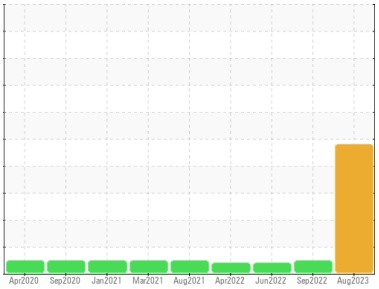
PROBLEM SUMMARY

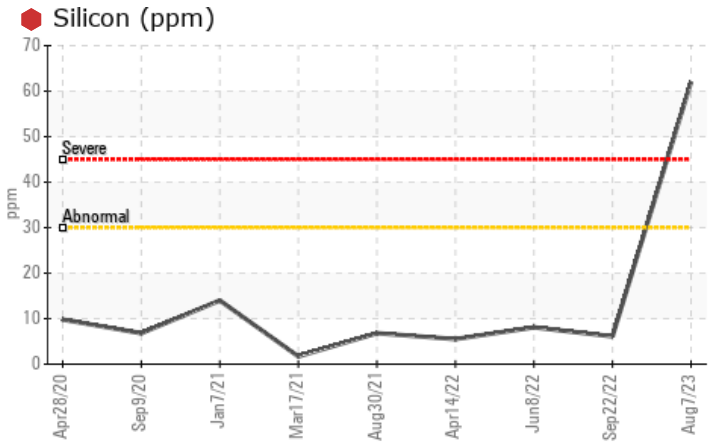
Sample Rating Trend



DIRT

Machine Id
926017-9022
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	ATTENTION
Silicon	ppm	ASTM D5185m	>30	62	6	8

Customer Id: GFL663
Sample No.: GFL0079796
Lab Number: 05929308
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
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

22 Sep 2022 Diag: Don Baldridge

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. 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 suitable for further service.

view report

08 Jun 2022 Diag: Don Baldridge

VISCOSITY

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

14 Apr 2022 Diag: Jonathan Hester

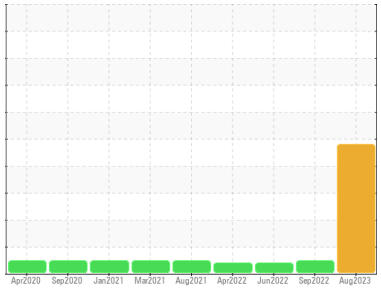
VISCOSITY

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
926017-9022
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0079796**	GFL0055081	GFL0052840
Sample Date		Client Info		**07 Aug 2023**	22 Sep 2022	08 Jun 2022
Machine Age	hrs	Client Info		**19310**	17583	17031
Oil Age	hrs	Client Info		**600**	17583	17031
Oil Changed		Client Info		**Not Changd**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	<1.0
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	**32**	25	21
Chromium	ppm	ASTM D5185m	>4	**2**	1	1
Nickel	ppm	ASTM D5185m	>2	**0**	1	0
Titanium	ppm	ASTM D5185m		**66**	12	6
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**5**	2	2
Lead	ppm	ASTM D5185m	>45	**5**	7	6
Copper	ppm	ASTM D5185m	>85	**0**	<1	<1
Tin	ppm	ASTM D5185m	>4	**0**	<1	<1
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**35**	19	27
Barium	ppm	ASTM D5185m	0	**0**	2	0
Molybdenum	ppm	ASTM D5185m	60	**29**	50	58
Manganese	ppm	ASTM D5185m	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**790**	708	806
Calcium	ppm	ASTM D5185m	1070	**1991**	1390	1273
Phosphorus	ppm	ASTM D5185m	1150	**1244**	987	993
Zinc	ppm	ASTM D5185m	1270	**1671**	1237	1181
Sulfur	ppm	ASTM D5185m	2060	**5561**	3495	3092

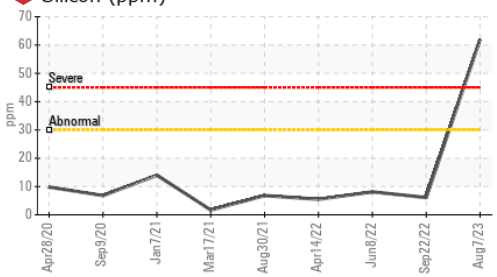
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>30	**62**	6	8
Sodium	ppm	ASTM D5185m		**3**	4	5
Potassium	ppm	ASTM D5185m	>20	**0**	3	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.6**	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**11.1**	10.9	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.6**	23.4	21.7

