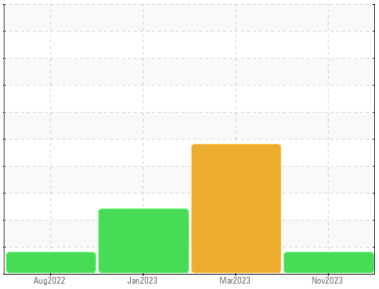
PROBLEM SUMMARY

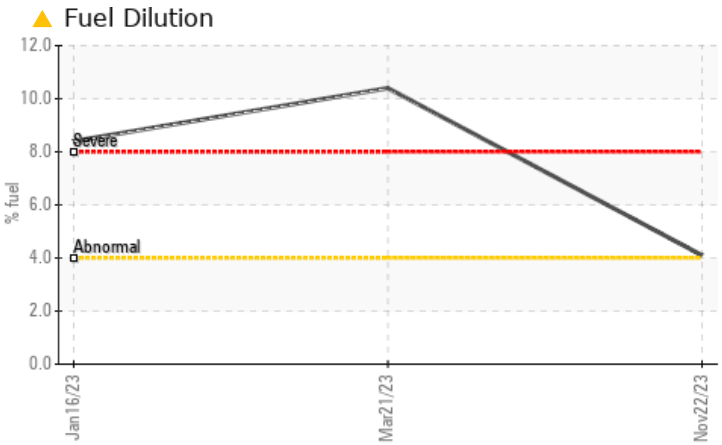
Sample Rating Trend



FUEL

Machine Id
711041
Component
Gasoline Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	SEVERE	SEVERE
Fuel	%	ASTM D3524	>4.0	▲ **4.1**	⬢ 10.4	⬢ 8.4

Customer Id: GFL415
Sample No.: GFL0089094
Lab Number: 06017728
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

21 Mar 2023 Diag: Jonathan Hester

FUEL

We advise that you check for the source of the coolant leak. Check for low coolant level. 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. Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. 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.

view report

16 Jan 2023 Diag: Jonathan Hester

FUEL

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. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

05 Aug 2022 Diag: Don Baldridge

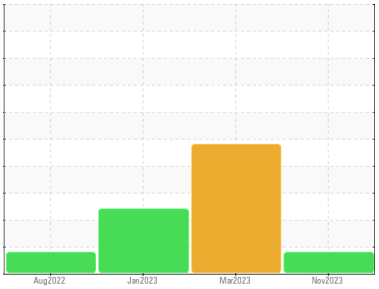
WEAR

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.The iron level is abnormal. All other metal levels are typical for a new component breaking in. There is no indication of any contamination in the oil. 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.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Machine Id
711041
Component
Gasoline Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0089094**	GFL0073884	GFL0068642
Sample Date		Client Info		**22 Nov 2023**	21 Mar 2023	16 Jan 2023
Machine Age	hrs	Client Info		**5981**	4130	3856
Oil Age	hrs	Client Info		**0**	3856	2661
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**ABNORMAL**	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	>150	**27**	34	66
Chromium	ppm	ASTM D5185m	>20	**<1**	1	2
Nickel	ppm	ASTM D5185m	>5	**1**	<1	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**1**	<1	<1
Aluminum	ppm	ASTM D5185m	>40	**2**	3	<1
Lead	ppm	ASTM D5185m	>50	**<1**	0	0
Copper	ppm	ASTM D5185m	>155	**<1**	10	1
Tin	ppm	ASTM D5185m	>10	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**92**	20	<1
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**16**	38	55
Manganese	ppm	ASTM D5185m	0	**<1**	2	<1
Magnesium	ppm	ASTM D5185m	1010	**326**	735	748
Calcium	ppm	ASTM D5185m	1070	**1723**	1227	984
Phosphorus	ppm	ASTM D5185m	1150	**1056**	935	853
Zinc	ppm	ASTM D5185m	1270	**1176**	1084	1036
Sulfur	ppm	ASTM D5185m	2060	**3222**	3214	2496

