



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 441404

Component
Diesel Engine

Fluid
{not provided} (20 QTS)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0030504	IL0026630	---
Sample Date		Client Info		31 Oct 2023	19 Nov 2022	---
Machine Age	hrs	Client Info		30001	17462	---
Oil Age	hrs	Client Info		30001	17462	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				MARGINAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	33	51	---
Chromium	ppm	ASTM D5185m	>20	2	1	---
Nickel	ppm	ASTM D5185m	>2	0	<1	---
Titanium	ppm	ASTM D5185m	>2	0	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>20	35	15	---
Lead	ppm	ASTM D5185m	>40	0	<1	---
Copper	ppm	ASTM D5185m	>330	3	4	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

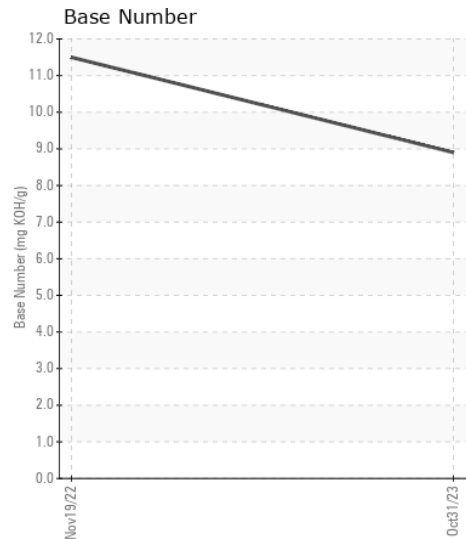
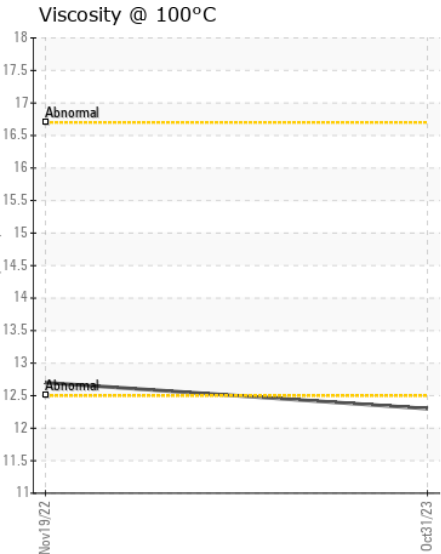
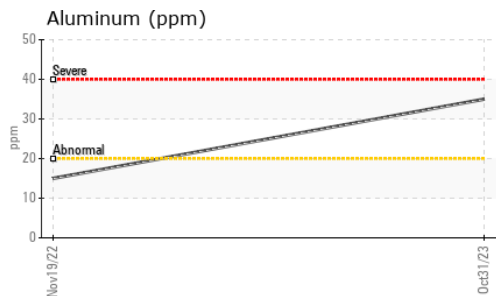
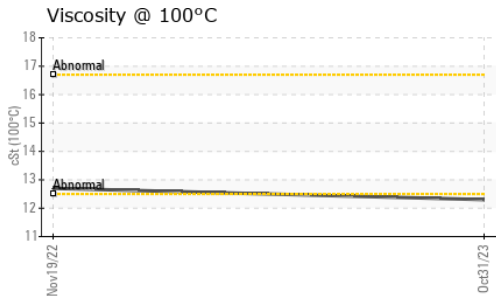
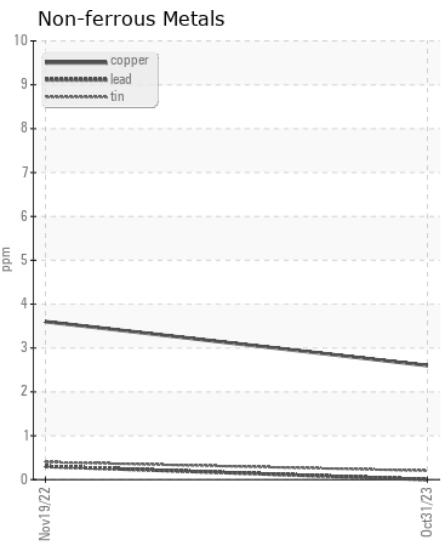
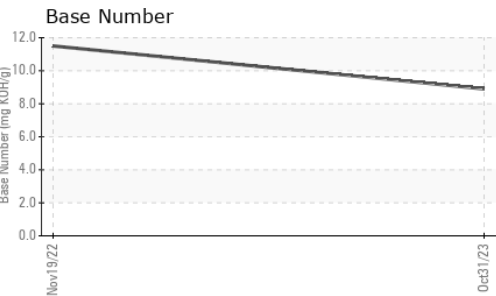
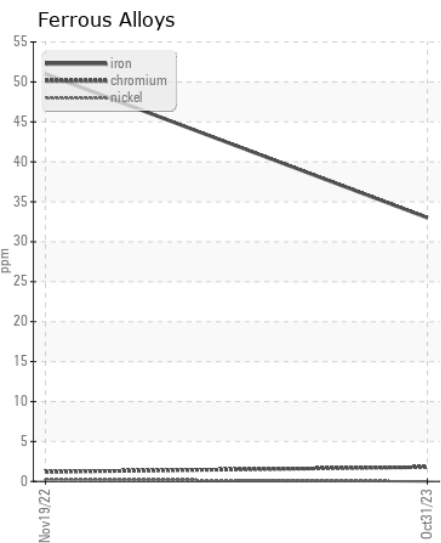
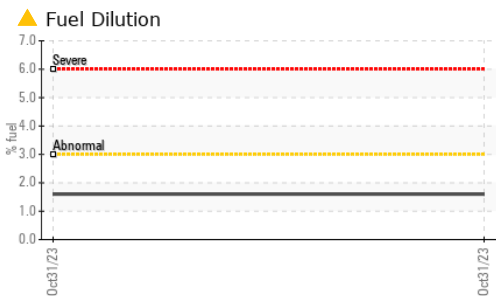
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	8	10	---
Potassium	ppm	ASTM D5185m	>20	91	38	---
Fuel	%	ASTM D3524	>3.0	▲ 1.6	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>6	0.4	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	8.5	6.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.9	23.2	---
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 suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	---
Boron	ppm	ASTM D5185m		7	65	---
Barium	ppm	ASTM D5185m		<1	0	---
Molybdenum	ppm	ASTM D5185m		62	43	---
Manganese	ppm	ASTM D5185m		<1	1	---
Magnesium	ppm	ASTM D5185m		962	534	---
Calcium	ppm	ASTM D5185m		1106	1576	---
Phosphorus	ppm	ASTM D5185m		1049	738	---
Zinc	ppm	ASTM D5185m		1248	898	---
Sulfur	ppm	ASTM D5185m		3160	2804	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	20.6	---
Base Number (BN)	mg KOH/g	ASTM D2896		8.9	11.5	---
Visc @ 100°C	cSt	ASTM D445		12.3	12.7	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0030504 **Received** : 18 Jan 2024
Lab Number : 06064840 **Diagnosed** : 23 Jan 2024
Unique Number : 10836222 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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Certificate L2367
 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)