OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
IRIS UPRIVER
Component
1 Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

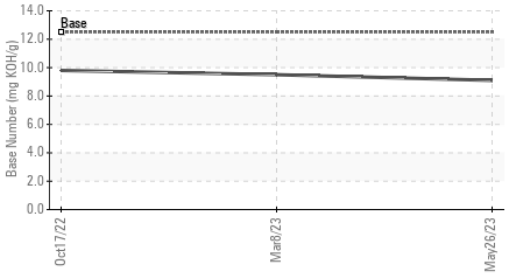
There is no indication of any contamination in the oil.

FLUID CONDITION

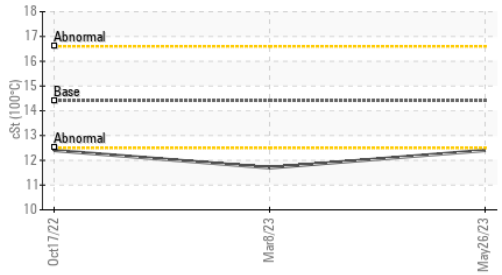
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0727954	WC0727931	WC0727937
Sample Date		Client Info		26 May 2023	08 Mar 2023	17 Oct 2022
Machine Age	hrs	Client Info		3698	2995	2364
Oil Age	hrs	Client Info		272	0	452
Filter Age	hrs	Client Info		272	0	452
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ATTENTION	ATTENTION
Iron	ppm	ASTM D5185m	>100	3	3	7
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	3
Lead	ppm	ASTM D5185m	>40	0	0	3
Copper	ppm	ASTM D5185m	>330	0	<1	254
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	5	5
Potassium	ppm	ASTM D5185m	>20	0	0	0
Fuel	%	ASTM D3524	>5	<1.0	<1.0	0.7
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.9	7.5	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.3	22.5	25.1
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		2	1	0
Boron	ppm	ASTM D5185m	151	285	325	269
Barium	ppm	ASTM D5185m	0.4	0	0	0
Molybdenum	ppm	ASTM D5185m	250	126	122	132
Manganese	ppm	ASTM D5185m		0	1	<1
Magnesium	ppm	ASTM D5185m	0	661	647	687
Calcium	ppm	ASTM D5185m	2046	1606	1610	1647
Phosphorus	ppm	ASTM D5185m	1043	699	686	703
Zinc	ppm	ASTM D5185m	943	841	810	835
Sulfur	ppm	ASTM D5185m	5012	2998	2526	2963
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	16.4	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	9.1	9.5	9.8
Visc @ 100°C	cSt	ASTM D445	14.4	12.4	▲ 11.7	▲ 12.4

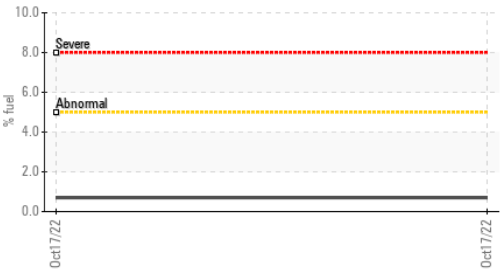
Base Number



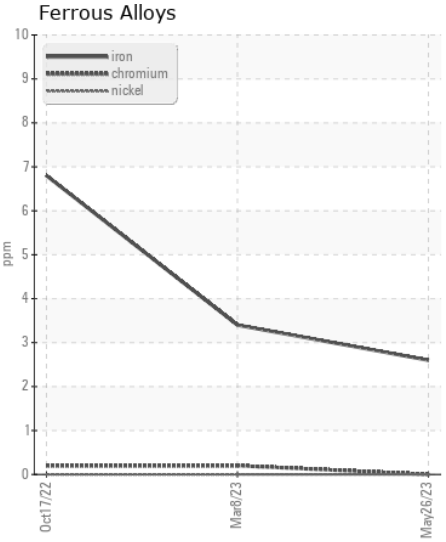
Viscosity @ 100°C



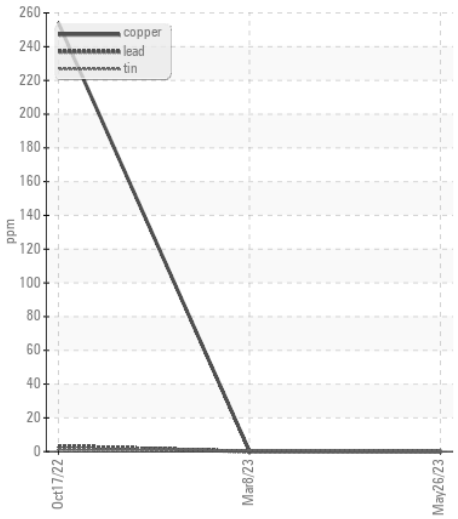
Fuel Dilution



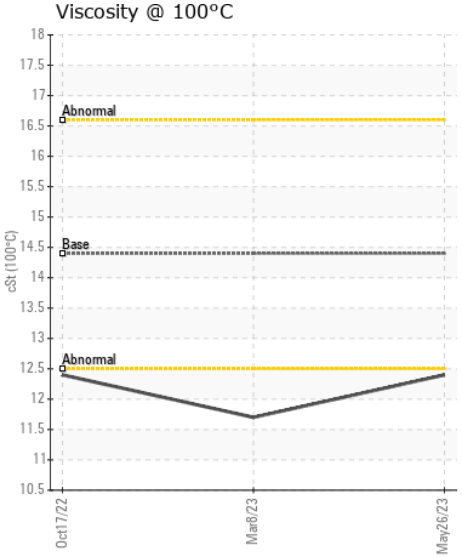
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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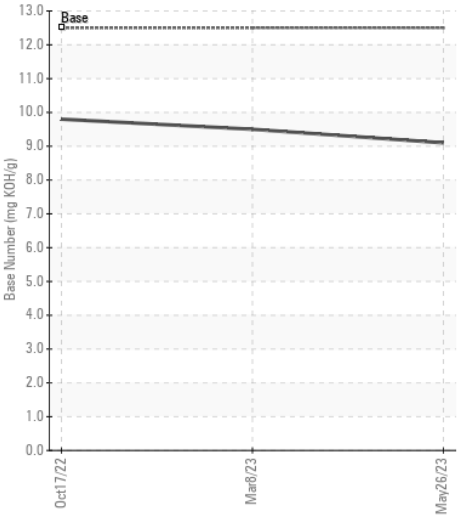

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0727954 **Recieved** : 05 Jun 2023
Lab Number : 05864965 **Diagnosed** : 06 Jun 2023
Unique Number : 10499430 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution)

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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