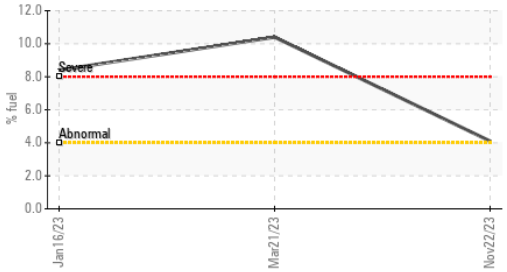
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	**4**	10	5
Sodium	ppm	ASTM D5185m	>400	**3**	▲ 101	5
Potassium	ppm	ASTM D5185m	>20	**3**	▲ 245	1
Fuel	%	ASTM D3524	>4.0	▲ **4.1**	⬢ 10.4	⬢ 8.4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.4**	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	**10.0**	11.2	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.9**	21.2	21.7

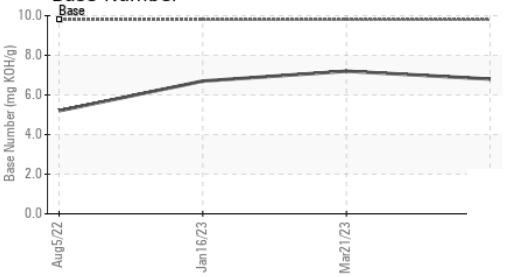
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.5**	19.8	20.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.8**	7.2	6.7

OIL ANALYSIS REPORT

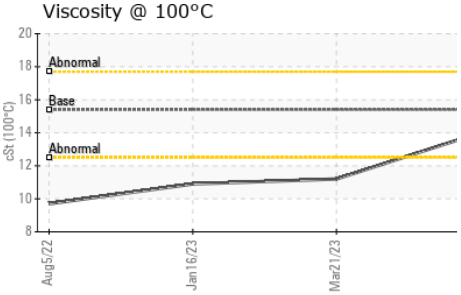
Fuel Dilution



Base Number



Viscosity @ 100°C

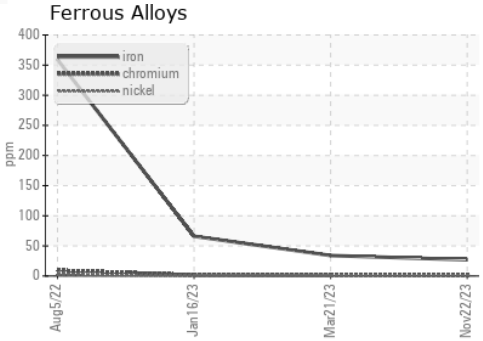


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

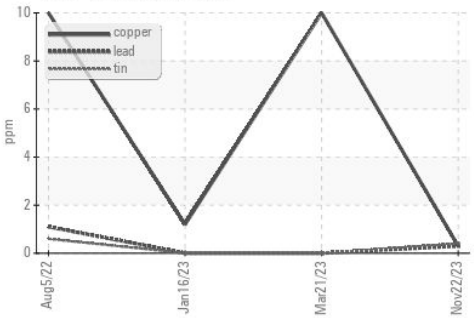
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**14.0**	▲ 11.2	▲ 10.9

GRAPHS

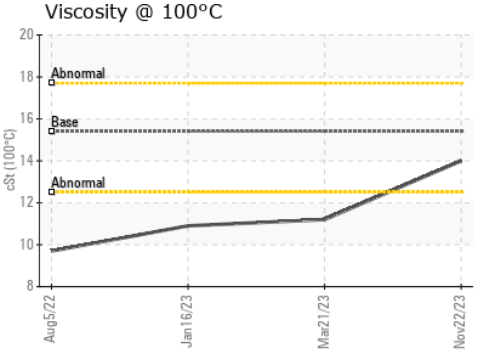
Ferrous Alloys



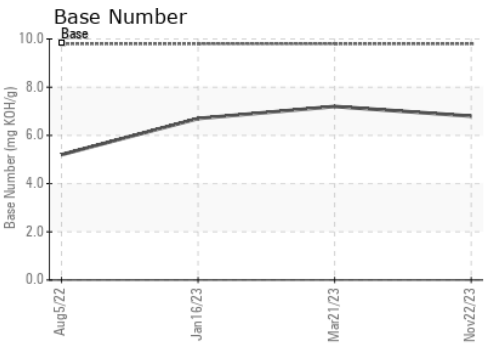
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0089094 **Received** : 27 Nov 2023
Lab Number : 06017728 **Diagnosed** : 14 Dec 2023
Unique Number : 10756872 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: PercentFuel)

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)

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