OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ATTENTION

Machine Id
349606-152250
Component
Diesel Engine
Fluid
CHEVRON DELO 400 XLE 15W40 (--- QTS)

RECOMMENDATION

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Please specify the component make and model with your next sample.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

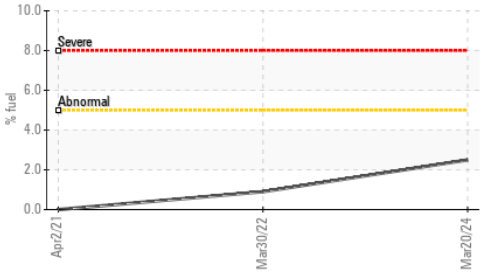
Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

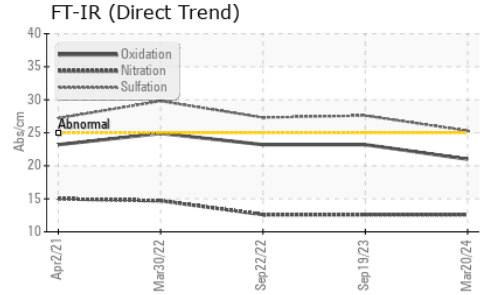
Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RY0123438	RY0123232	RY0123165
Sample Date		Client Info		20 Mar 2024	19 Sep 2023	22 Sep 2022
Machine Age	mls	Client Info		14000	0	0
Oil Age	mls	Client Info		0	17000	12000
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	45	34	29
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	<1
Aluminum	ppm	ASTM D5185m	>20	9	7	10
Lead	ppm	ASTM D5185m	>40	0	0	2
Copper	ppm	ASTM D5185m	>330	5	3	3
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	8	8	7
Potassium	ppm	ASTM D5185m	>20	7	7	8
Fuel	%	ASTM D3524	>5	▲ 2.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	1	0.9
Nitration	Abs/cm	*ASTM D7624	>20	12.6	12.6	12.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.3	27.6	27.3
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		4	3	6
Boron	ppm	ASTM D5185m		● 27	34	66
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		● 17	61	79
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m		659	561	549
Calcium	ppm	ASTM D5185m		1383	1383	1444
Phosphorus	ppm	ASTM D5185m	760	779	813	779
Zinc	ppm	ASTM D5185m	830	907	1069	1013
Sulfur	ppm	ASTM D5185m	2770	3320	2852	3111
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.0	23.2	23.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	6.0	6.0	7.1
Visc @ 100°C	cSt	ASTM D445	14.9	12.0	12.7	13.2

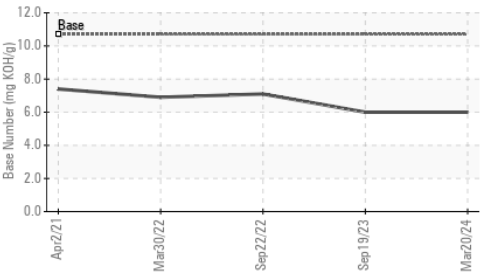
Fuel Dilution



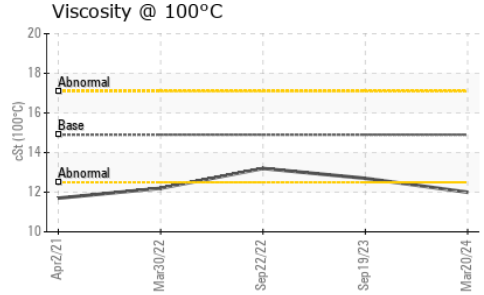
FT-IR (Direct Trend)



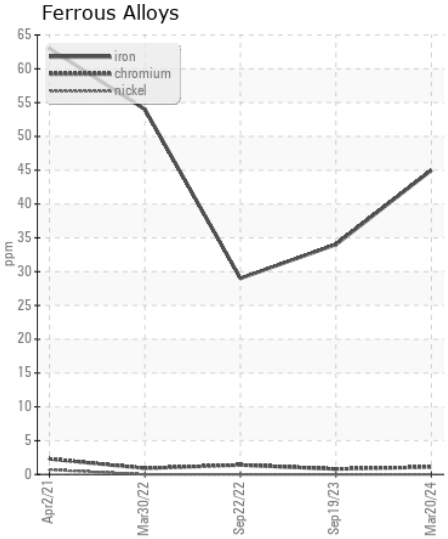
Base Number



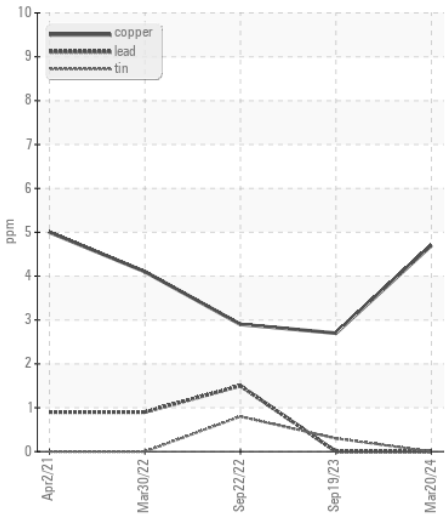
Viscosity @ 100°C



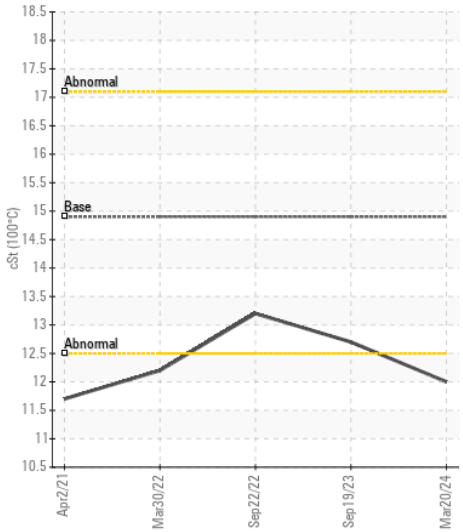
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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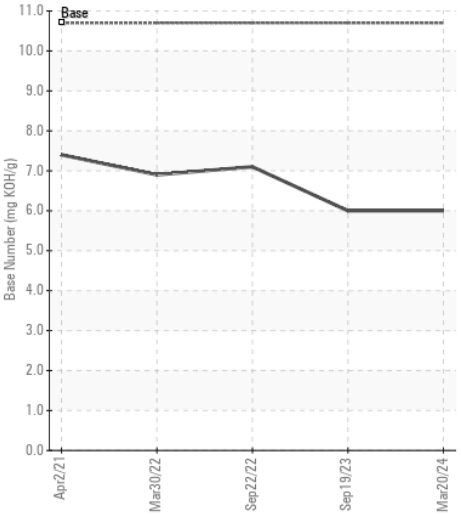

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RY0123438
Lab Number : 06187307
Unique Number : 11044059
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 22 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 2024 - 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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