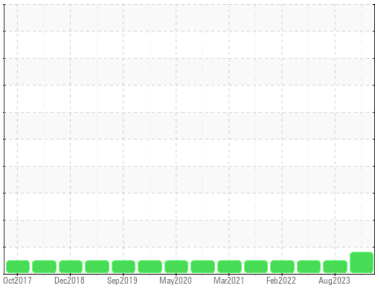
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
[1189996]
Machine Id
701030
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (22 LTR)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0875112**	GFL0091047	GFL0086469
Sample Date		Client Info		**05 Dec 2023**	01 Aug 2023	08 Jun 2023
Machine Age	hrs	Client Info		**10668**	106415	106415
Oil Age	hrs	Client Info		**496**	0	5875
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**MARGINAL**	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 D5185(m)	>100	**27**	18	27
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**8**	5	4
Lead	ppm	ASTM D5185(m)	>40	**<1**	0	0
Copper	ppm	ASTM D5185(m)	>330	**2**	<1	1
Tin	ppm	ASTM D5185(m)	>15	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**4**	3	6
Barium	ppm	ASTM D5185(m)	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	60	**61**	58	61
Manganese	ppm	ASTM D5185(m)	0	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	**931**	962	941
Calcium	ppm	ASTM D5185(m)	1070	**1066**	1044	1123
Phosphorus	ppm	ASTM D5185(m)	1150	**907**	1032	1072
Zinc	ppm	ASTM D5185(m)	1270	**1162**	1185	1203
Sulfur	ppm	ASTM D5185(m)	2060	**2397**	2470	2418
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**7**	3	6
Sodium	ppm	ASTM D5185(m)		**8**	7	9
Potassium	ppm	ASTM D5185(m)	>20	**10**	6	2
Fuel	%	ASTM D7593*	>5	**3.9**	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.5**	0.3	0.4
Nitration	Abs/cm	ASTM D7624*	>20	**11.1**	8.9	10.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.7**	20.6	22.5

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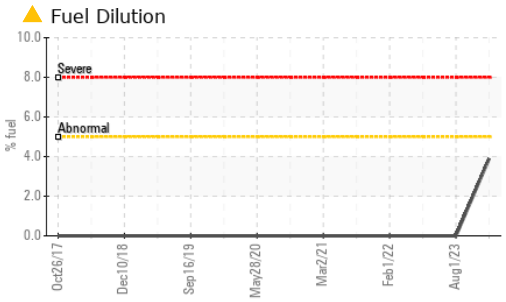
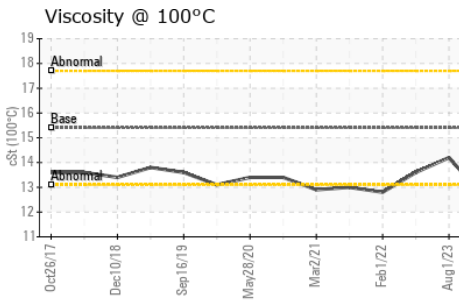


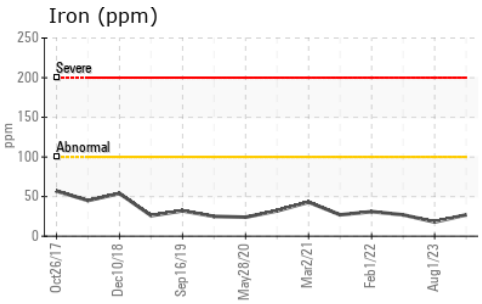


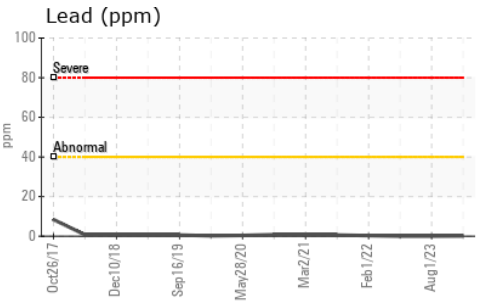
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**19.2**	16.1	19.7

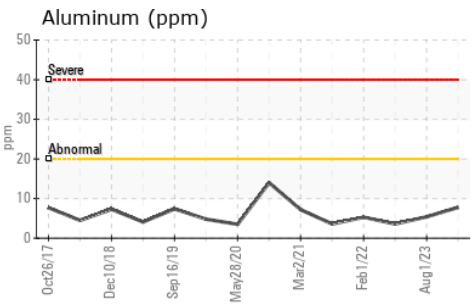
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

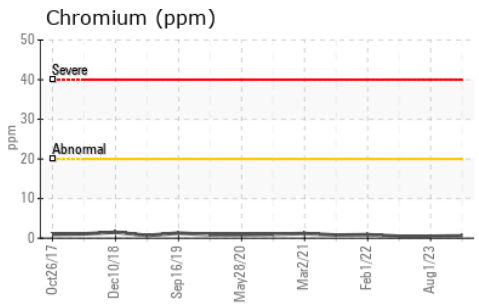
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**12.7**	14.2	13.6

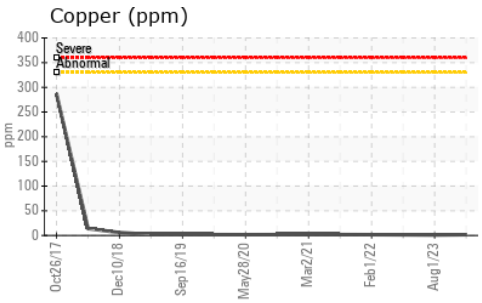
GRAPHS

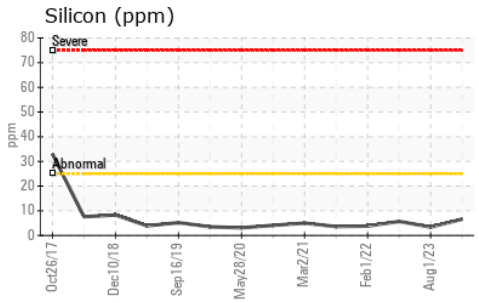


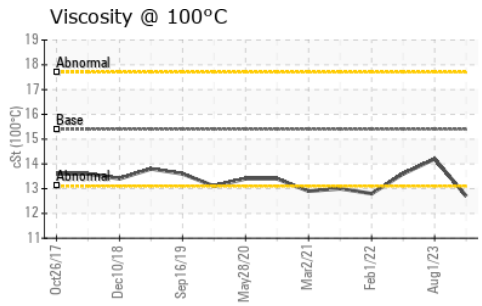


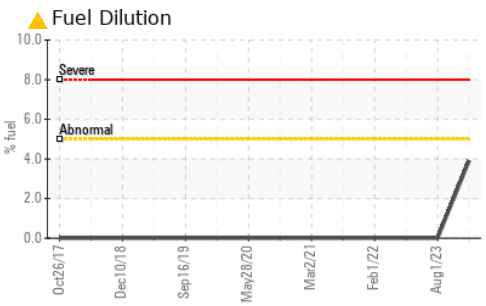












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0875112
Lab Number : 02601784
Unique Number : 5694869
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

Received : 08 Dec 2023
Diagnosed : 11 Dec 2023
Diagnostician : Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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Report Id: GFL217 [WCAMIS] 02601784 (Generated: 12/11/2023 06:58:11) Rev: 1

Submitted By: Scott Ewan