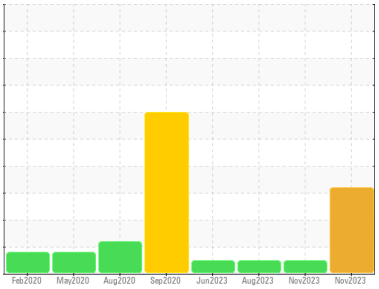
PROBLEM SUMMARY

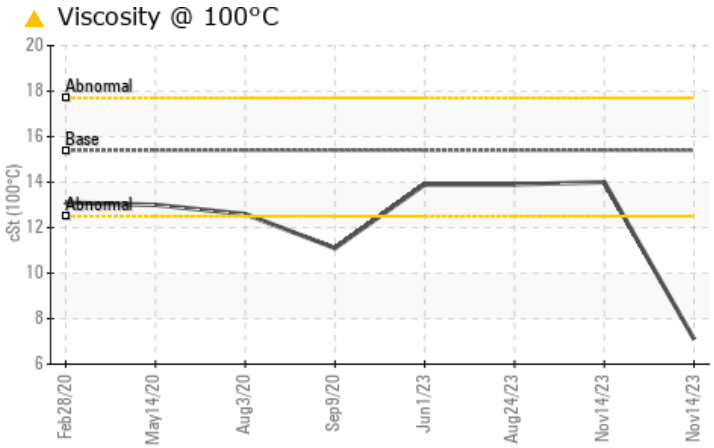
Machine Id
825054-101235
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

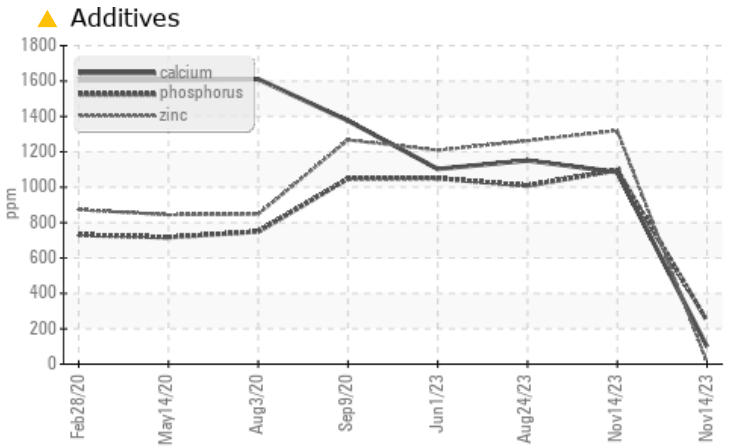
Sample Rating Trend



VISCOSITY

COMPONENT CONDITION SUMMARY





RECOMMENDATION

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				ATTENTION	NORMAL	NORMAL
Boron	ppm	ASTM D5185m	0	▲ **86**	2	4
Molybdenum	ppm	ASTM D5185m	60	▲ **0**	58	59
Magnesium	ppm	ASTM D5185m	1010	▲ **9**	994	992
Calcium	ppm	ASTM D5185m	1070	▲ **100**	1085	1151
Phosphorus	ppm	ASTM D5185m	1150	▲ **245**	1097	1009
Zinc	ppm	ASTM D5185m	1270	▲ **12**	1320	1262
Sulfur	ppm	ASTM D5185m	2060	▲ **1323**	3361	3767
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **7.1**	14.0	13.9

Customer Id: GFL837
Sample No.: GFL0098655
Lab Number: 06017118
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.

HISTORICAL DIAGNOSIS

14 Nov 2023 Diag: Jonathan Hester

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

24 Aug 2023 Diag: Wes Davis

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

01 Jun 2023 Diag: Wes Davis

NORMAL

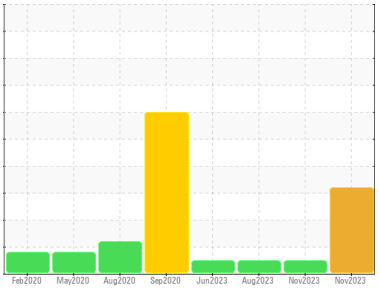
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Machine Id
825054-101235
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY

DIAGNOSIS

Recommendation
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
Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. The BN level is low. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**GFL0098655**	GFL0098621	GFL0087698
Sample Date		Client Info		**14 Nov 2023**	14 Nov 2023	24 Aug 2023
Machine Age	hrs	Client Info		**12740**	12740	12599
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ATTENTION**	NORMAL	NORMAL

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	>80	**39**	18	7
Chromium	ppm	ASTM D5185m	>5	**0**	2	0
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	**5**	23	4
Lead	ppm	ASTM D5185m	>30	**9**	<1	<1
Copper	ppm	ASTM D5185m	>150	**7**	7	<1
Tin	ppm	ASTM D5185m	>5	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	▲ **86**	2	4
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	▲ **0**	58	59
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	▲ **9**	994	992
Calcium	ppm	ASTM D5185m	1070	▲ **100**	1085	1151
Phosphorus	ppm	ASTM D5185m	1150	▲ **245**	1097	1009
Zinc	ppm	ASTM D5185m	1270	▲ **12**	1320	1262
Sulfur	ppm	ASTM D5185m	2060	▲ **1323**	3361	3767

