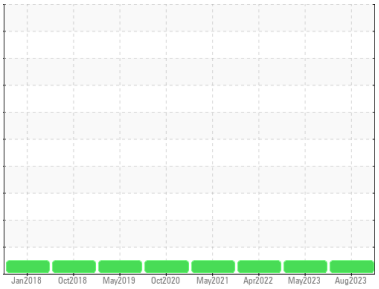
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
GM Seattle Off Raod Shop
Machine Id
[GM Seattle Off Raod Shop] 24-740
Component
Diesel Engine
Fluid
SHELL 15W40 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

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		**PE0002305**	PE0001775	PE12290946
Sample Date		Client Info		**03 Aug 2023**	30 May 2023	27 Apr 2022
Machine Age	hrs	Client Info		**5185**	5100	4458
Oil Age	hrs	Client Info		**581**	478	393
Oil Changed		Client Info		**Changed**	Oil Added	Not Changd
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	**21**	15	10
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	0
Nickel	ppm	ASTM D5185m	>4	**0**	0	1
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**2**	2	3
Lead	ppm	ASTM D5185m	>40	**1**	1	1
Copper	ppm	ASTM D5185m	>330	**3**	2	3
Tin	ppm	ASTM D5185m	>15	**1**	<1	5
Antimony	ppm	ASTM D5185m		**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**32**	34	11
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**24**	22	26
Manganese	ppm	ASTM D5185m		**<1**	<1	---
Magnesium	ppm	ASTM D5185m		**374**	362	439
Calcium	ppm	ASTM D5185m		**2159**	2121	1903
Phosphorus	ppm	ASTM D5185m		**1029**	986	1046
Zinc	ppm	ASTM D5185m		**1238**	1231	1226
Sulfur	ppm	ASTM D5185m		**4459**	4507	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**13**	11	9
Sodium	ppm	ASTM D5185m	>150	**1**	<1	3
Potassium	ppm	ASTM D5185m	>20	**<1**	2	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.6**	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**10.9**	9.9	10
Sulfation	Abs/.1mm	*ASTM D7415	>30	**21.6**	20.8	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**17.2**	17.1	15
Base Number (BN)	mg KOH/g	ASTM D2896		**6.7**	6.6	8.02

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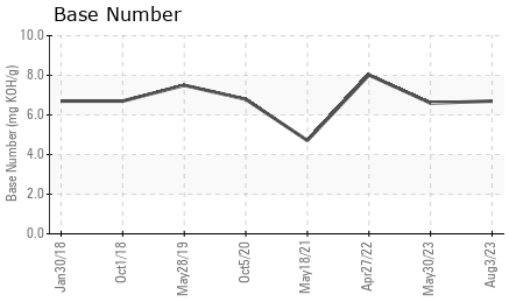
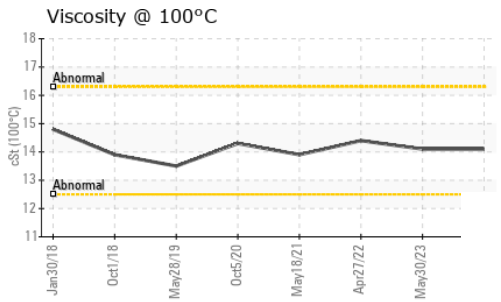
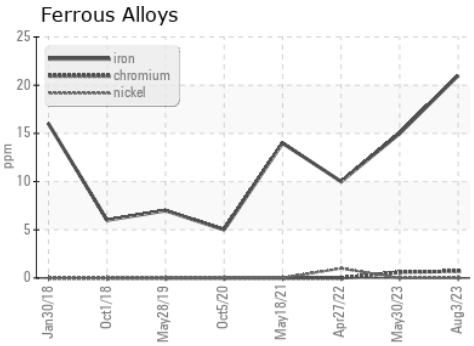


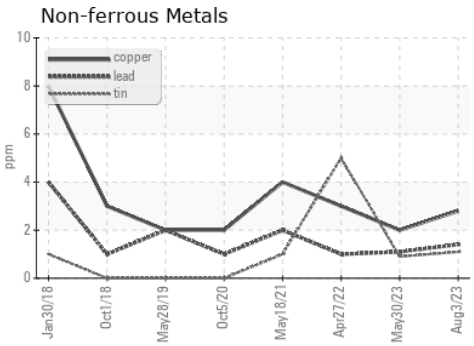


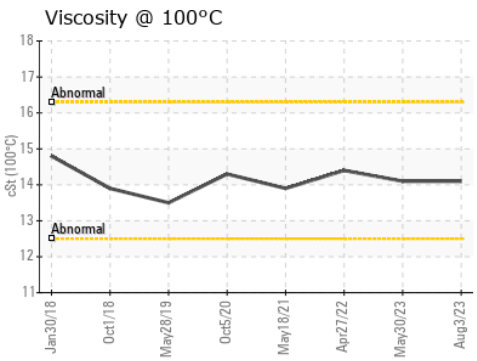
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	---
Free Water	scalar	*Visual		**NEG**	NEG	---

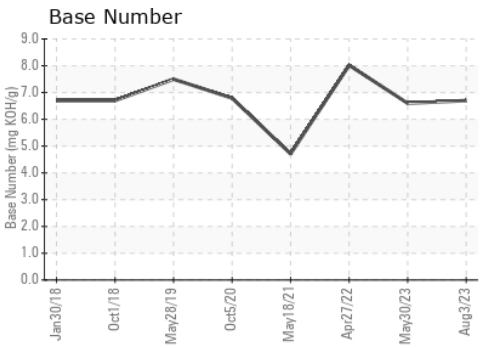
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**14.1**	14.1	14.4

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0002305
Lab Number : 05922752
Unique Number : 10602699
Test Package : CONST (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

Received : 11 Aug 2023
Diagnosed : 14 Aug 2023
Diagnostician : Don Baldridge

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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Report Id: GARSEA [WUSCAR] 05922752 (Generated: 08/14/2023 13:44:33) Rev: 1

Submitted By: Stoneway Concrete - Seattle - Jesse Patterson