



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
846-5213
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 SAE 10W30 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RPL0019030	RPL0017263	---
Sample Date		Client Info		10 Jun 2024	15 Jan 2024	---
Machine Age	mls	Client Info		18168	19401	---
Oil Age	mls	Client Info		0	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changd	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	59	32	---
Chromium	ppm	ASTM D5185m	>20	1	<1	---
Nickel	ppm	ASTM D5185m	>4	<1	<1	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	23	6	---
Lead	ppm	ASTM D5185m	>40	<1	3	---
Copper	ppm	ASTM D5185m	>330	22	27	---
Tin	ppm	ASTM D5185m	>15	2	2	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

Elemental level of silicon (Si) above normal indicating ingress of seal material. 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.

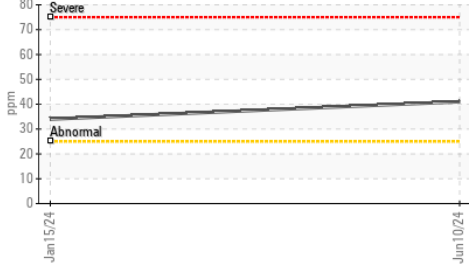
Silicon	ppm	ASTM D5185m	>25	▲ 41	▲ 34	---
Potassium	ppm	ASTM D5185m	>20	98	14	---
Fuel		WC Method	>5	<1.0	1.1	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol	%	*ASTM D2982		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	10.2	9.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.8	19.6	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

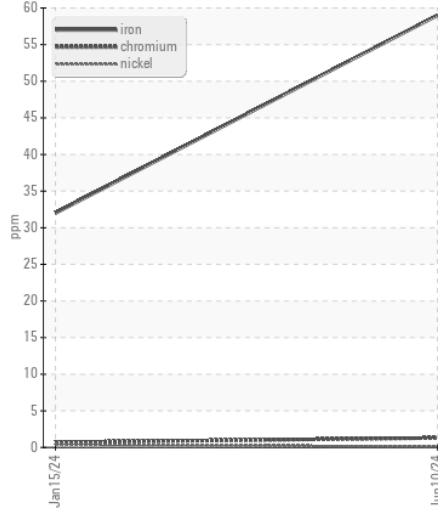
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	3	---
Boron	ppm	ASTM D5185m		28	49	---
Barium	ppm	ASTM D5185m		0	4	---
Molybdenum	ppm	ASTM D5185m		14	19	---
Manganese	ppm	ASTM D5185m		6	5	---
Magnesium	ppm	ASTM D5185m		763	796	---
Calcium	ppm	ASTM D5185m		1284	1438	---
Phosphorus	ppm	ASTM D5185m	1260	735	763	---
Zinc	ppm	ASTM D5185m	1400	884	837	---
Sulfur	ppm	ASTM D5185m		2988	2888	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	15.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.3	6.7	---
Visc @ 100°C	cSt	ASTM D445	11.1	11.6	● 11.3	---

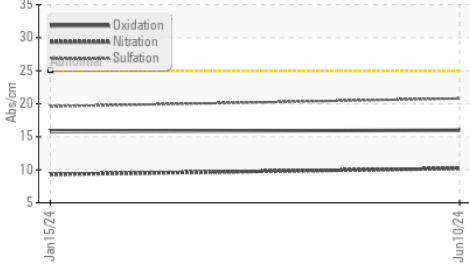
▲ Silicon (ppm)



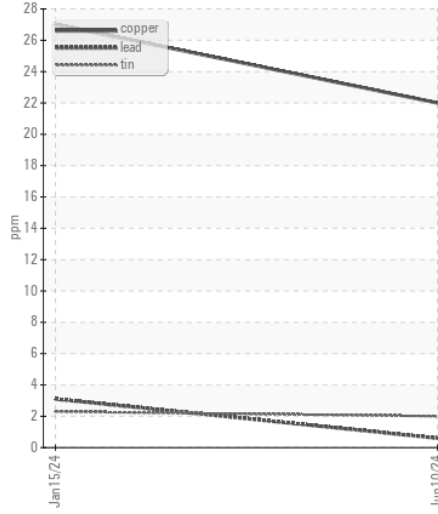
Ferrous Alloys



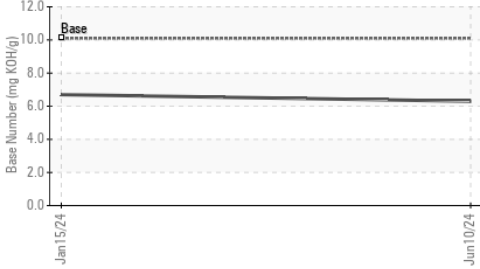
FT-IR (Direct Trend)



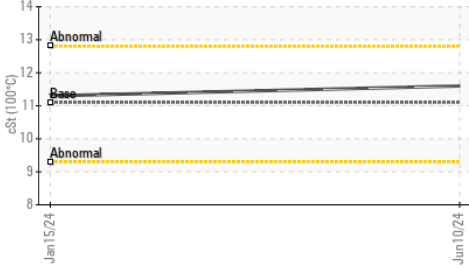
Non-ferrous Metals



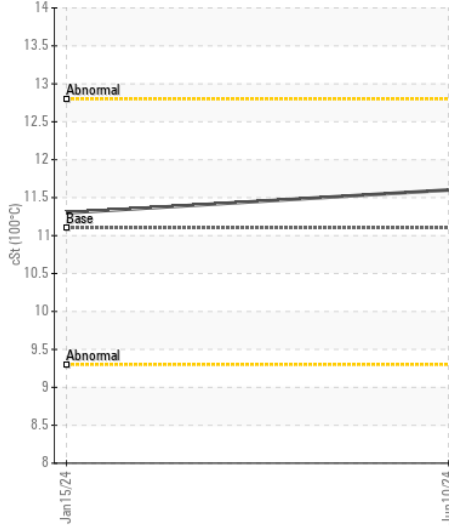
Base Number



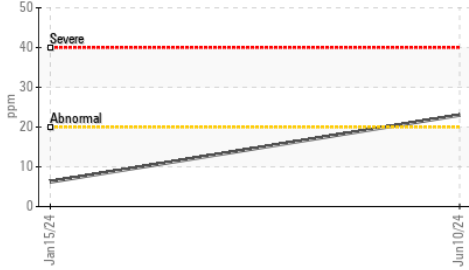
Viscosity @ 100°C



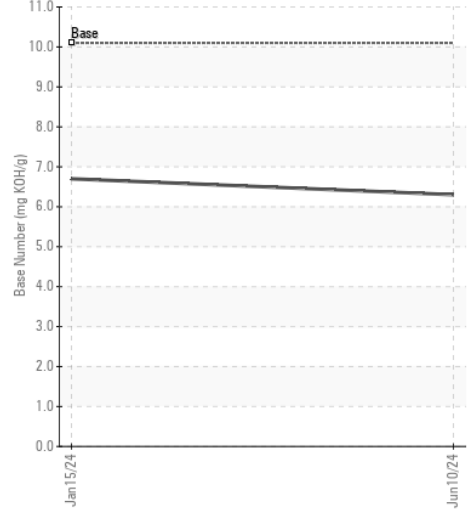
Viscosity @ 100°C



Aluminum (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : RPL0019030

Lab Number : 06225538

Unique Number : 11103735

Test Package : FLEET (Additional Tests: Glycol, KV40)

Received : 01 Jul 2024

Tested : 03 Jul 2024

Diagnosed : 03 Jul 2024 - Don Baldrige

RTL PACLEASE - 7051 -Las Vegas

4150 Arctic Spring Ave

North Las Vegas, NV

US 89115

Contact: Rudy Trevizo

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F:

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)