



Machine Id
923025-205242.1
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0118253	GFL0118186	GFL0109190
Sample Date		Client Info		09 Jul 2024	22 Apr 2024	28 Mar 2024
Machine Age	hrs	Client Info		7113	6742	6575
Oil Age	hrs	Client Info		700	700	131
Filter Age	hrs	Client Info		700	700	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				SEVERE	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	50	24	14
Chromium	ppm	ASTM D5185m	>20	2	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	4	2
Lead	ppm	ASTM D5185m	>40	4	1	<1
Copper	ppm	ASTM D5185m	>330	1	1	0
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

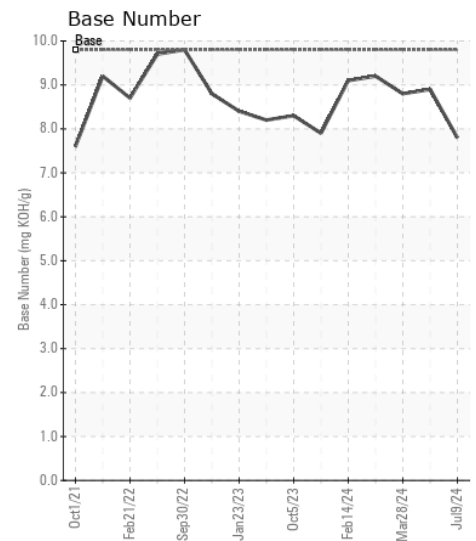
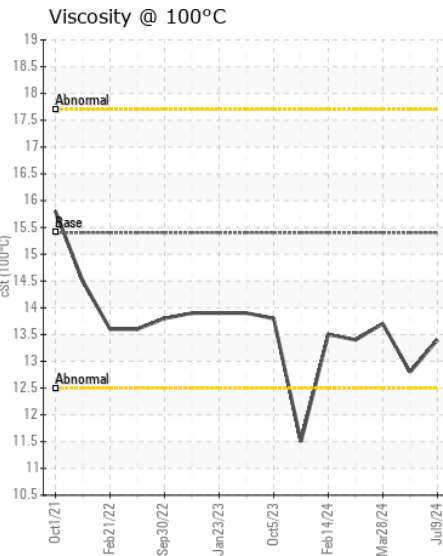
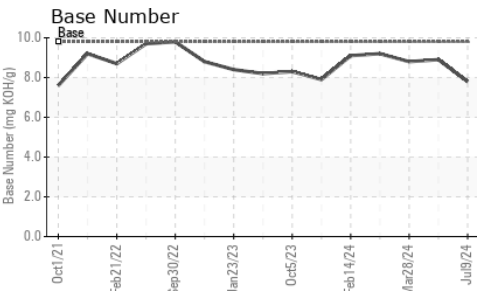
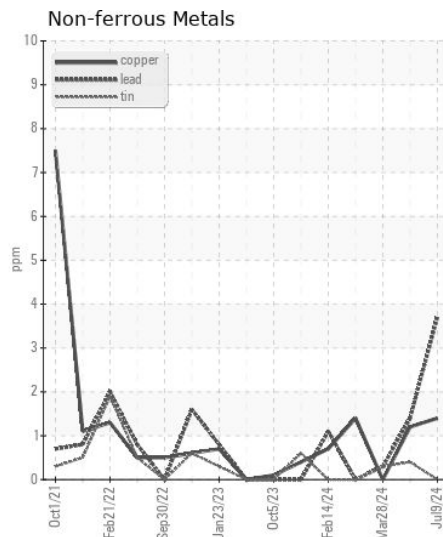
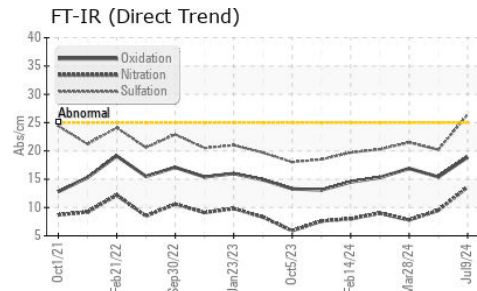
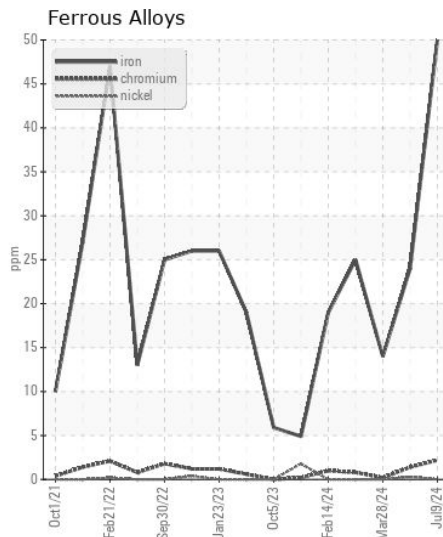
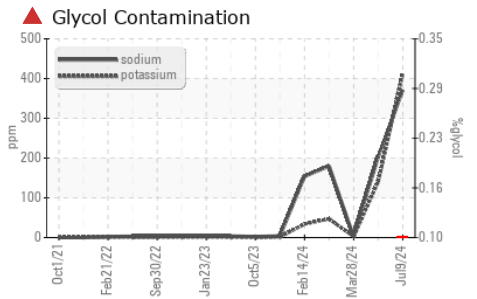
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	11	8	4
Potassium	ppm	ASTM D5185m	>20	413	141	2
Fuel		WC Method	>5	<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	1.9	0.9	0.9
Nitration	Abs/cm	*ASTM D7624	>20	13.6	9.5	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.4	20.2	21.5
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 BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		371	203	2
Boron	ppm	ASTM D5185m	0	0	0	9
Barium	ppm	ASTM D5185m	0	<1	<1	0
Molybdenum	ppm	ASTM D5185m	60	134	87	51
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	939	886	891
Calcium	ppm	ASTM D5185m	1070	1094	1010	1027
Phosphorus	ppm	ASTM D5185m	1150	982	1040	1036
Zinc	ppm	ASTM D5185m	1270	1199	1187	1182
Sulfur	ppm	ASTM D5185m	2060	3327	3004	3832
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.9	15.4	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.8	8.9	8.8
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	12.8	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0118253 **Received** : 17 Jul 2024
Lab Number : 06238878 **Tested** : 19 Jul 2024
Unique Number : 11127712 **Diagnosed** : 19 Jul 2024 - Wes Davis
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 822 - Springfield Hauling
 2120 West Bennett Street
 Springfield, MO
 US 65807
 Contact: Dennis Moore
 dennis.moore@gflenv.com
 T: (417)403-3641
 F:

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)