

## Machine Id **26591** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		PCA0123492	PCA0068356	
	Sample Date		Client Info		03 Apr 2024	03 Nov 2023	
	Machine Age	mls	Client Info		0	710852	
	Oil Age	mls	Client Info		30000	30000	
	Filter Age	mls	Client Info		30000	30000	
	Oil Changed		Client Info		Changed	N/A	
	Filter Changed		Client Info		Changed	N/A	
	Sample Status				ABNORMAL	ABNORMAL	
WEAR Cylinder, crank, or cam shaft wear is indicated. Valve wear is indicated.	Iron	ppm	ASTM D5185m	>100	<b>112</b>	36	
	Chromium	ppm	ASTM D5185m		2	<1	
	Nickel	ppm	ASTM D5185m		- 12	0	
	Titanium	ppm	ASTM D5185m		<1	0	
	Silver	ppm	ASTM D5185m	>3	<1	<1	
	Aluminum	ppm	ASTM D5185m		7	17	
	Lead	ppm	ASTM D5185m		3	0	
	Copper	ppm	ASTM D5185m		30	3	
	Tin	ppm	ASTM D5185m		1	<1	
	Vanadium	ppm	ASTM D5185m	210	0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
		Scalai	visuai			NONL	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	17	9	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	10	66	
	Fuel		WC Method	>5	<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol	%	*ASTM D2982		NEG	0.0	
	Soot %	%	*ASTM D7844	>3	1.2	0.8	
	Nitration	Abs/cm	*ASTM D7624	>20	12.7	9.9	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	26.1	23.9	
	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	Sodium	ppm	ASTM D5185m	>158	23	31	
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.	Boron		ASTM D5185m		1	0	
	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		63	62	
	Manganese	ppm	ASTM D5185m	100	3	<1	
	Magnesium	ppm	ASTM D5185m	450	849	936	
	Calcium		ASTM D5185m		1213	1071	
	Phosphorus	ppm ppm	ASTM D5185m		999	988	
	Zinc		ASTM D5185m		999 1245	1227	
	Sulfur	ppm	ASTM D5185m		2796	2487	
	Oxidation	ppm	*ASTM D5185111		2796	19.2	
		Abs/.1mm	AGTIVI D/414	>20	23.1	13.2	

Base Number (BN) mg KOH/g ASTM D2896 8.5

ASTM D445 14.4

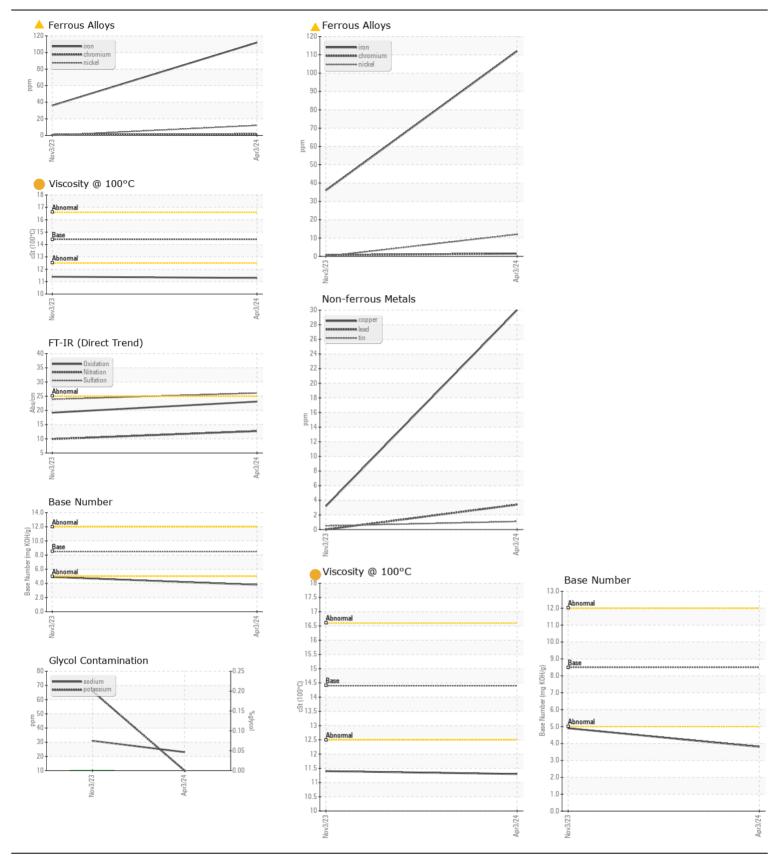
Visc @ 100°C cSt

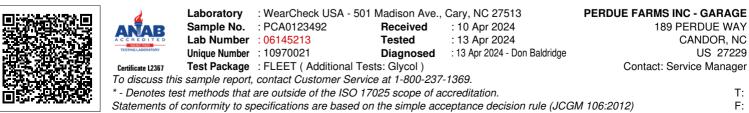
4.9

11.4

3.8

11.3





Contact/Location: Service Manager - PERCANNC Page 2 of 2