppm	ASTM D5185m	>35	15	---	---
Tin	ppm	ASTM D5185m	>4	2	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

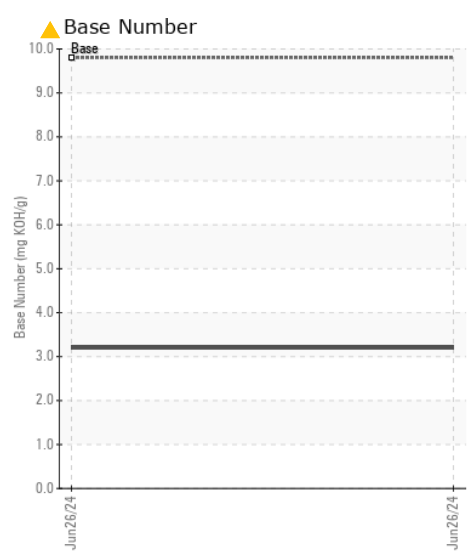
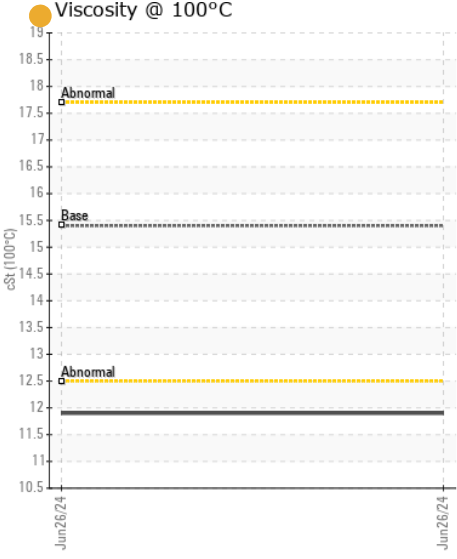
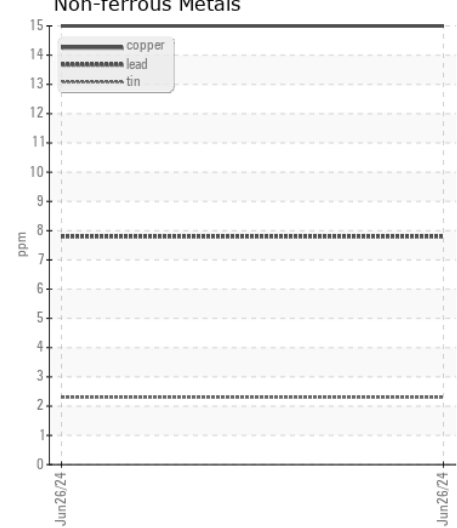
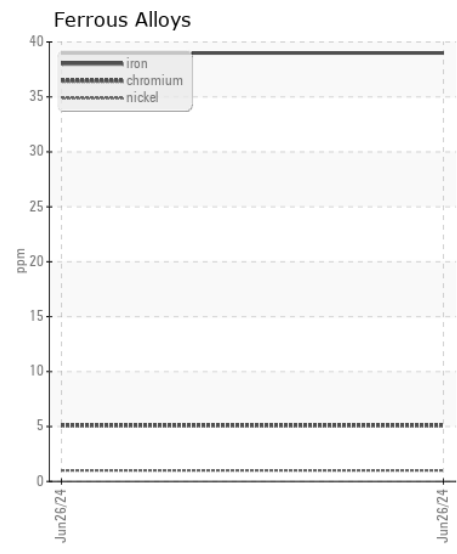
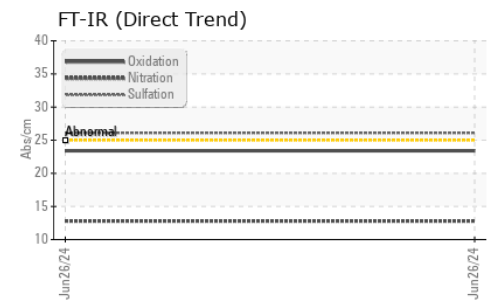
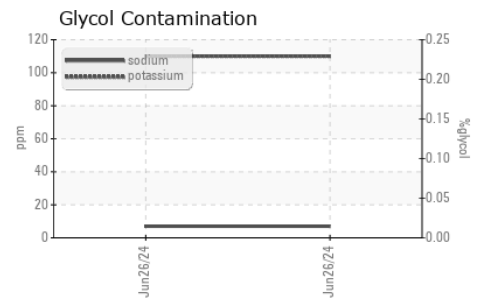
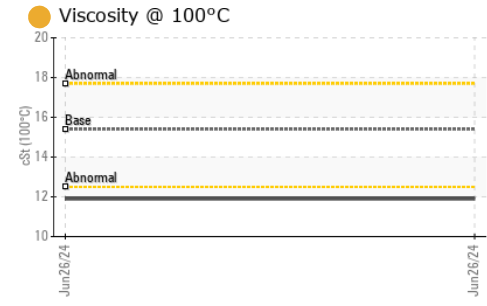
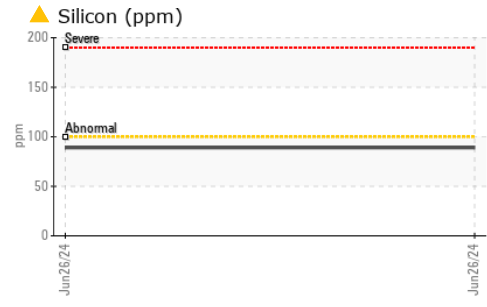
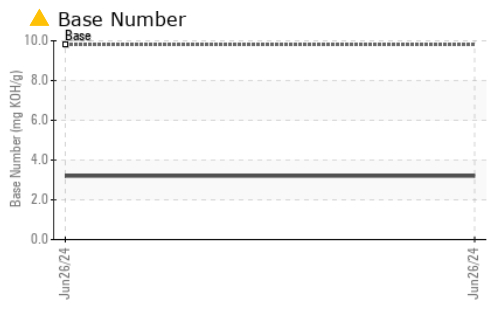
Elemental level of silicon (Si) above normal indicating ingress of seal material. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

Silicon	ppm	ASTM D5185m	>+100	▲ 89	---	---
Potassium	ppm	ASTM D5185m	>20	110	---	---
Water		WC Method	>0.1	NEG	---	---
Soot %	%	*ASTM D7844		0	---	---
Nitration	Abs/cm	*ASTM D7624	>20	12.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---

FLUID CONDITION

The oil viscosity is lower than normal. The BN level is low. Confirm oil type.

Sodium	ppm	ASTM D5185m		7	---	---
Boron	ppm	ASTM D5185m	0	10	---	---
Barium	ppm	ASTM D5185m	0	1	---	---
Molybdenum	ppm	ASTM D5185m	60	53	---	---
Manganese	ppm	ASTM D5185m	0	5	---	---
Magnesium	ppm	ASTM D5185m	1010	763	---	---
Calcium	ppm	ASTM D5185m	1070	1173	---	---
Phosphorus	ppm	ASTM D5185m	1150	656	---	---
Zinc	ppm	ASTM D5185m	1270	841	---	---
Sulfur	ppm	ASTM D5185m	2060	2075	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 3.2	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	● 11.9	---	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0118156
Lab Number : 06232007
Unique Number : 11115500
Test Package : FLEET
Received : 10 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 11 Jul 2024 - Don Baldrige

GFL Environmental - 932 - Muskego HC
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 Muskego, WI
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 Contact: Brian Schlomann
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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)