



WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION
ABNORMAL
NORMAL

Area
(KN5436) GFL035

Machine Id
711005

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (40 QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0116510	GFL0102354	GFL0085164
Sample Date		Client Info		22 May 2024	01 Feb 2024	02 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		600	600	600
Filter Age	hrs	Client Info		0	0	600
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	48	75	53
Chromium	ppm	ASTM D5185m	>20	2	2	1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	2	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	16	43	5
Lead	ppm	ASTM D5185m	>40	9	5	6
Copper	ppm	ASTM D5185m	>330	7	63	144
Tin	ppm	ASTM D5185m	>15	2	2	1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

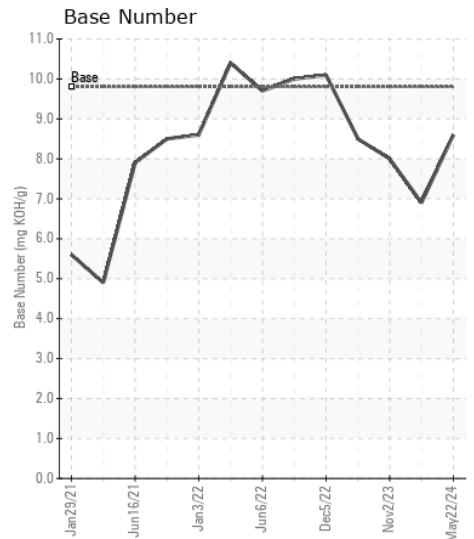
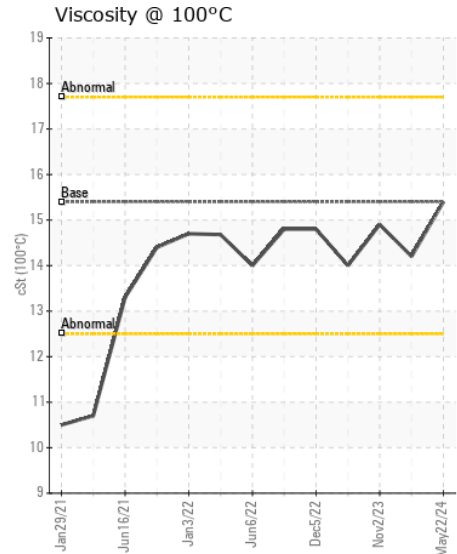
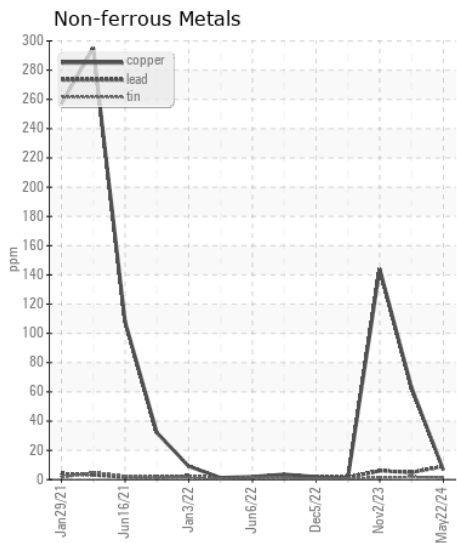
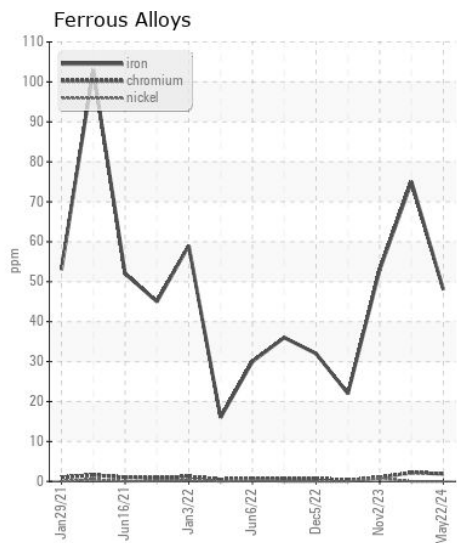
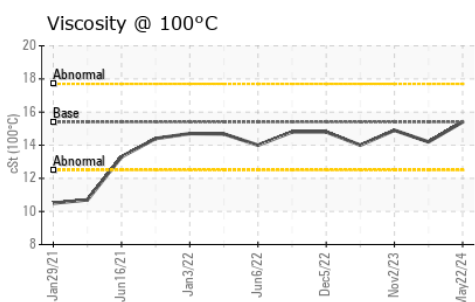
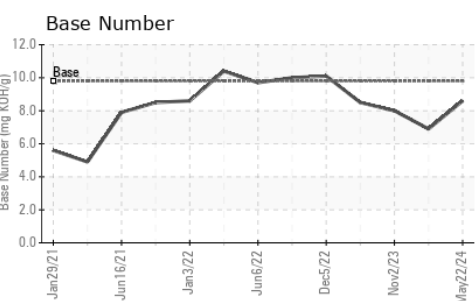
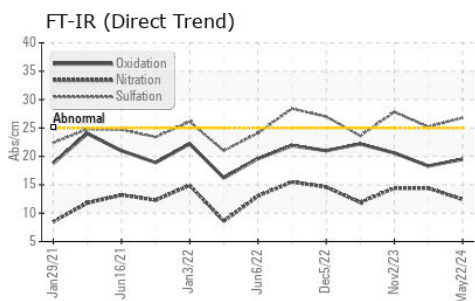
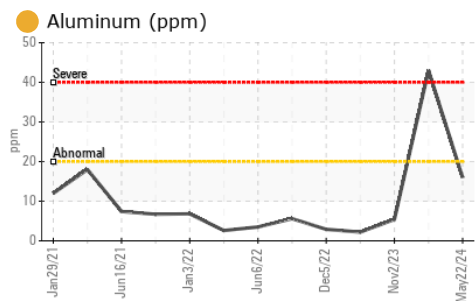
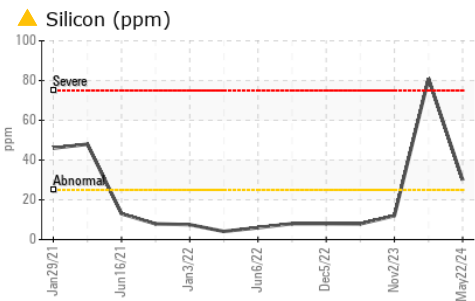
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>25	30	81	12
Potassium	ppm	ASTM D5185m	>20	6	29	13
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	2.5	2.4	2.8
Nitration	Abs/cm	*ASTM D7624	>20	12.4	14.4	14.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.8	25.2	27.8
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		21	56	17
Boron	ppm	ASTM D5185m	0	<1	9	6
Barium	ppm	ASTM D5185m	0	0	<1	5
Molybdenum	ppm	ASTM D5185m	60	66	68	68
Manganese	ppm	ASTM D5185m	0	<1	2	1
Magnesium	ppm	ASTM D5185m	1010	1085	880	907
Calcium	ppm	ASTM D5185m	1070	1315	1138	1172
Phosphorus	ppm	ASTM D5185m	1150	1172	990	1080
Zinc	ppm	ASTM D5185m	1270	1389	1248	1244
Sulfur	ppm	ASTM D5185m	2060	3579	2690	3029
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.5	18.3	20.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.6	6.9	8.0
Visc @ 100°C	cSt	ASTM D445	15.4	15.4	14.2	14.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116510
Lab Number : 06191450
Unique Number : 11048202
Test Package : FLEET

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 US 27263
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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)