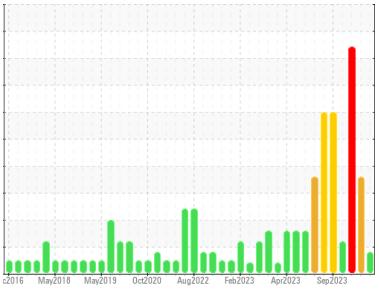
PROBLEM SUMMARY

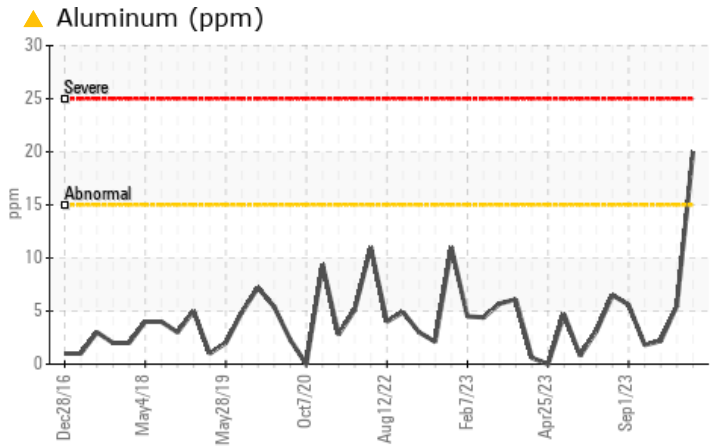
Sample Rating Trend



WEAR

Machine Id
10669
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	SEVERE
Aluminum	ppm	ASTM D5185m	>15	▲ **20**	▲ 6	2

Customer Id: GFL010
Sample No.: GFL0101186
Lab Number: 06011899
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

23 Oct 2023 Diag: Jonathan Hester

DIRT

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. 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

02 Oct 2023 Diag: Wes Davis

GLYCOL

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition.All component wear rates are normal. Test for glycol is positive. There is a high concentration of glycol present in the oil. 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

14 Sep 2023 Diag: Jonathan Hester

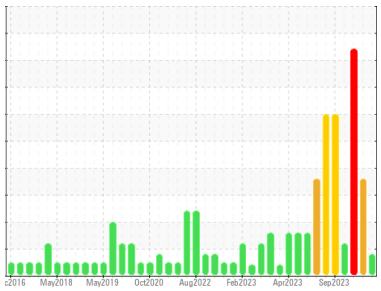
GLYCOL

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.All component wear rates are normal. Sodium and/or potassium levels remain high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
10669
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
The aluminum level is abnormal. All other component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

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		**GFL0101186**	GFL0091417	GFL0097884
Sample Date		Client Info		**17 Nov 2023**	23 Oct 2023	02 Oct 2023
Machine Age	hrs	Client Info		**50113**	50027	49920
Oil Age	hrs	Client Info		**138**	356	249
Oil Changed		Client Info		**Not Changd**	Changed	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	0.20

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>75	**35**	29	17
Chromium	ppm	ASTM D5185m	>5	**<1**	1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**20**	6	2
Lead	ppm	ASTM D5185m	>25	**0**	<1	0
Copper	ppm	ASTM D5185m	>100	**1**	4	3
Tin	ppm	ASTM D5185m	>4	**2**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**11**	29	34
Barium	ppm	ASTM D5185m	0	**0**	3	0
Molybdenum	ppm	ASTM D5185m	60	**70**	116	108
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**954**	789	881
Calcium	ppm	ASTM D5185m	1070	**1253**	1094	1134
Phosphorus	ppm	ASTM D5185m	1150	**1073**	1003	980
Zinc	ppm	ASTM D5185m	1270	**1330**	1160	1211
Sulfur	ppm	ASTM D5185m	2060	**2941**	3365	2955

