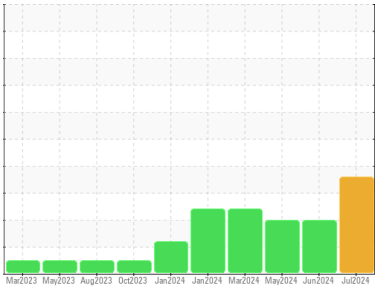
PROBLEM SUMMARY

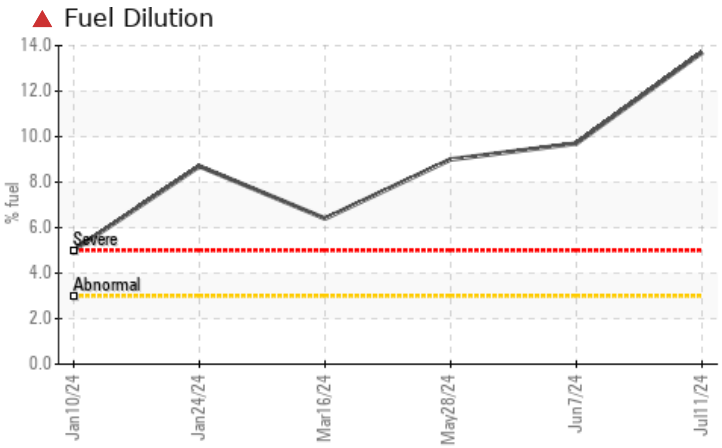
Machine Id
420092 - SW4020
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

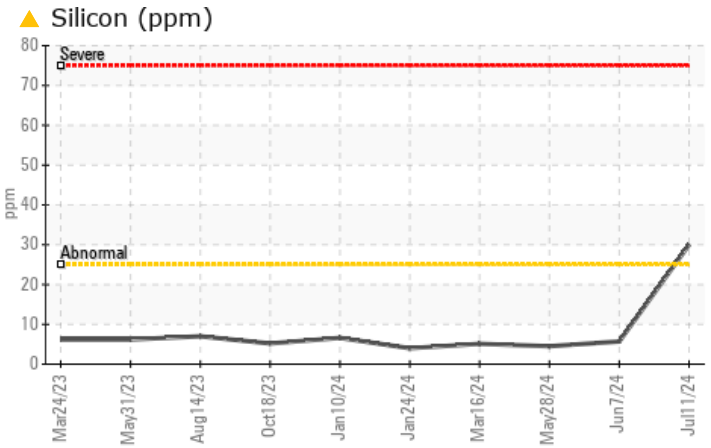
Sample Rating Trend



FUEL

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the fuel injection system. 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.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Silicon	ppm	ASTM D5185m	>25	▲ **30**	6	4
Fuel	%	ASTM D3524	>3.0	▲ **13.7**	▲ 9.7	▲ 9.0

Customer Id: GFL983
Sample No.: GFL0128697
Lab Number: 06238923
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

FUEL

07 Jun 2024 Diag: Jonathan Hester

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

FUEL

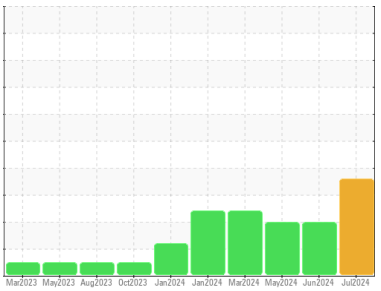
28 May 2024 Diag: Jonathan Hester

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
420092 - SW4020
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation
We advise that you check the fuel injection system. 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.

Wear
All component wear rates are normal.

▲ Contamination
There is a high amount of fuel present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0128697**	GFL0123598	GFL0123604
Sample Date		Client Info		**11 Jul 2024**	07 Jun 2024	28 May 2024
Machine Age	mls	Client Info		**162521**	159273	151032
Oil Age	mls	Client Info		**162521**	159273	151032
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**6**	5	<1
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	0
Nickel	ppm	ASTM D5185m	>5	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	2	6
Lead	ppm	ASTM D5185m	>40	**0**	1	0
Copper	ppm	ASTM D5185m	>330	**0**	4	<1
Tin	ppm	ASTM D5185m	>15	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	0	0
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**0**	46	50
Manganese	ppm	ASTM D5185m	0	**0**	0	<1
Magnesium	ppm	ASTM D5185m	1010	**<1**	31	29
Calcium	ppm	ASTM D5185m	1070	**0**	2325	2440
Phosphorus	ppm	ASTM D5185m	1150	**320**	995	1118
Zinc	ppm	ASTM D5185m	1270	**2**	1137	1273
Sulfur	ppm	ASTM D5185m	2060	**187**	3113	3597

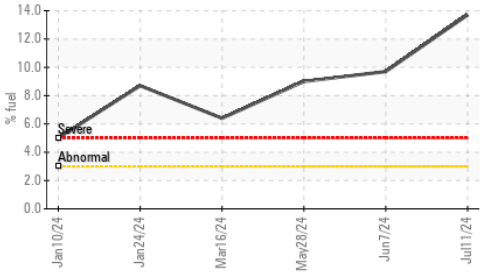
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **30**	6	4
Sodium	ppm	ASTM D5185m		**0**	1	3
Potassium	ppm	ASTM D5185m	>20	**<1**	2	21
Fuel	%	ASTM D3524	>3.0	▲ **13.7**	▲ 9.7	▲ 9.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.1**	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	**6.3**	7.7	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	**15.7**	18.4	20.9

