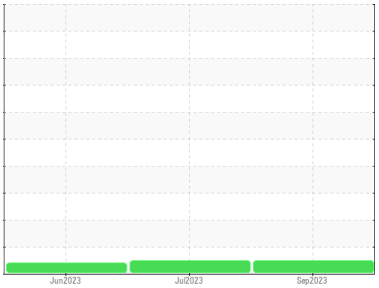
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
J-24
Component
Diesel Engine
Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

DIAGNOSIS

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

Wear
Metal levels are typical for a new component breaking in.

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. 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		**WC0819746**	WC0819754	WC0756088
Sample Date		Client Info		**18 Sep 2023**	31 Jul 2023	06 Jun 2023
Machine Age	mls	Client Info		**46227**	31114	13533
Oil Age	mls	Client Info		**15000**	15000	13533
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**NORMAL**	NORMAL	ATTENTION

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>5	**<1.0**	<1.0	0.3
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**18**	27	50
Chromium	ppm	ASTM D5185m	>20	**<1**	2	2
Nickel	ppm	ASTM D5185m	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	<1	<1
Silver	ppm	ASTM D5185m	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>20	**16**	44	51
Lead	ppm	ASTM D5185m	>40	**1**	2	3
Copper	ppm	ASTM D5185m	>330	**2**	5	30
Tin	ppm	ASTM D5185m	>15	**<1**	1	3
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		**259**	217	84
Barium	ppm	ASTM D5185m		**0**	0	8
Molybdenum	ppm	ASTM D5185m		**124**	113	15
Manganese	ppm	ASTM D5185m		**<1**	2	6
Magnesium	ppm	ASTM D5185m		**673**	661	973
Calcium	ppm	ASTM D5185m		**1575**	1600	1805
Phosphorus	ppm	ASTM D5185m	1200	**714**	693	977
Zinc	ppm	ASTM D5185m	1300	**888**	840	1158
Sulfur	ppm	ASTM D5185m	3200	**2633**	2932	4592

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**13**	16	55
Sodium	ppm	ASTM D5185m		**2**	3	5
Potassium	ppm	ASTM D5185m	>20	**55**	126	159

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.4**	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**7.6**	8.0	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.4**	23.2	18.9

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.4**	16.4	13.7
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	**8.98**	11.08	10.14

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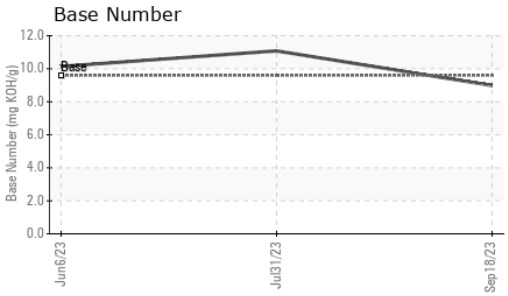
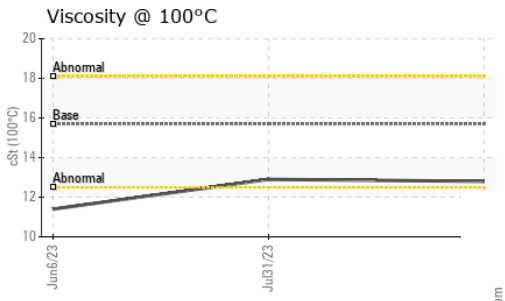
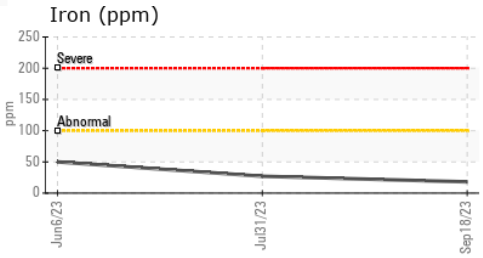


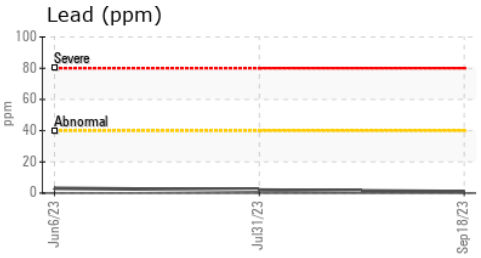


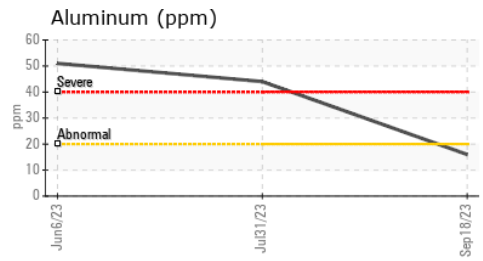
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

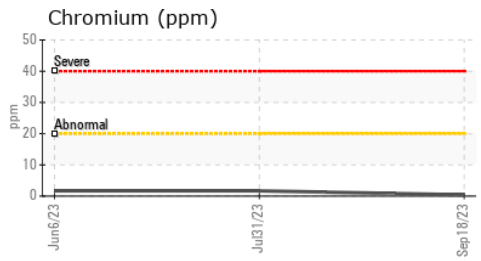
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	**12.8**	12.9	▲ 11.4

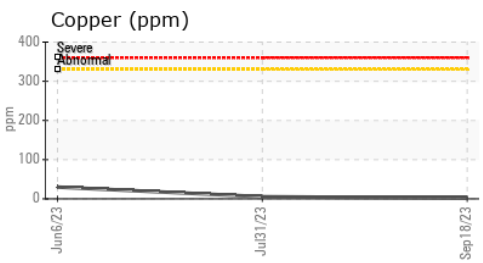
GRAPHS

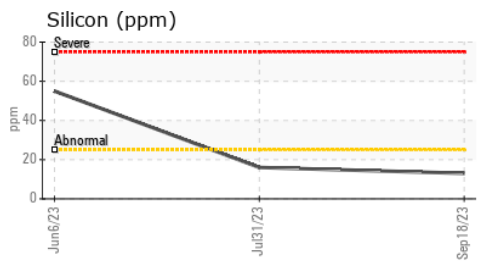


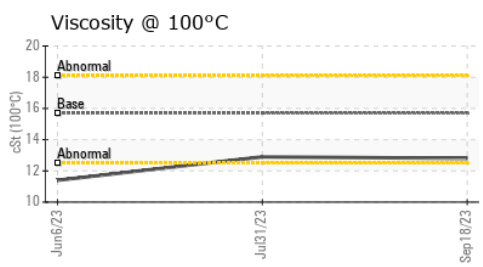


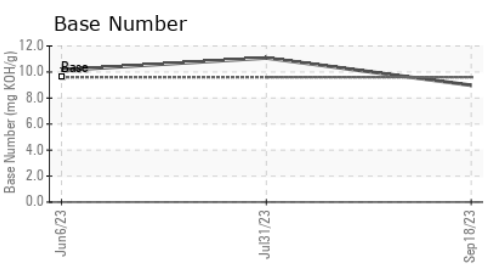












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0819746
Lab Number : 05963018
Unique Number : 10669569
Test Package : MOB 2

Received : 27 Sep 2023
Diagnosed : 29 Sep 2023
Diagnostician : Wes Davis

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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