OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
139-397
Component
Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

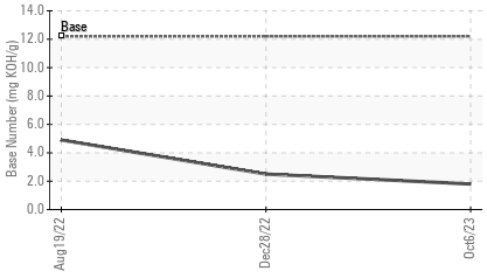
There is no indication of any contamination in the oil.

FLUID CONDITION

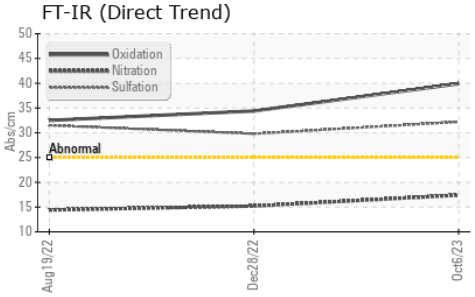
The BN level is low. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RPL0014929	RPL0007329	RPL0003211
Sample Date		Client Info		06 Oct 2023	28 Dec 2022	19 Aug 2022
Machine Age	mls	Client Info		227473	227473	186801
Oil Age	mls	Client Info		25000	40672	36120
Filter Age	mls	Client Info		25000	40672	36120
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	59	43	38
Chromium	ppm	ASTM D5185m	>20	3	2	2
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	13	13	10
Lead	ppm	ASTM D5185m	>40	8	7	6
Copper	ppm	ASTM D5185m	>330	5	4	2
Tin	ppm	ASTM D5185m	>15	<1	<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	10	10	10
Potassium	ppm	ASTM D5185m	>20	20	33	14
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	0.7	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	17.4	15.2	14.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.2	29.8	31.5
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		1	0	2
Boron	ppm	ASTM D5185m		38	38	35
Barium	ppm	ASTM D5185m		2	2	0
Molybdenum	ppm	ASTM D5185m		129	132	139
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		649	626	662
Calcium	ppm	ASTM D5185m		1438	1544	1557
Phosphorus	ppm	ASTM D5185m	1360	726	649	709
Zinc	ppm	ASTM D5185m	1480	933	837	927
Sulfur	ppm	ASTM D5185m		2620	2223	2494
Oxidation	Abs/.1mm	*ASTM D7414	>25	39.9	34.4	32.5
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	▲ 1.8	▲ 2.5	4.9
Visc @ 100°C	cSt	ASTM D445	15.1	14.2	13.6	14.0

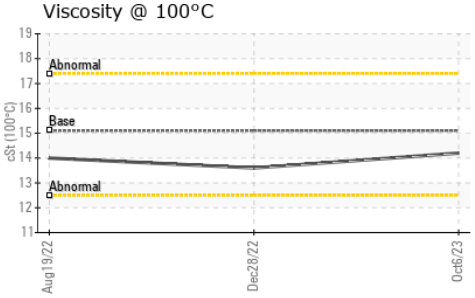
Base Number



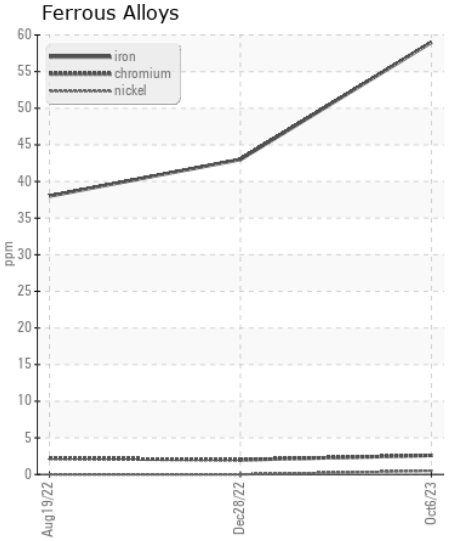
FT-IR (Direct Trend)



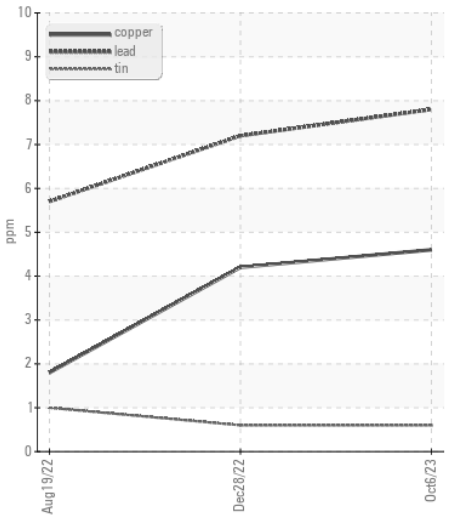
Viscosity @ 100°C



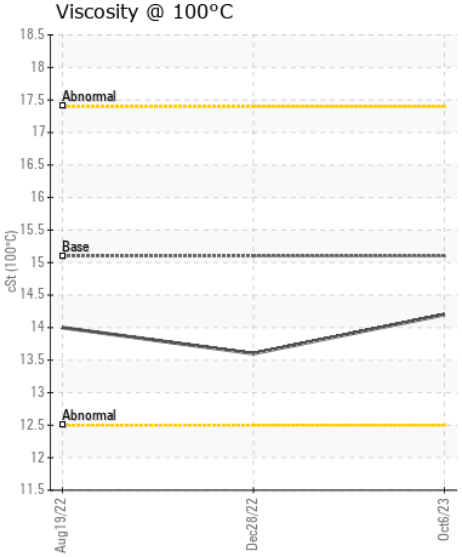
Ferrous Alloys



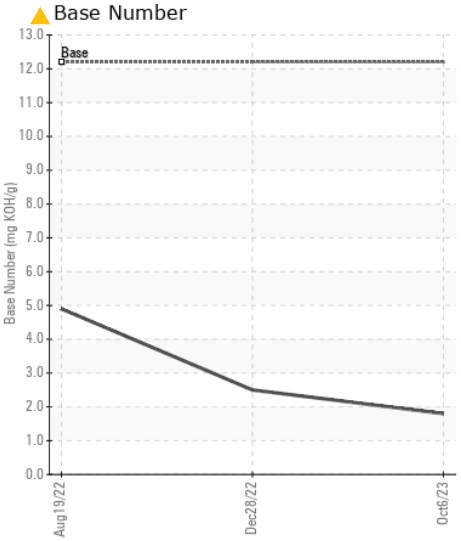
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL0014929
Lab Number : 05975561
Unique Number : 10687511
Test Package : FLEET

Received : 11 Oct 2023
Tested : 13 Oct 2023
Diagnosed : 13 Oct 2023 - Jonathan Hester

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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