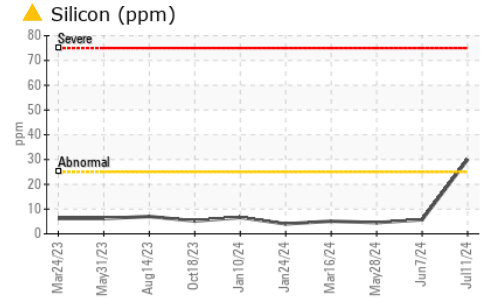
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**10.3**	10.1	12.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**8.2**	6.3	5.7

OIL ANALYSIS REPORT

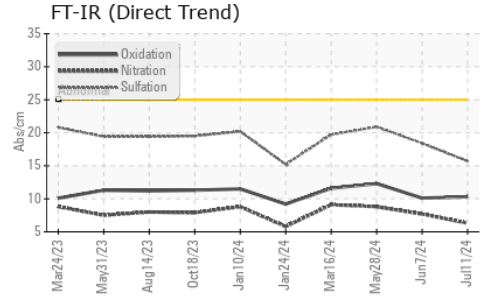
Fuel Dilution



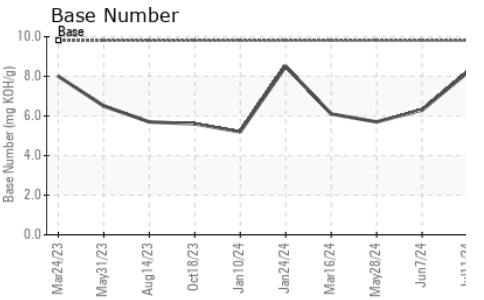
Silicon (ppm)



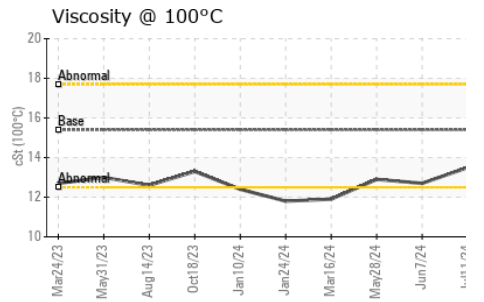
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

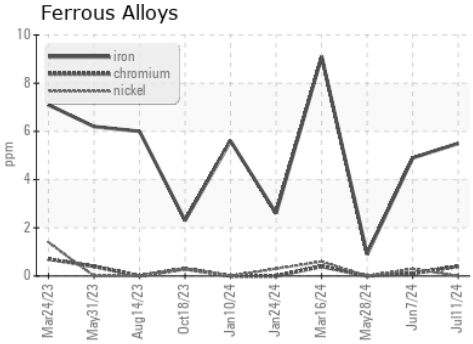


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

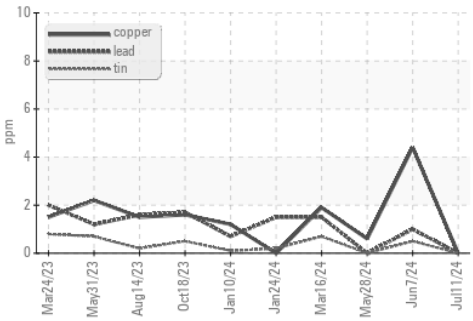
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.5**	12.7	12.9

GRAPHS

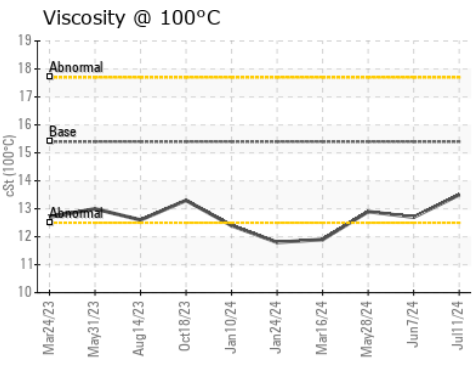
Ferrous Alloys



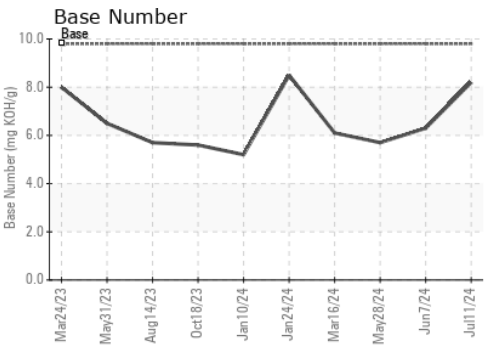
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0128697
Lab Number : 06238923
Unique Number : 11127757
Test Package : FLEET (Additional Tests: PercentFuel)

Received : 17 Jul 2024
Tested : 19 Jul 2024
Diagnosed : 19 Jul 2024 - Jonathan Hester

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)

GFL Environmental - 983 - Sugar Land Hauling
16011 West Belfort Street
Sugar Land, TX
US 77498
Contact: Adrian Martinez
adrianmartinez@gflenv.com
T:
F:

Report Id: GFL983 [WUSCAR] 06238923 (Generated: 07/19/2024 12:03:01) Rev: 1

Submitted By: TECHNICIAN ACCOUNT