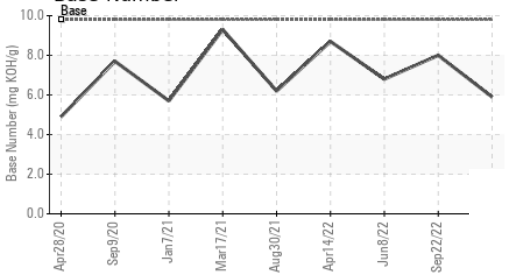
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**20.6**	17.9	17.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**5.9**	8.0	6.8

OIL ANALYSIS REPORT

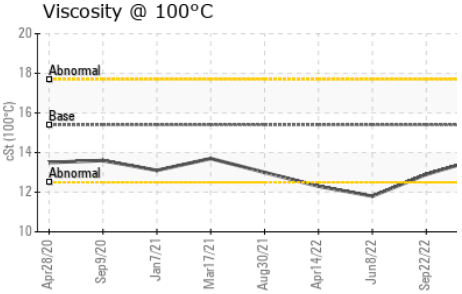
Silicon (ppm)



Base Number



Viscosity @ 100°C

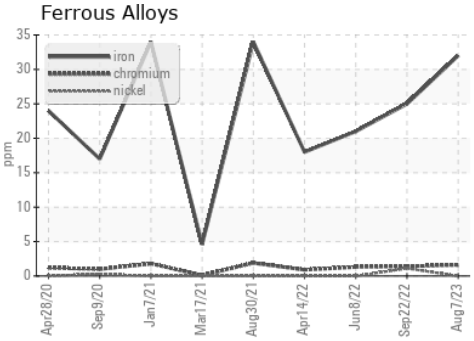


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

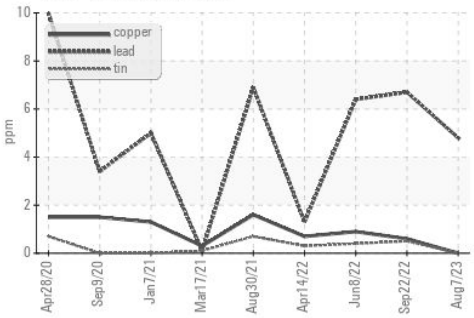
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	**13.7**	12.9	▲ 11.8

GRAPHS

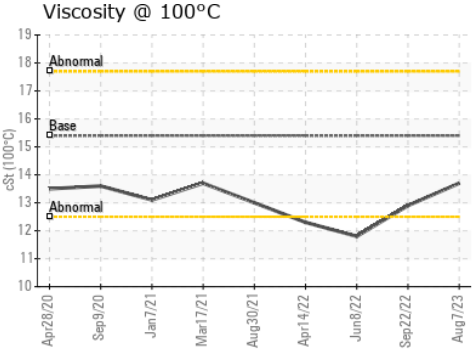
Ferrous Alloys



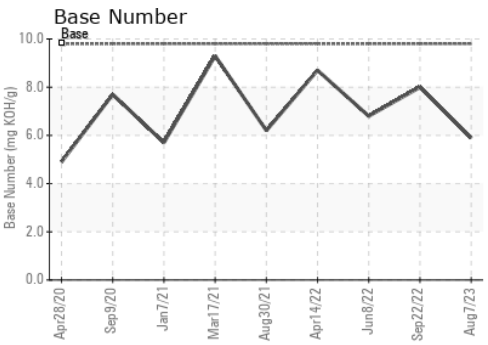
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0079796
Lab Number : 05929308
Unique Number : 10609255
Test Package : FLEET

Received : 21 Aug 2023
Diagnosed : 22 Aug 2023
Diagnostician : 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 - 663 - Lake Ariel (Scranton Hauling)
17 Industrial Park Rd
Lake Ariel, PA
US 18436
Contact: Eric Merone
emerone@countyrecycling.net
T:
F:

Report Id: GFL663 [WUSCAR] 05929308 (Generated: 08/22/2023 15:59:01) Rev: 1

Submitted By: Eric Buchanan