OIL ANALYSIS REPORT

360 OIL DIAGNOSTICS / TECHNICAL EXPERTISE

Sample Rating Trend

Jun2020 Aug2020 Apr2021 Nov2021 Mar2022 Aug2022 May2023

NORMAL

Machine Id
540
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear
All 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 suitable for further service.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		**PCA0069603**	PCA0058357	PCA0058499
Sample Date	Client Info		**15 May 2023**	17 Aug 2022	14 Mar 2022
Machine Age	hrs	Client Info	**11835**	8488	8488
Oil Age	hrs	Client Info	**887**	8488	8488
Oil Changed		Client Info	**Not Changd**	N/A	N/A
Sample Status			**NORMAL**	NORMAL	NORMAL

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	>100	**31**	19	25
Chromium	ppm	ASTM D5185m	>20	**1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**5**	2	3
Lead	ppm	ASTM D5185m	>40	**1**	2	1
Copper	ppm	ASTM D5185m	>330	**8**	1	2
Tin	ppm	ASTM D5185m	>15	**<1**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	---
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**6**	8	7
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**71**	65	66
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**1035**	897	1055
Calcium	ppm	ASTM D5185m		**1331**	1197	1229
Phosphorus	ppm	ASTM D5185m		**1164**	1029	1182
Zinc	ppm	ASTM D5185m		**1446**	1241	1407
Sulfur	ppm	ASTM D5185m		**3851**	3572	3034

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**9**	6	7
Sodium	ppm	ASTM D5185m		**2**	2	0
Potassium	ppm	ASTM D5185m	>20	**4**	<1	5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.6**	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**12.1**	11.6	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.7**	22.1	19.8

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**20.1**	18.6	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**6.3**	9.1	8.3

OIL ANALYSIS REPORT

Base Number

Viscosity @ 100°C
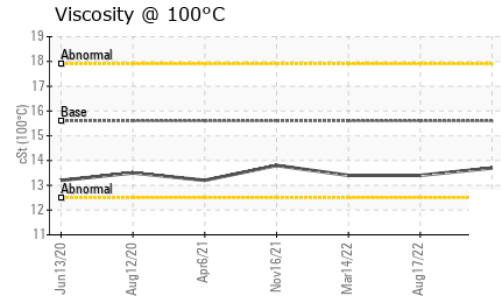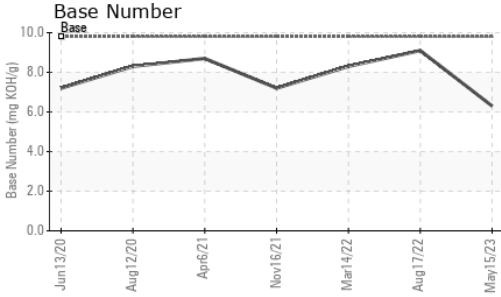
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	15.6	**13.7**	13.4	13.4

GRAPHS

Ferrous Alloys

Non-ferrous Metals

Viscosity @ 100°C

Base Number
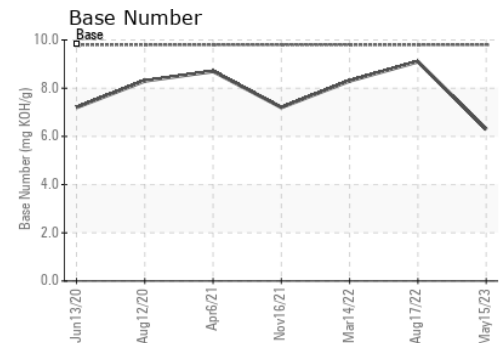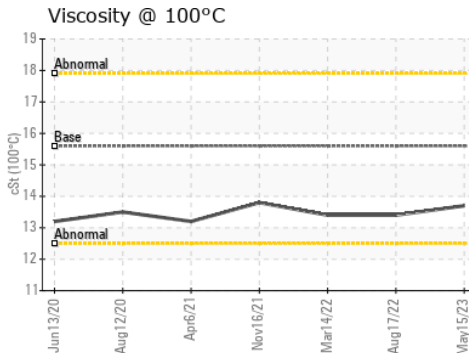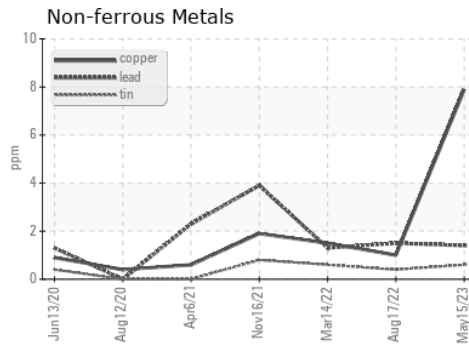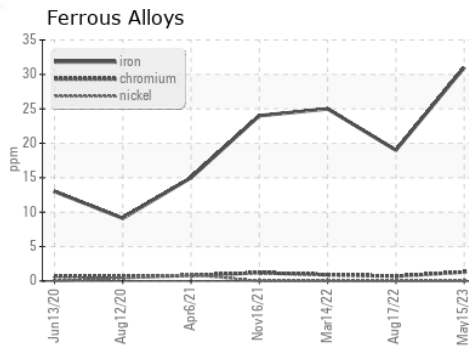
Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513			**AVR - APPLE VALLEY READY MIX**
Sample No.	: PCA0069603	**Received**	: 25 Aug 2023	14698 GALAXY AVE
Lab Number	: 05934712	**Diagnosed**	: 25 Aug 2023	APPLE VALLEY, MN
Unique Number	: 10619983	**Diagnostician**	: Wes Davis	US 55124
Test Package	: FLEET			Contact: COLE DAMBROTEN

To discuss this sample report, contact Customer Service at 1-800-237-1369.
coledambroten@avrconcrete.com

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.   T:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)   F: