



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	MARGINAL

Machine Id
8574350
 Component
Diesel Engine
 Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)

RECOMMENDATION

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		RPL0019649	RPL0016746	RPL0007272
Sample Date		Client Info		20 May 2024	12 Apr 2024	21 Feb 2023
Machine Age	mls	Client Info		201223	192257	121089
Oil Age	mls	Client Info		130055	71168	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				MARGINAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	32	20	62
Chromium	ppm	ASTM D5185m	>20	<1	<1	4
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		2	2	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	12	9	22
Lead	ppm	ASTM D5185m	>40	6	2	6
Copper	ppm	ASTM D5185m	>330	<1	0	5
Tin	ppm	ASTM D5185m	>15	1	<1	2
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

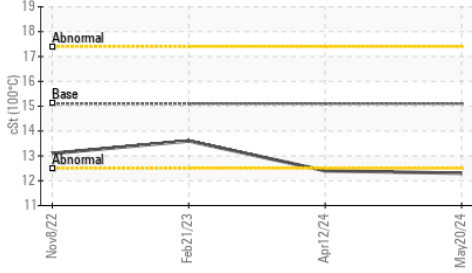
Silicon	ppm	ASTM D5185m	>25	8	5	11
Potassium	ppm	ASTM D5185m	>20	23	19	56
Fuel	%	ASTM D3524	>5	<1.0	▲ 3.1	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	13.4	12.2	14.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.1	28.2	32.5
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

FLUID CONDITION

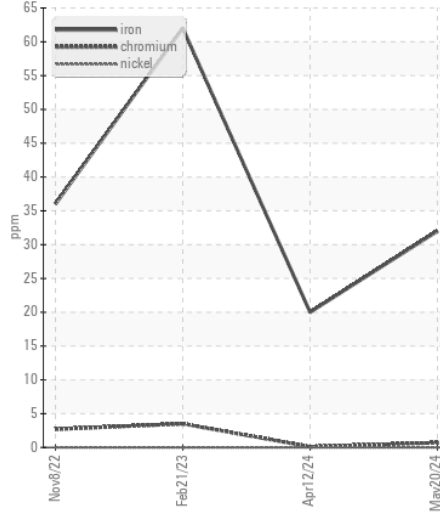
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		2	<1	3
Boron	ppm	ASTM D5185m		92	169	48
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		108	108	130
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m		666	638	607
Calcium	ppm	ASTM D5185m		1441	1455	1487
Phosphorus	ppm	ASTM D5185m	1360	661	632	663
Zinc	ppm	ASTM D5185m	1480	780	729	879
Sulfur	ppm	ASTM D5185m		2665	2584	2553
Oxidation	Abs/.1mm	*ASTM D7414	>25	39.7	32.0	37.6
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	3.8	5.3	▲ 3.1
Visc @ 100°C	cSt	ASTM D445	15.1	▲ 12.3	▲ 12.4	13.6

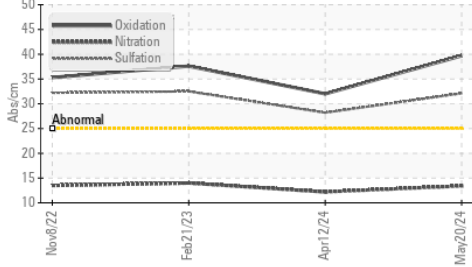
▲ Viscosity @ 100°C



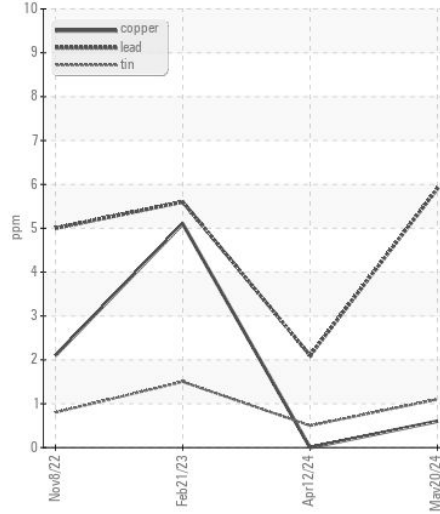
Ferrous Alloys



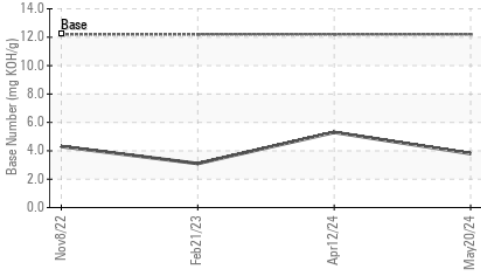
FT-IR (Direct Trend)



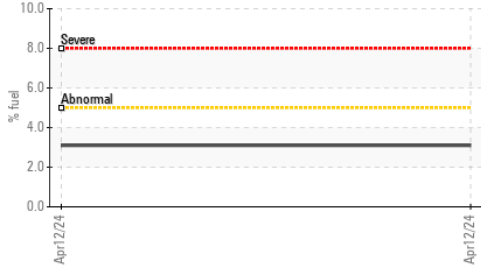
Non-ferrous Metals



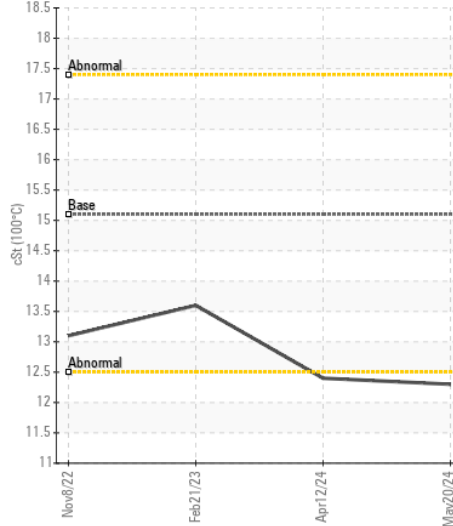
Base Number



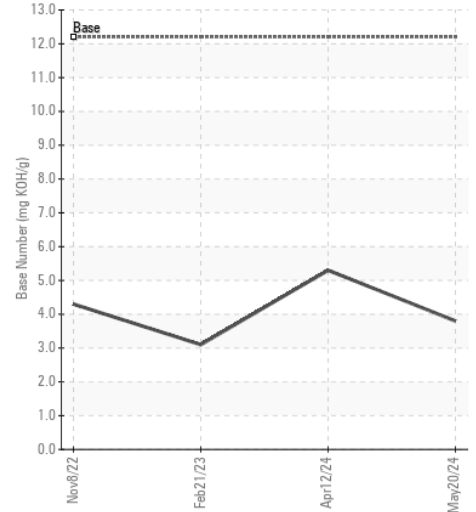
Fuel Dilution



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL0019649 **Received** : 29 May 2024
Lab Number : 06193764 **Tested** : 03 Jun 2024
Unique Number : 11050516 **Diagnosed** : 03 Jun 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION, PercentFuel)

RTL PACLEASE - 7005 - Arlington
 1900 E Division
 Arlington, TX
 US 76011
 Contact: Ricardo Ronquillo
 ronquillor@rushenterprises.com
 T: (469)203-8172
 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)