



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
929089-205312
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0093480	GFL0093513	GFL0093432
Sample Date		Client Info		01 Jul 2024	06 Jun 2024	16 May 2024
Machine Age	hrs	Client Info		23961	23858	23703
Oil Age	hrs	Client Info		470	367	212
Filter Age	hrs	Client Info		470	367	212
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	7	5
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		10	9	9
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	14	10	4
Lead	ppm	ASTM D5185m	>40	4	<1	<1
Copper	ppm	ASTM D5185m	>330	2	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

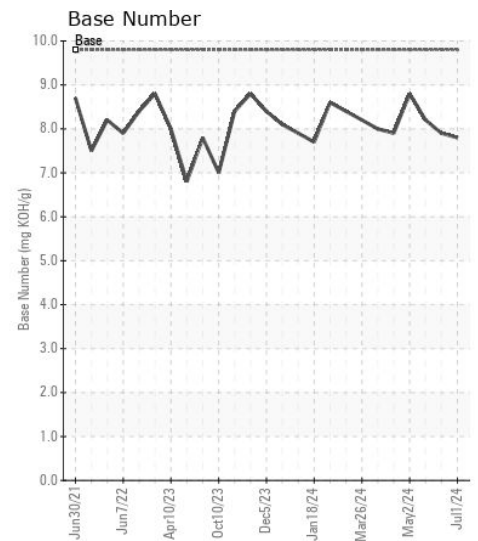
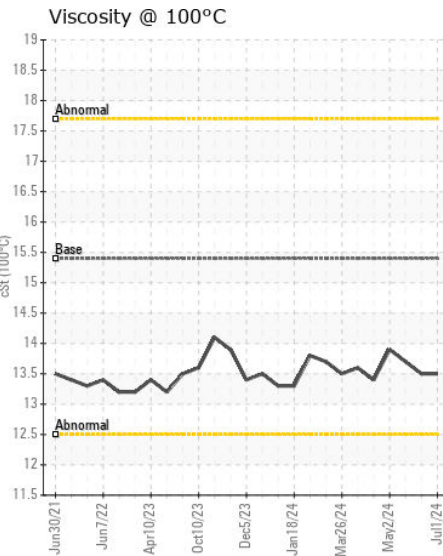
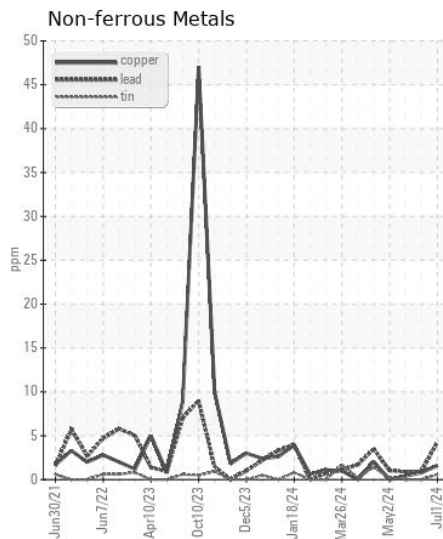
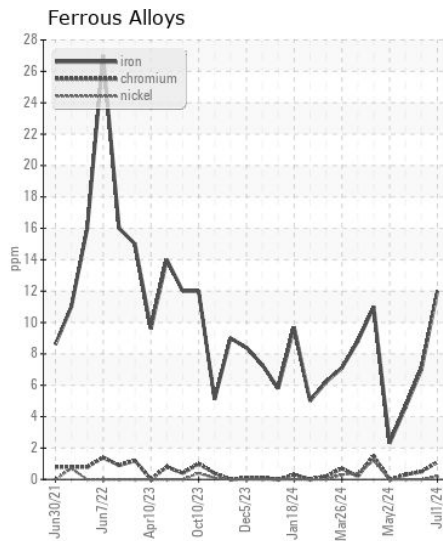
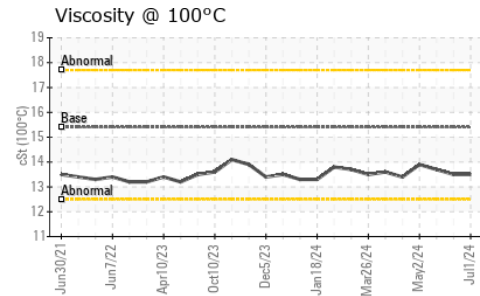
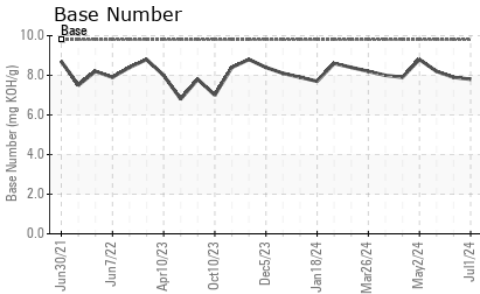
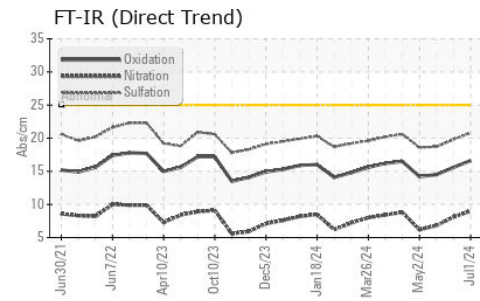
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	5	4
Potassium	ppm	ASTM D5185m	>20	47	36	14
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	0.4	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.0	8.1	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	19.8	18.7
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 suitable for further service.

Sodium	ppm	ASTM D5185m		3	4	3
Boron	ppm	ASTM D5185m	0	6	8	8
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	61	56	56
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	943	943	989
Calcium	ppm	ASTM D5185m	1070	1218	1147	1225
Phosphorus	ppm	ASTM D5185m	1150	1058	1065	1105
Zinc	ppm	ASTM D5185m	1270	1294	1279	1321
Sulfur	ppm	ASTM D5185m	2060	2828	3555	3920
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	15.6	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.8	7.9	8.2
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.5	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093480
Lab Number : 06226051
Unique Number : 11109544
Test Package : FLEET

Received : 02 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 03 Jul 2024 - Wes Davis

GFL Environmental - 891 - Oklahoma City Hauling
 1001 South Rockwell
 Oklahoma City, OK
 US 73128
 Contact: Andy Smith
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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)