



Area
(KY6344)
Machine Id
712019
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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		GFL0094495	GFL0058875	GFL0058868
Sample Date		Client Info		20 May 2024	03 Jan 2024	07 Sep 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ATTENTION	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	19	18	43
Chromium	ppm	ASTM D5185m	>20	1	<1	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	2	1
Lead	ppm	ASTM D5185m	>40	<1	2	5
Copper	ppm	ASTM D5185m	>330	12	8	22
Tin	ppm	ASTM D5185m	>15	<1	1	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

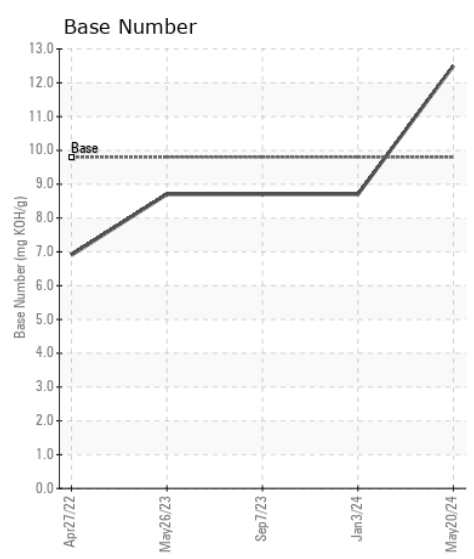
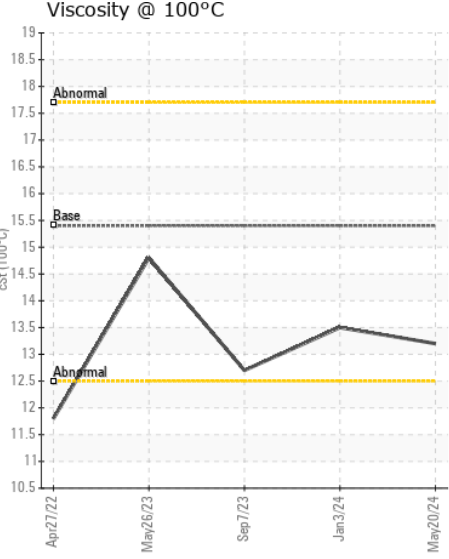
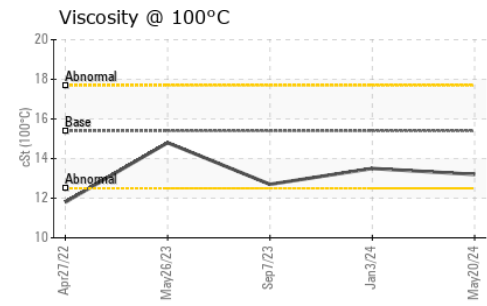
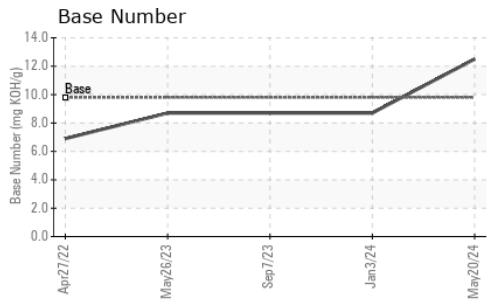
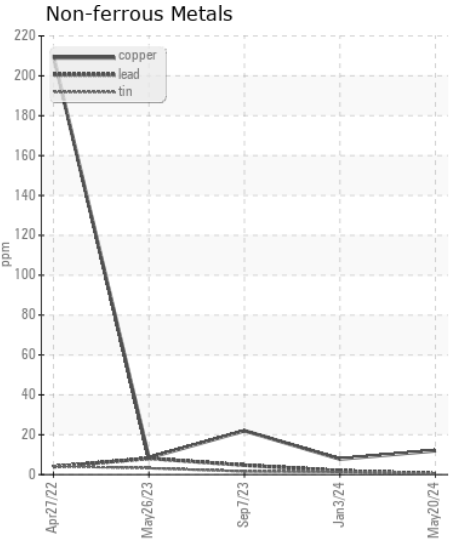
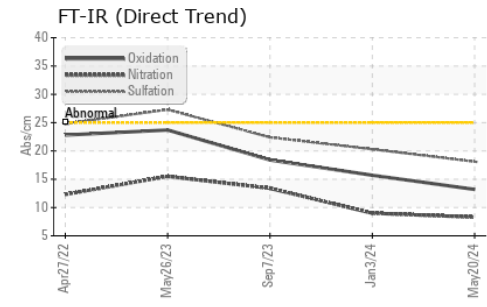
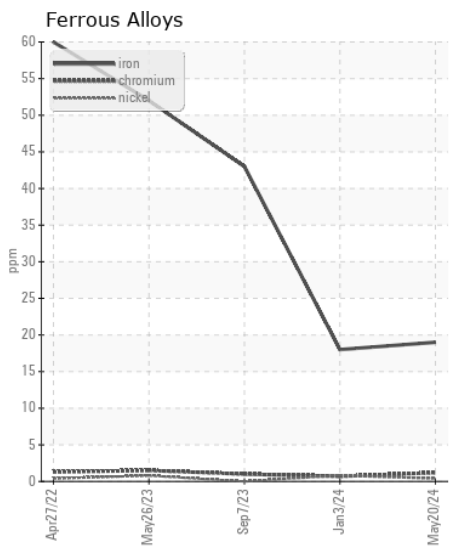
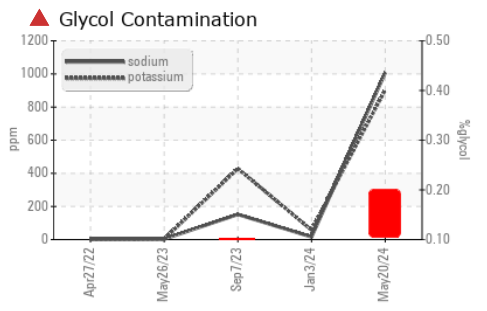
Sodium and/or potassium levels are high. Test for glycol is positive.

Silicon	ppm	ASTM D5185m	>25	25	8	21
Potassium	ppm	ASTM D5185m	>20	903	57	429
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.20	NEG	0.10
Soot %	%	*ASTM D7844	>3	0.2	0.9	1.5
Nitration	Abs/cm	*ASTM D7624	>20	8.3	9.0	13.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	20.3	22.4
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		1007	16	152
Boron	ppm	ASTM D5185m	0	27	10	6
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	185	64	92
Manganese	ppm	ASTM D5185m	0	<1	<1	1
Magnesium	ppm	ASTM D5185m	1010	843	931	1030
Calcium	ppm	ASTM D5185m	1070	1013	1101	1376
Phosphorus	ppm	ASTM D5185m	1150	926	890	1012
Zinc	ppm	ASTM D5185m	1270	1109	1220	1348
Sulfur	ppm	ASTM D5185m	2060	3115	3108	3548
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.2	15.7	18.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	12.5	8.7	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	13.5	12.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0094495 **Received** : 23 May 2024
Lab Number : 06188766 **Tested** : 24 May 2024
Unique Number : 11045518 **Diagnosed** : 28 May 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 119 - Williamston Hauling/TriEast
 1805 West Main Street
 Williamston, NC
 US 27892
 Contact: Spencer Ligon
 spencer.ligon@gflenv.com
 T: (800)207-6618
 F:

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)