OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
DFGS 273093
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

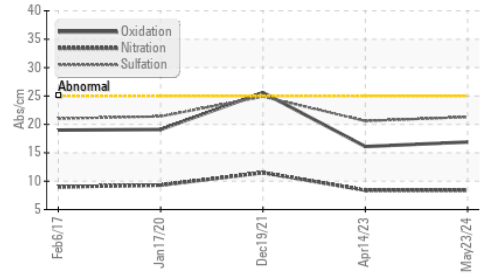
Sodium and/or potassium levels are high.

FLUID CONDITION

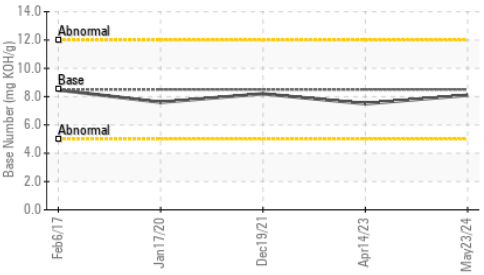
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0911167	WC0779340	WC0641837
Sample Date		Client Info		23 May 2024	14 Apr 2023	19 Dec 2021
Machine Age	hrs	Client Info		13201	11759	10284
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				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	16	21	12
Chromium	ppm	ASTM D5185m	>20	<1	4	<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	8	6	4
Lead	ppm	ASTM D5185m	>40	0	<1	1
Copper	ppm	ASTM D5185m	>330	2	3	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	5	8	4
Potassium	ppm	ASTM D5185m	>20	6	7	<1
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	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.4	8.4	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	20.6	24.9
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	>158	▲ 886	▲ 402	43
Boron	ppm	ASTM D5185m	250	386	376	282
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	81	89	113
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	387	356	509
Calcium	ppm	ASTM D5185m	3000	1559	1470	1381
Phosphorus	ppm	ASTM D5185m	1150	1044	937	635
Zinc	ppm	ASTM D5185m	1350	1273	1157	851
Sulfur	ppm	ASTM D5185m	4250	3818	2988	2459
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	16.1	25.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.1	7.5	8.2
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	13.1	14.0

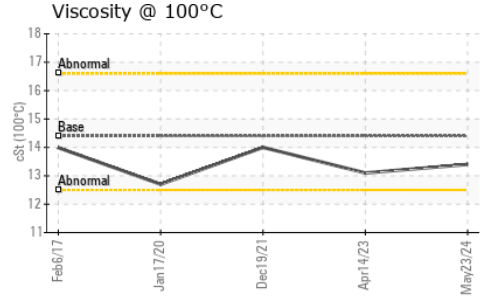
FT-IR (Direct Trend)



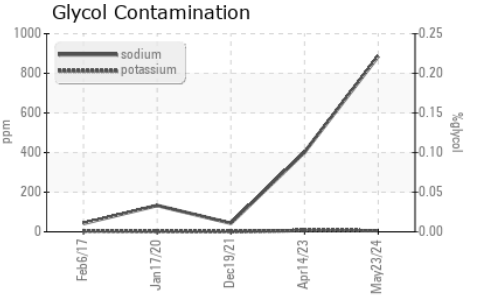
Base Number



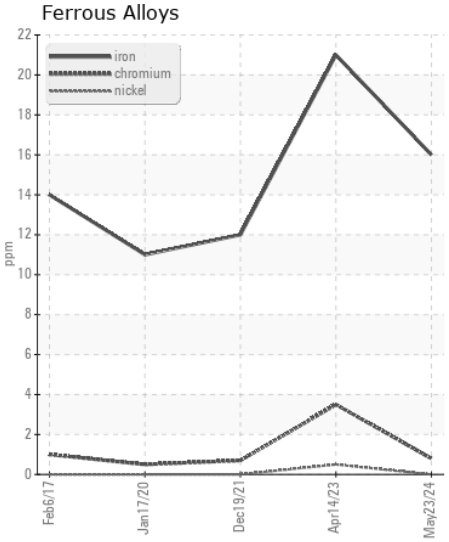
Viscosity @ 100°C



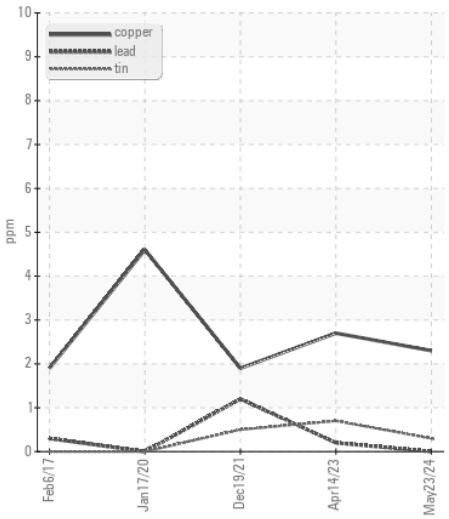
Glycol Contamination



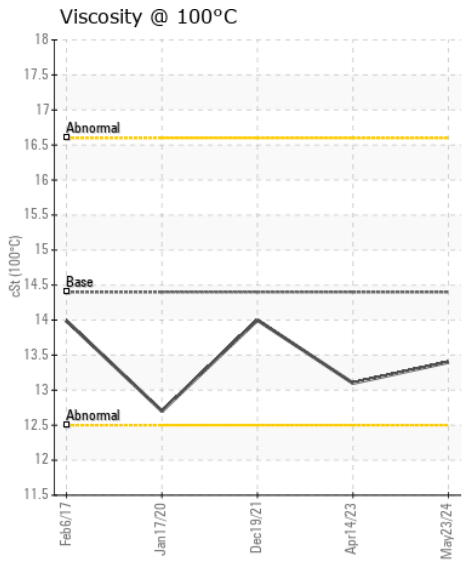
Ferrous Alloys



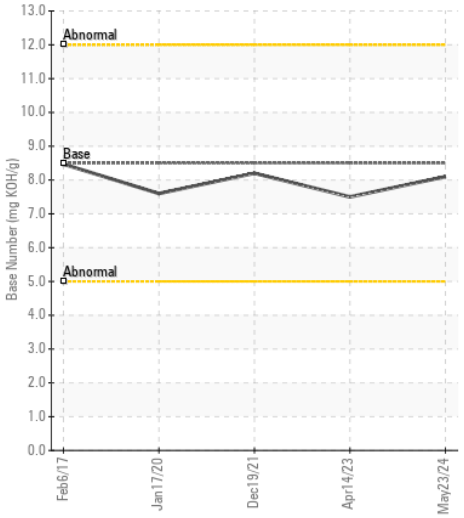
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0911167 **Received** : 17 Jul 2024
Lab Number : 06239761 **Tested** : 19 Jul 2024
Unique Number : 11128595 **Diagnosed** : 19 Jul 2024 - Sean Felton
Test Package : FLEET (Additional Tests: Glycol)

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)

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