



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
DFGS273241
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Check for low coolant level. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0950033	WC0779443	WC0708124
Sample Date		Client Info		13 Jun 2024	02 Feb 2023	16 Jan 2023
Machine Age	hrs	Client Info		12010	11283	10532
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	9	13	13
Chromium	ppm	ASTM D5185m	>20	0	2	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	6	4
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Sodium and/or potassium levels are high. Test for glycol is negative.

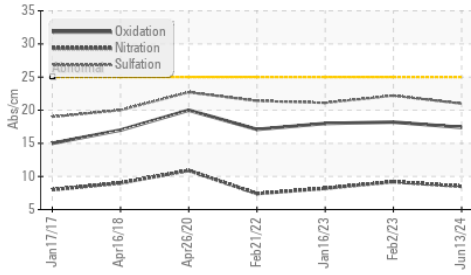
Silicon	ppm	ASTM D5185m	>25	6	6	5
Potassium	ppm	ASTM D5185m	>20	2	4	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.5	9.2	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	22.2	21.1
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

FLUID CONDITION

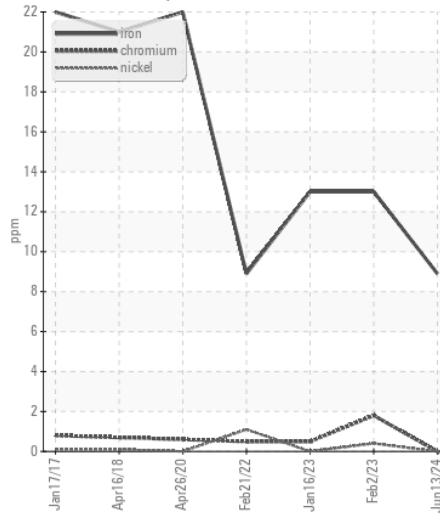
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	497	31	271
Boron	ppm	ASTM D5185m	250	338	291	342
Barium	ppm	ASTM D5185m	10	0	0	4
Molybdenum	ppm	ASTM D5185m	100	84	101	88
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	396	392	393
Calcium	ppm	ASTM D5185m	3000	1563	1947	1327
Phosphorus	ppm	ASTM D5185m	1150	1016	1146	777
Zinc	ppm	ASTM D5185m	1350	1217	1510	1072
Sulfur	ppm	ASTM D5185m	4250	3692	4430	3135
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.4	18.2	18.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.8	8.3	7.7
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	13.9	12.9

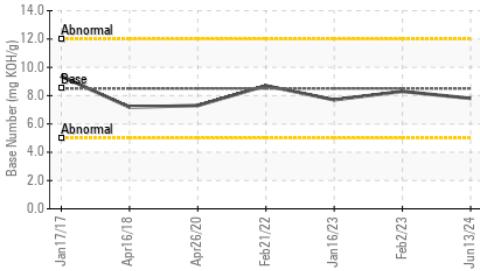
FT-IR (Direct Trend)



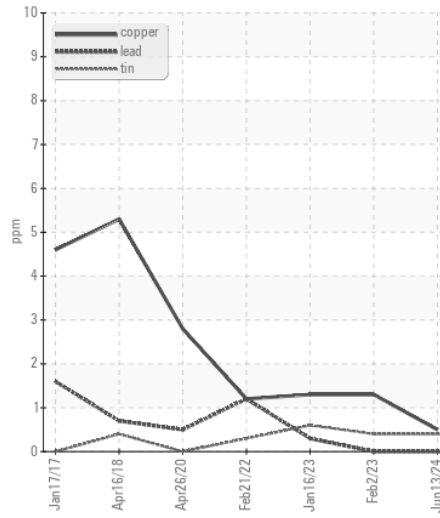
Ferrous Alloys



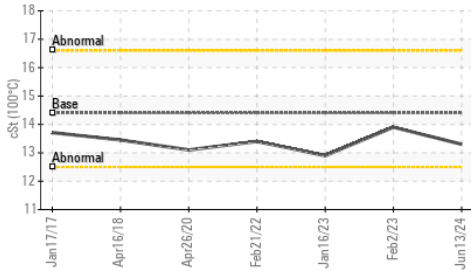
Base Number



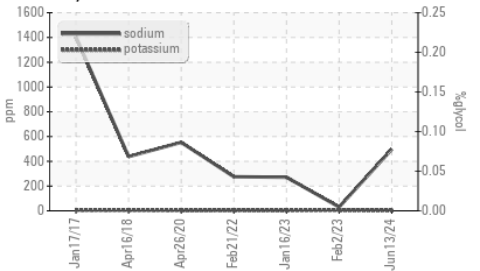
Non-ferrous Metals



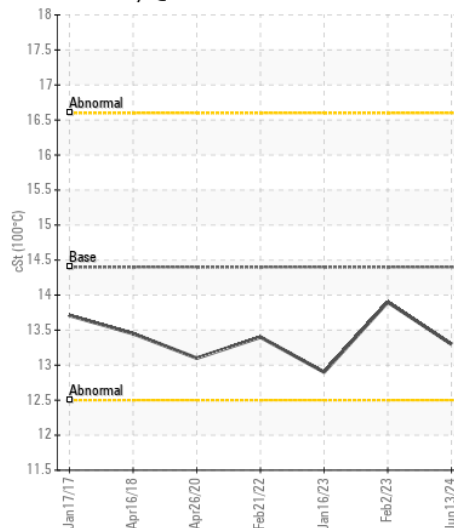
Viscosity @ 100°C



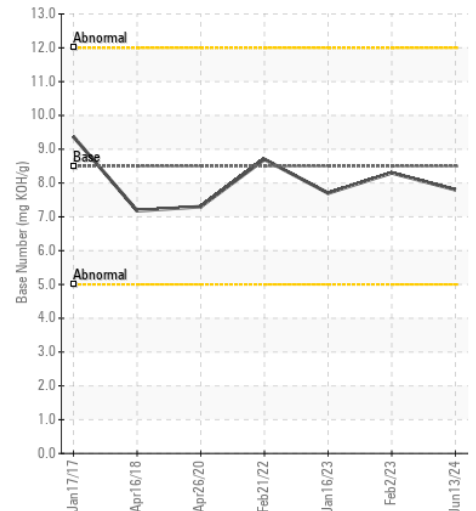
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : WC0950033

Lab Number : 06239730

Unique Number : 11128564

Test Package : FLEET (Additional Tests: Glycol)

Received : 17 Jul 2024

Tested : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Sean Felton

DOLE FRESH FRUIT

PO BOX 725, ATTN: MAINTENANCE AND REPAIR

NEW CASTLE, DE

US 19720

Contact: LUIS LAPIERRE

luis.lapierre@dole.com

T: (302)652-6344

F: (302)652-6061

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)