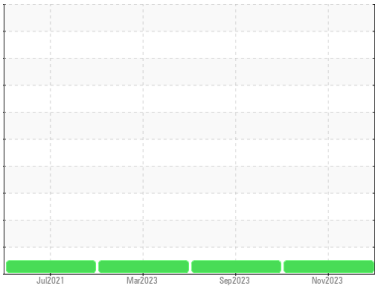
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
260
Component
Diesel Engine
Fluid
15W40 PRIMROSE (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor. 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0584571**	WC0584569	WC0584560
Sample Date		Client Info		**16 Nov 2023**	28 Sep 2023	16 Mar 2023
Machine Age	mls	Client Info		**257278**	250223	215470
Oil Age	mls	Client Info		**30000**	28779	34902
Oil Changed		Client Info		**Changed**	Oil Added	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
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	>90	**31**	28	35
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**4**	6	4
Lead	ppm	ASTM D5185m	>40	**11**	11	16
Copper	ppm	ASTM D5185m	>330	**3**	3	4
Tin	ppm	ASTM D5185m	>15	**0**	<1	<1
Antimony	ppm	ASTM D5185m		**---**	---	---
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		**76**	131	53
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**99**	112	76
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**450**	543	374
Calcium	ppm	ASTM D5185m		**1594**	1763	1738
Phosphorus	ppm	ASTM D5185m		**1143**	1327	1062
Zinc	ppm	ASTM D5185m		**1395**	1680	1246
Sulfur	ppm	ASTM D5185m		**3540**	4152	3701

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**19**	22	16
Sodium	ppm	ASTM D5185m		**5**	9	4
Potassium	ppm	ASTM D5185m	>20	**18**	18	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>6	**0.8**	0.6	0.9
Nitration	Abs/cm	*ASTM D7624	>20	**11.1**	11.3	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**30.4**	28.6	33.2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**26.6**	25.0	29.1
Base Number (BN)	mg KOH/g	ASTM D2896		**5.6**	6.5	4.7

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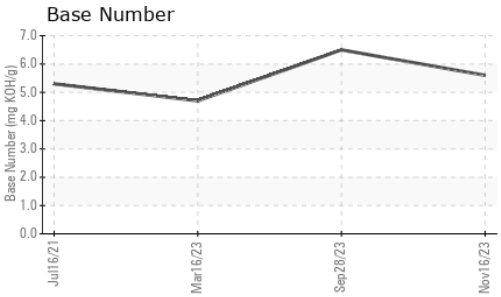
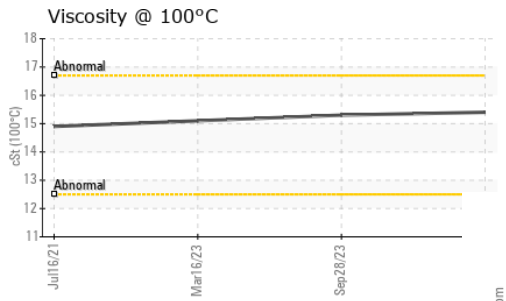
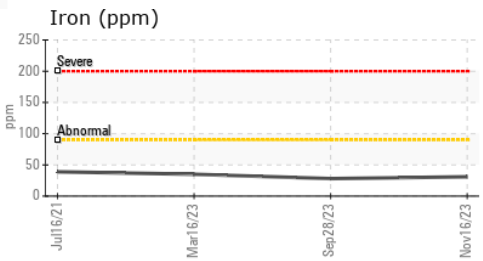


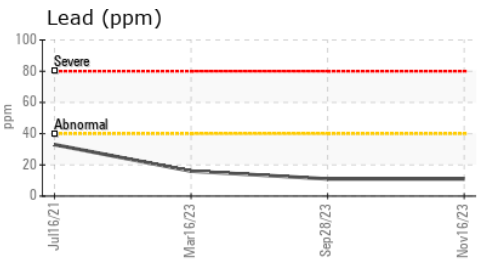


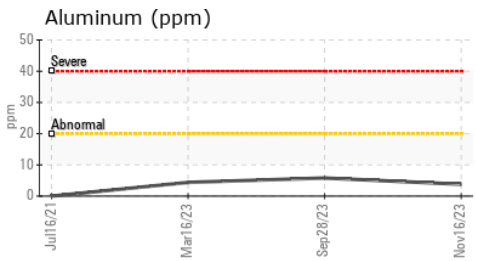
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

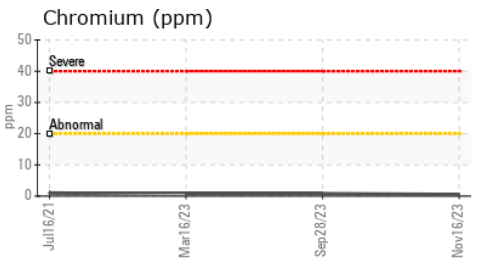
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**15.4**	15.3	15.1

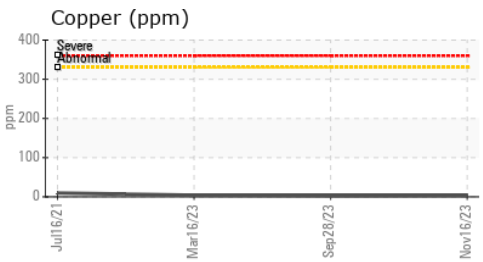
GRAPHS

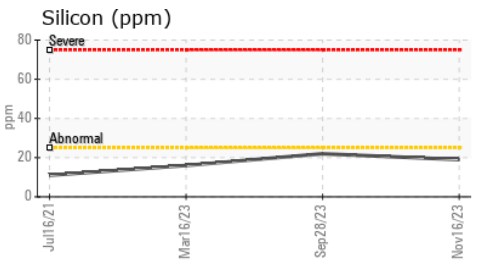


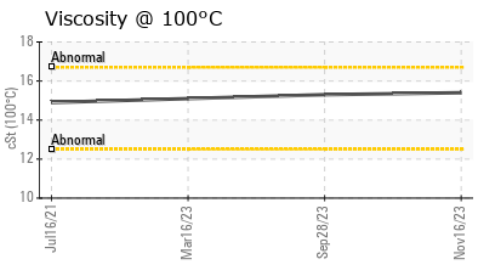


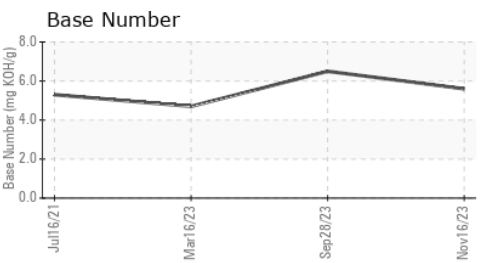












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0584571
Lab Number : 06011843
Unique Number : 10750987
Test Package : MOB1+

Received : 20 Nov 2023
Diagnosed : 21 Nov 2023
Diagnostician : Sean Felton

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: MIDMIDKY [WUSCAR] 06011843 (Generated: 11/21/2023 17:18:15) Rev: 1

Submitted By: TIM GOINS