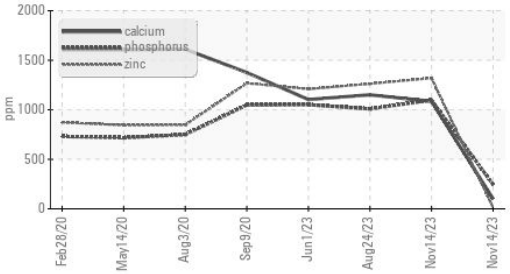
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	**5**	5	13
Sodium	ppm	ASTM D5185m		**6**	8	2
Potassium	ppm	ASTM D5185m	>20	**3**	3	2
Fuel	%	ASTM D3524	>5	**1.7**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.1**	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**5.9**	5.7	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**29.9**	17.8	18.5

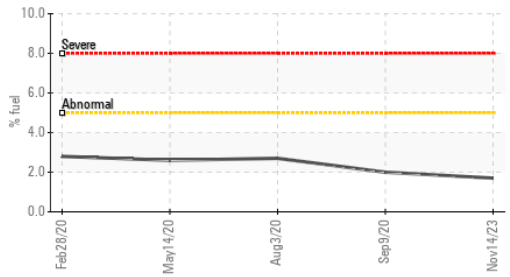
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**44.3**	13.6	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**-0.7**	9.6	8.2

OIL ANALYSIS REPORT

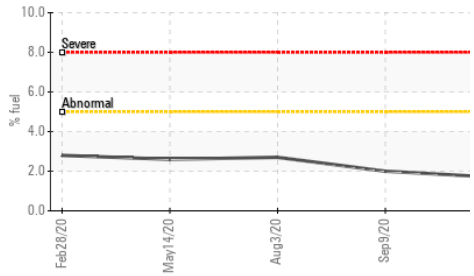
Additives



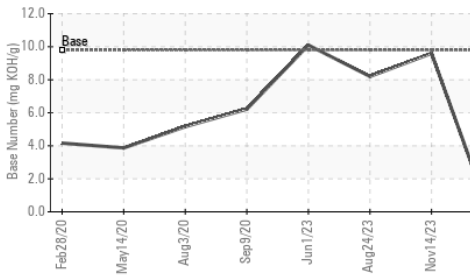
Fuel Dilution



Fuel Dilution



Base Number

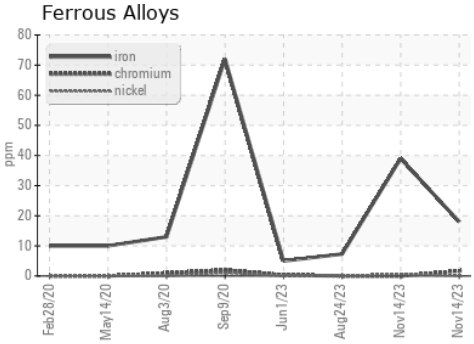


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

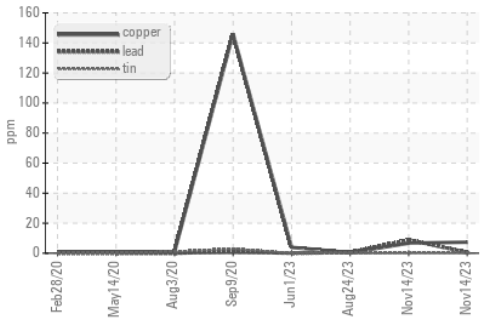
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	▲ **7.1**	14.0	13.9

GRAPHS

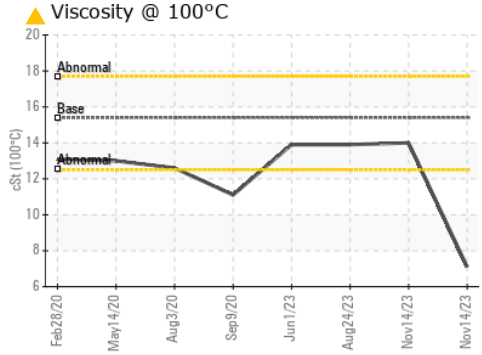
Ferrous Alloys



Non-ferrous Metals



▲ Viscosity @ 100°C



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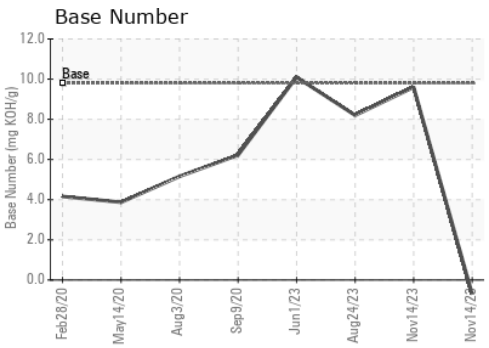

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098655 **Received** : 24 Nov 2023
Lab Number : 06017118 **Diagnosed** : 29 Nov 2023
Unique Number : 10756262 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, 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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