



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
4160220

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

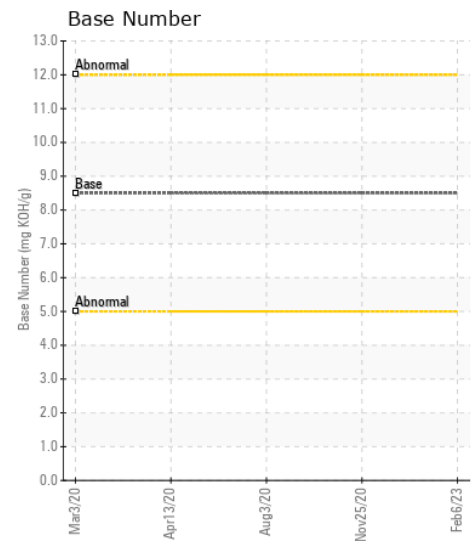
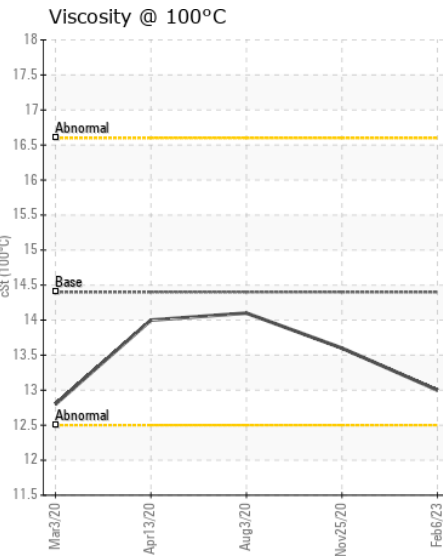
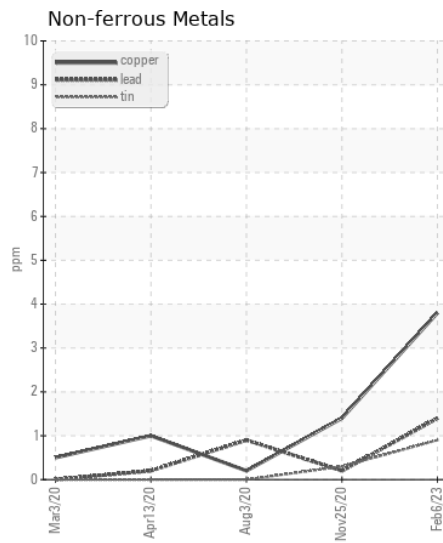
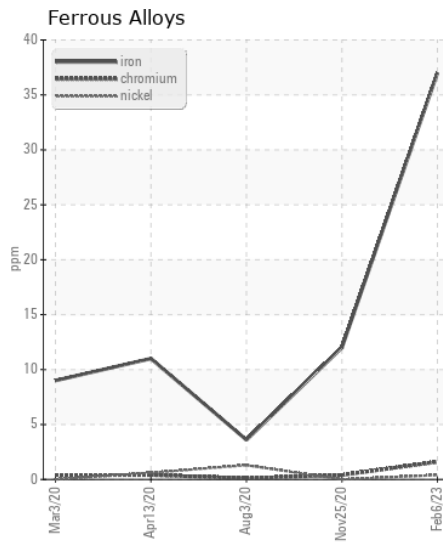
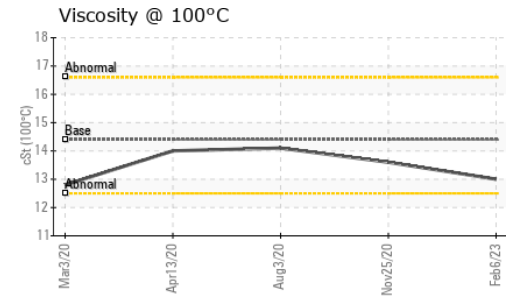
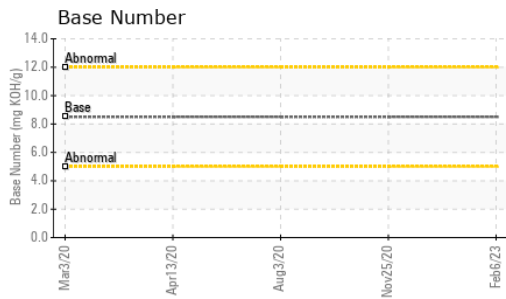
CONTAMINATION

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0688037	WC05134224	WC0485508
Sample Date		Client Info		06 Feb 2023	25 Nov 2020	03 Aug 2020
Machine Age	hrs	Client Info		8243	6030	5798
Oil Age	hrs	Client Info		0	232	219
Filter Age	hrs	Client Info		0	0	219
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	37	12	4
Chromium	ppm	ASTM D5185m	>20	2	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	7	4	4
Lead	ppm	ASTM D5185m	>40	1	<1	<1
Copper	ppm	ASTM D5185m	>330	4	1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	10	4	6
Potassium	ppm	ASTM D5185m	>20	<1	0	19
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.9	8.4	5.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	23.4	22.1
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
Sodium	ppm	ASTM D5185m	>158	<1	<1	2
Boron	ppm	ASTM D5185m	250	233	260	324
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	97	88	100
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	564	447	578
Calcium	ppm	ASTM D5185m	3000	1588	1756	1723
Phosphorus	ppm	ASTM D5185m	1150	862	825	797
Zinc	ppm	ASTM D5185m	1350	1059	968	839
Sulfur	ppm	ASTM D5185m	4250	3371	2453	2306
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	18.4	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.2	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.0	13.6	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0688037 **Received** : 10 Feb 2023
Lab Number : 05764955 **Diagnosed** : 13 Feb 2023
Unique Number : 10334563 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: TBN)

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)

KELLER - NORTH AMERICA
 510 NINE NORTH COURT
 ALPHARETTA, GA
 US 30004-2961
 Contact: SHOP MANAGER
 SRLEWIS@KELLER-NA.COM
 T: (770)442-1801
 F: (770)442-8344