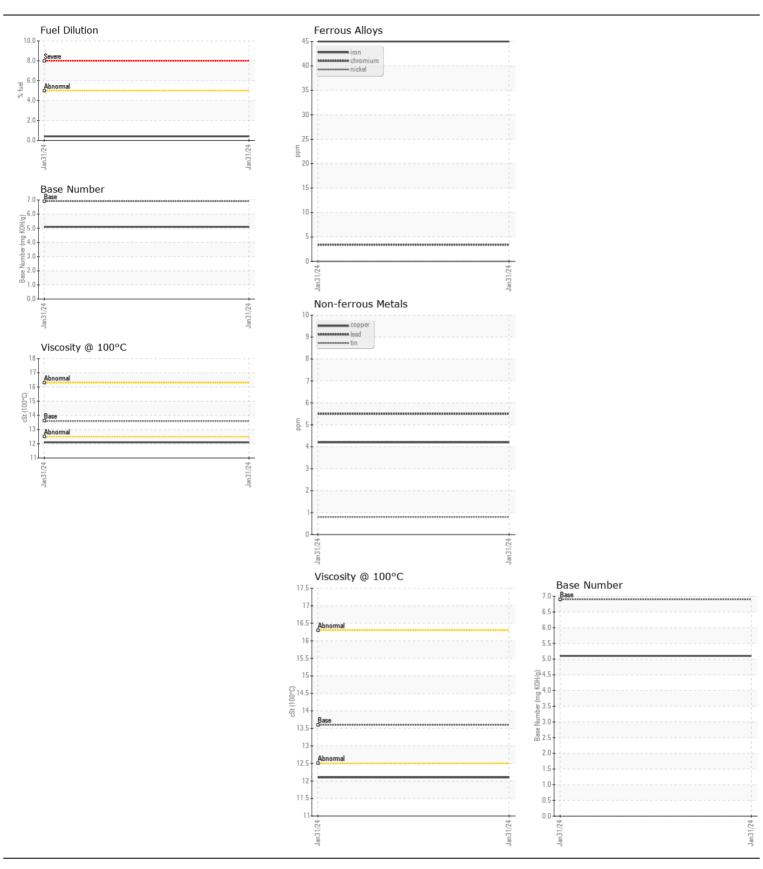
WEAR CONTAMINATION **FLUID CONDITION** **NORMAL NORMAL NORMAL**

Machine Id **2174**

Component Diesel Engine							
VALVOLINE 15W40 (GAL)							
	T1		NA-Ale-al	1 to 2 t / A to 2			I Estava O
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
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.	Sample Number		Client Info		IL0028400		
	Sample Date	mla	Client Info		31 Jan 2024		
	Machine Age	mls	Client Info		61582		
	Oil Age Filter Age	mls	Client Info		0		
	Oil Changed	mls	Client Info				
	Filter Changed		Client Info		Changed Changed		
	Sample Status		Client inio		NORMAL		
					INORWAL		
WEAR	Iron	ppm	ASTM D5185m	>100	45		
Metal levels are typical for a new component breaking in.	Chromium	ppm	ASTM D5185m	>20	3		
	Nickel	ppm	ASTM D5185m	>4	0		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m	>3	0		
	Aluminum	ppm	ASTM D5185m	>20	22		
	Lead	ppm	ASTM D5185m	>40	6		
	Copper	ppm	ASTM D5185m	>330	4		
	Tin	ppm	ASTM D5185m	>15	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
Fuel content negligible. 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. There is no indication of any contamination in the oil.	Silicon	ppm	ASTM D5185m		8		
	Potassium	ppm	ASTM D5185m		74		
	Fuel	%			0.4		
	Water		WC Method	>0.2	NEG		
	Glycol	21	WC Method	0	NEG		
	Soot %	%	*ASTM D7844		0.3		
	Nitration	Abs/cm	*ASTM D7624	>20	10.1		
	Sulfation	Abs/.1mm	*ASTM D7415		22.8 NONE		
	Silt	scalar	*Visual	NONE	NONE NONE		
	Debris Sand/Dirt	scalar	*Visual	NONE	NONE		
	_	scalar scalar	*Visual	NORML	NORML		
	Appearance Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water		*Visual	>0.2	NEG		
	Lindisined Water						
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2		
TI DNI DE PARTE DE LA CONTRACTOR DE LA C	Boron	ppm	ASTM D5185m	39	24		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m	1	0		
	Molybdenum	ppm	ASTM D5185m	49	75		
	Manganese	ppm	ASTM D5185m	1	0		
	Magnesium	ppm	ASTM D5185m	616	661		
	Calcium	ppm	ASTM D5185m		1278		
	Phosphorus	ppm	ASTM D5185m	899	792		
	Zinc	ppm		1069	953		
	Sulfur	ppm	ASTM D5185m	2624	2428		
	Oxidation	Abs/.1mm	*ASTM D7414	>25	20.9		
	Base Number (BN)	mg KOH/g			5.1		
	Visc @ 100°C	cSt	ASTM D445	13.6	12.1		







Laboratory Sample No.

Lab Number : 06084606 Unique Number : 10872051

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : IL0028400

Received **Tested** Diagnosed

: 13 Feb 2024

: 13 Feb 2024 - Wes Davis Test Package: FLEET (Additional Tests: FuelDilution, PercentFuel)

: 09 Feb 2024

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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