



Machine Id
10867

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (40 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		GFL0098968	GFL0099012	GFL0098983
Sample Date		Client Info		06 Jan 2024	14 Dec 2023	29 Nov 2023
Machine Age	hrs	Client Info		13230	213058	211373
Oil Age	hrs	Client Info		13230	204515	204515
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Filter Changed		Client Info		None	None	None
Sample Status				SEVERE	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	17	24	26
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	3	4
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>100	<1	<1	1
Tin	ppm	ASTM D5185m	>4	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

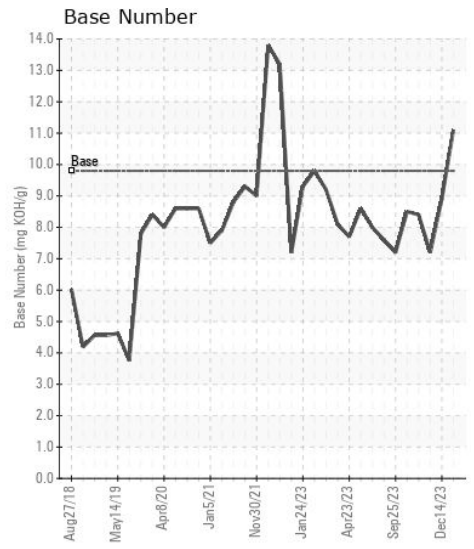
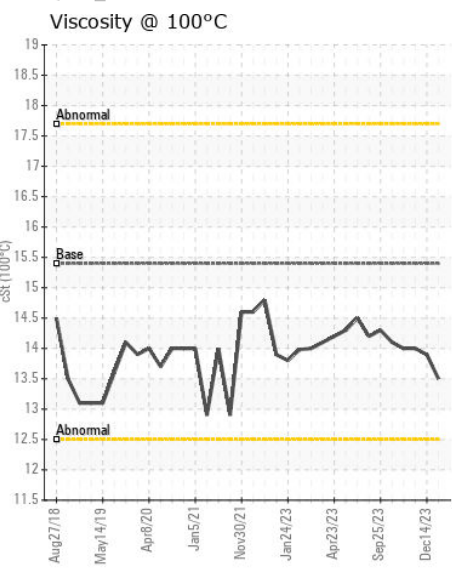
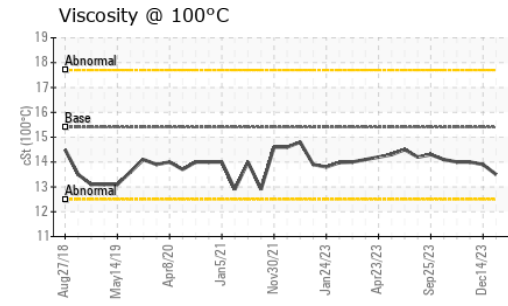
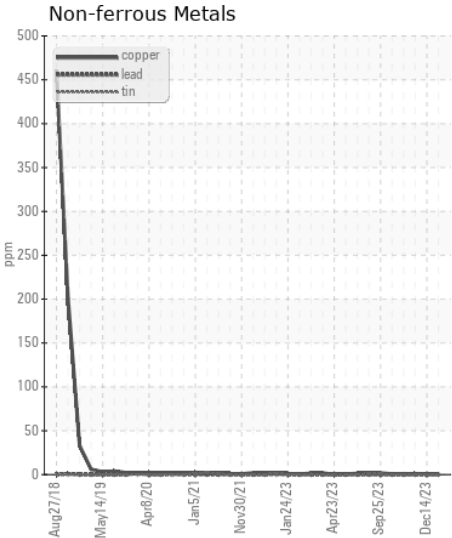
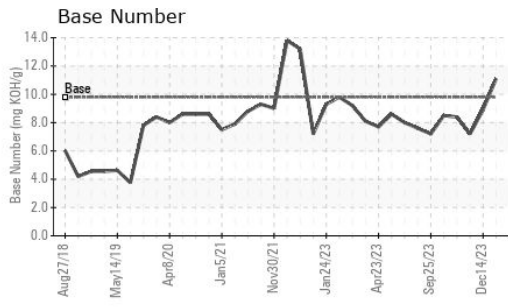
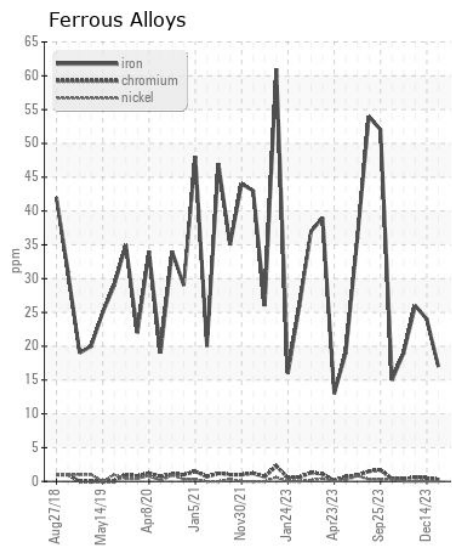
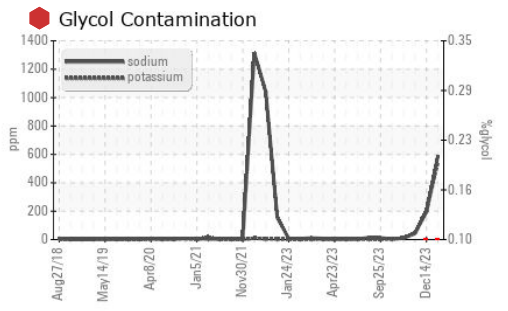
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	7	7	9
Potassium	ppm	ASTM D5185m	>20	544	200	44
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.10	0.10	NEG
Soot %	%	*ASTM D7844	>6	0.3	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	8.8	9.3	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	20.1	19.4
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 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		590	196	45
Boron	ppm	ASTM D5185m	0	0	<1	0
Barium	ppm	ASTM D5185m	0	3	0	5
Molybdenum	ppm	ASTM D5185m	60	82	63	71
Manganese	ppm	ASTM D5185m	0	0	0	0
Magnesium	ppm	ASTM D5185m	1010	907	912	1014
Calcium	ppm	ASTM D5185m	1070	1170	1098	1194
Phosphorus	ppm	ASTM D5185m	1150	1028	939	1129
Zinc	ppm	ASTM D5185m	1270	1178	1195	1318
Sulfur	ppm	ASTM D5185m	2060	3622	2723	3313
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	15.6	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	11.1	8.9	7.2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.9	14.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098968 **Received** : 18 Jan 2024
Lab Number : 06064009 **Diagnosed** : 19 Jan 2024
Unique Number : 10835391 **Diagnostician** : Wes Davis
Test Package : FLEET

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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)