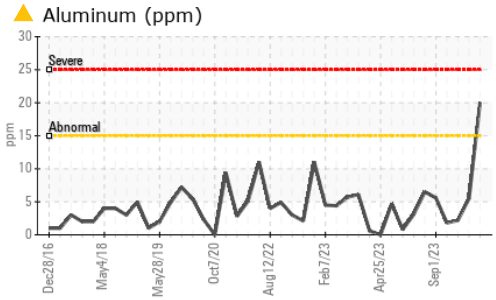
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**6**	26	19
Sodium	ppm	ASTM D5185m		**25**	1270	1073
Potassium	ppm	ASTM D5185m	>20	**8**	12	10

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.7**	1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	**7.5**	11.8	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.4**	20.6	19.7

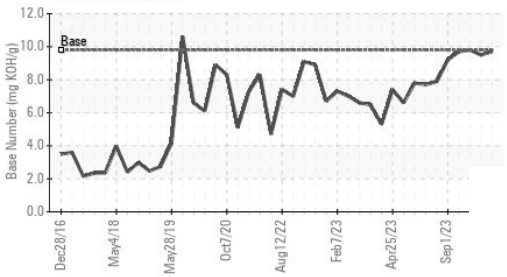
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**12.8**	14.9	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**9.7**	9.5	9.8

OIL ANALYSIS REPORT

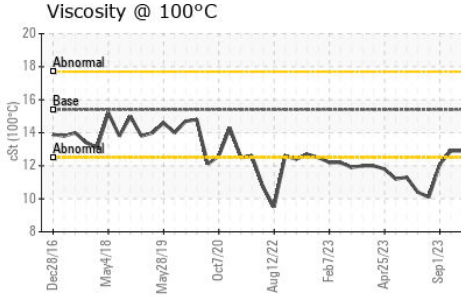
Aluminum (ppm)



Base Number



Viscosity @ 100°C

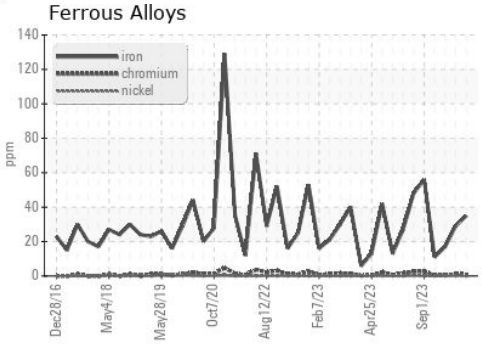


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

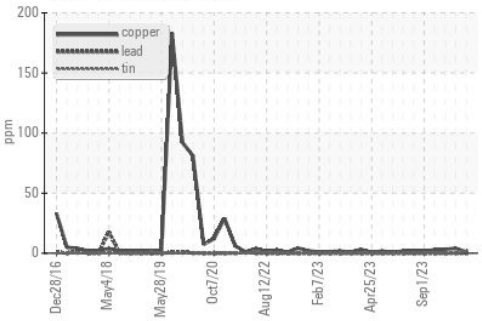
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.3**	12.9	12.9

GRAPHS

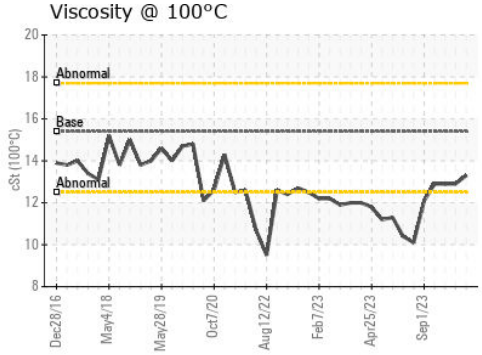
Ferrous Alloys



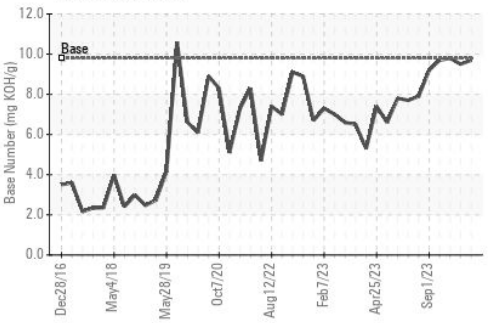
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0101186
Lab Number : 06011899
Unique Number : 10751043
Test Package : FLEET

Received : 20 Nov 2023
Diagnosed : 22 Nov 2023
Diagnostician : Sean Felton

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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