OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Machine Id
1461233
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

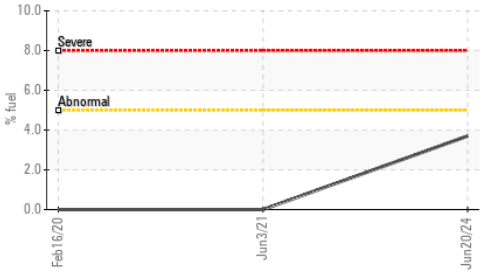
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

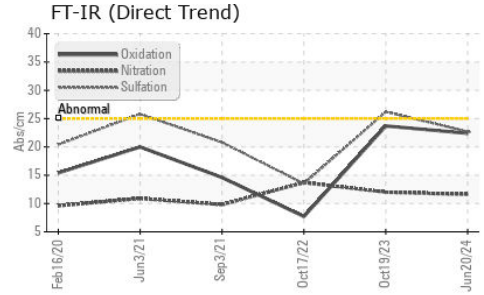
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RPL0017007	RPL0011185	RPL0002151
Sample Date		Client Info		20 Jun 2024	19 Oct 2023	17 Oct 2022
Machine Age	mls	Client Info		174714	31291	126194
Oil Age	mls	Client Info		0	31291	0
Filter Age	mls	Client Info		0	31291	0
Oil Changed		Client Info		N/A	Changed	N/A
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				MARGINAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	26	33	29
Chromium	ppm	ASTM D5185m	>20	4	4	4
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	31	25	26
Lead	ppm	ASTM D5185m	>40	0	1	4
Copper	ppm	ASTM D5185m	>330	2	<1	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	6	6
Potassium	ppm	ASTM D5185m	>20	75	66	65
Fuel	%	ASTM D3524	>5	▲ 3.7	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.6	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.6	12.0	13.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	26.2	13.5
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	>158	6	3	2
Boron	ppm	ASTM D5185m	250	43	13	23
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	88	61	12
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m	450	657	890	707
Calcium	ppm	ASTM D5185m	3000	1437	1206	1507
Phosphorus	ppm	ASTM D5185m	1150	743	983	722
Zinc	ppm	ASTM D5185m	1350	857	1236	891
Sulfur	ppm	ASTM D5185m	4250	2805	2806	3224
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.4	23.7	7.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.0	5.3	8.5
Visc @ 100°C	cSt	ASTM D445	14.4	12.3	13.5	13.6

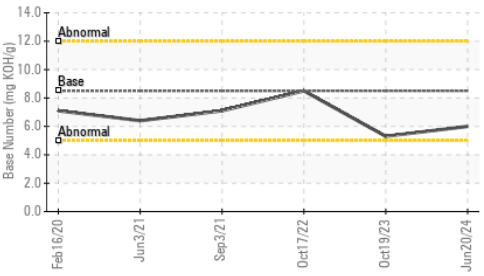
Fuel Dilution



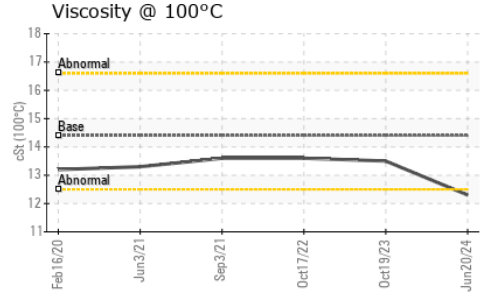
FT-IR (Direct Trend)



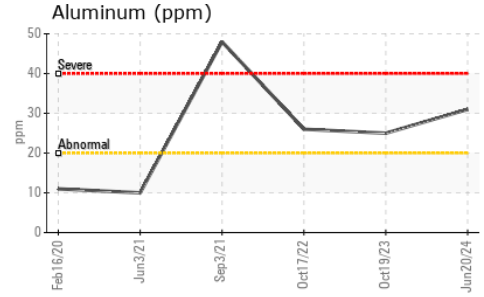
Base Number



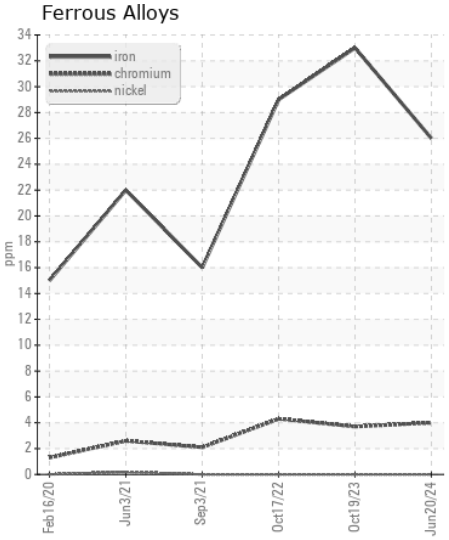
Viscosity @ 100°C



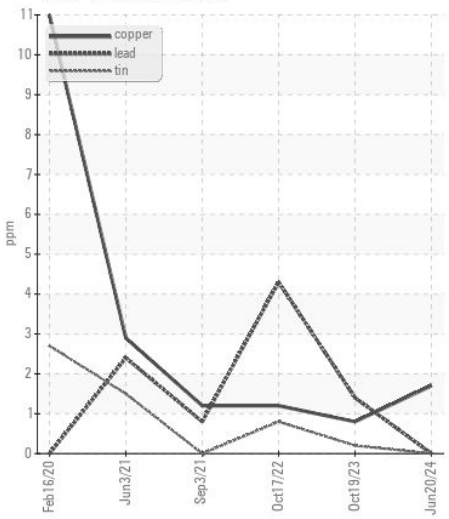
Aluminum (ppm)



Ferrous Alloys



Non-ferrous Metals



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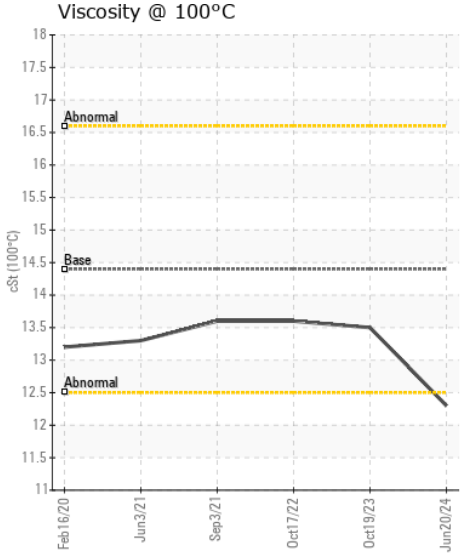

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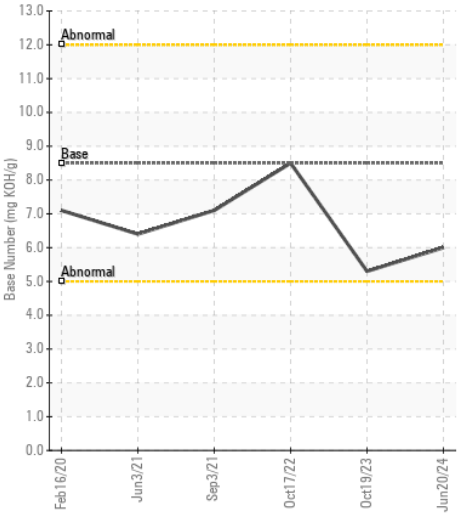

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RPL0017007
Lab Number : 06228345
Unique Number : 11111838
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 05 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Wes Davis

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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