



Machine Id
729036-361501
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Oil and filter change at the time of sampling has been noted. We advise an early resample to confirm this situation. NOTE: High contamination in the sample has limited the accuracy of Infra-Red data including Total Base Number (TBN) value. NOTE: one of five samples received with nearly the same data, indicating sample came from same source or unit.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0119148	GFL0115488	GFL0094232
Sample Date		Client Info		02 Jul 2024	22 Mar 2024	08 Dec 2023
Machine Age	hrs	Client Info		27675	27189	26680
Oil Age	hrs	Client Info		486	509	372
Filter Age	hrs	Client Info		486	509	372
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	21	6
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	2	<1
Copper	ppm	ASTM D5185m	>330	10	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

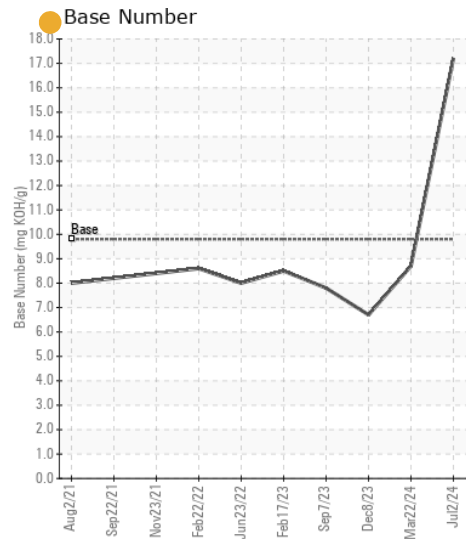
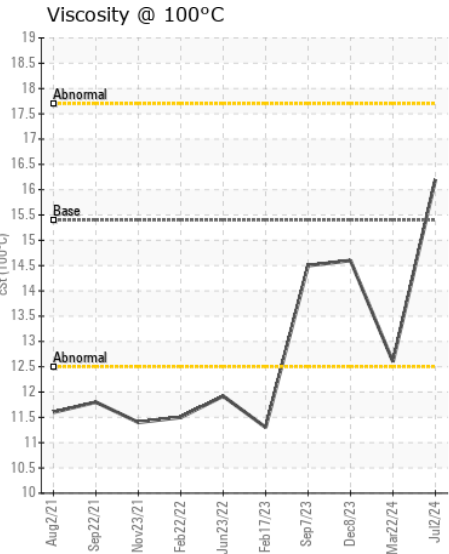
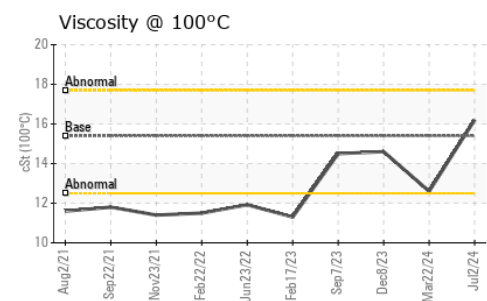
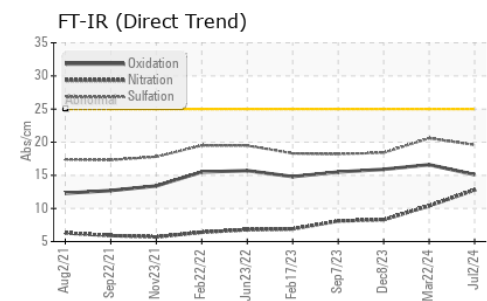
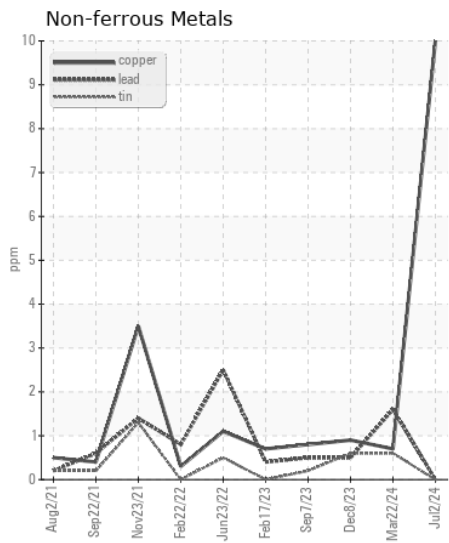
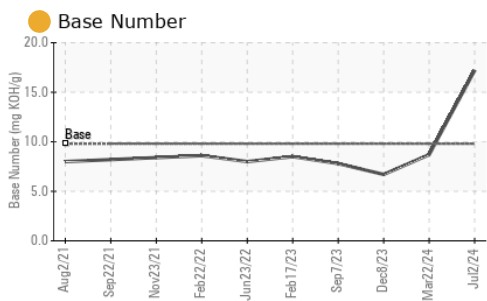
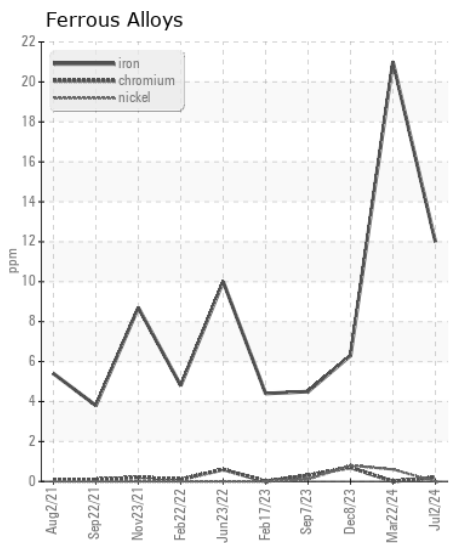
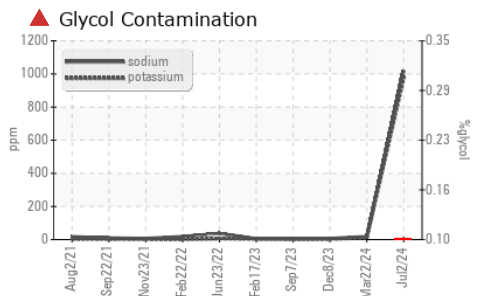
Sodium and/or potassium levels are high. Test for glycol is positive.

Silicon	ppm	ASTM D5185m	>25	8	3	4
Potassium	ppm	ASTM D5185m	>20	▲ 974	10	3
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.10	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	1.5	0
Nitration	Abs/cm	*ASTM D7624	>20	12.8	10.4	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	20.6	18.4
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		● 1019	18	7
Boron	ppm	ASTM D5185m	0	2	4	32
Barium	ppm	ASTM D5185m	0	<1	0	11
Molybdenum	ppm	ASTM D5185m	60	122	59	63
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	897	885	696
Calcium	ppm	ASTM D5185m	1070	1092	1069	1835
Phosphorus	ppm	ASTM D5185m	1150	1035	1056	948
Zinc	ppm	ASTM D5185m	1270	1255	1251	1161
Sulfur	ppm	ASTM D5185m	2060	3633	3430	3356
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.1	16.6	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	● 17.2	8.7	6.7
Visc @ 100°C	cSt	ASTM D445	15.4	16.2	12.6	14.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0119148 **Received** : 05 Jul 2024
Lab Number : 06228321 **Tested** : 09 Jul 2024
Unique Number : 11111814 **Diagnosed** : 09 Jul 2024 - Doug Bogart
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 882 - Gainesville
 5002 SW 41st Blvd
 Gainesville, FL
 US 32608
 Contact: ROBERT CLARK
 robert.clark@gflenv.com

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)