

## FLEET Machine Id VOLVO 26532 (S/N 4V4NC9EHN991837) Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	Sample Number		Client Info		PCA0099541	PCAMF015741	
	Sample Date		Client Info		28 Dec 2023	08 May 2017	
	Machine Age	mls	Client Info		521124	0	
	Oil Age	mls	Client Info		40000	0	
	Filter Age	mls	Client Info		20000	0	
	Oil Changed		Client Info		Changed	N/A	
	Filter Changed		Client Info		Changed	N/A	
	Sample Status				ABNORMAL	ABNORMAL	
WEAR	Iron	ppm	ASTM D5185m	>100	77	35	
WEAR	Chromium	ppm	ASTM D5185m		2	<1	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		1	<1	
	Titanium	ppm	ASTM D5185m		11	0	
	Silver	ppm	ASTM D5185m	>2	0	<1	
	Aluminum	ppm	ASTM D5185m		6	▲ 20	
	Lead	ppm	ASTM D5185m		<1	1	
	Copper	ppm	ASTM D5185m	>330	4	▲ 363	
	Tin	ppm	ASTM D5185m	>15	<1	6	
	Vanadium	ppm	ASTM D5185m		<1	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon		ASTM D5185m	<u>\</u> 25	6	<b>a</b> 30	
CONTAMINATION	Potassium	ppm ppm	ASTM D5185m		5	57	
There is no indication of any contamination in the oil.	Fuel	ррп	WC Method	>6.0	ر <1.0	<1.0	
	Water		WC Method		NEG	NEG	
	Glycol		WC Method	/ 012	NEG	0.0	
	Soot %	%	*ASTM D7844	>3	0.9	0.3	
	Nitration	Abs/cm	*ASTM D7624	>20	16.3	8.	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	29.7	21.	
	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		4	5	
I LOID CONDITION	Boron		ASTM D5185m	2	5	22	
The low BN value indicates relatively little reserve alkalinity remaining in this oil. The oil is no longer serviceable.	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		56	36	
	Manganese	ppm	ASTM D5185m		1	4	
	Magnesium	ppm	ASTM D5185m	950	872	463	
	Calcium	ppm	ASTM D5185m		1253	1505	
	Phosphorus	ppm	ASTM D5185m	995	1104	718	
	Zinc	ppm	ASTM D5185m	1180	1332	847	
	Sulfur	ppm	ASTM D5185m	2600	2622	2916	
	Outidation	Alas / durana		05	00 7	10	

Oxidation

Visc @ 100°C cSt

19.

9.91

11.57

32.7

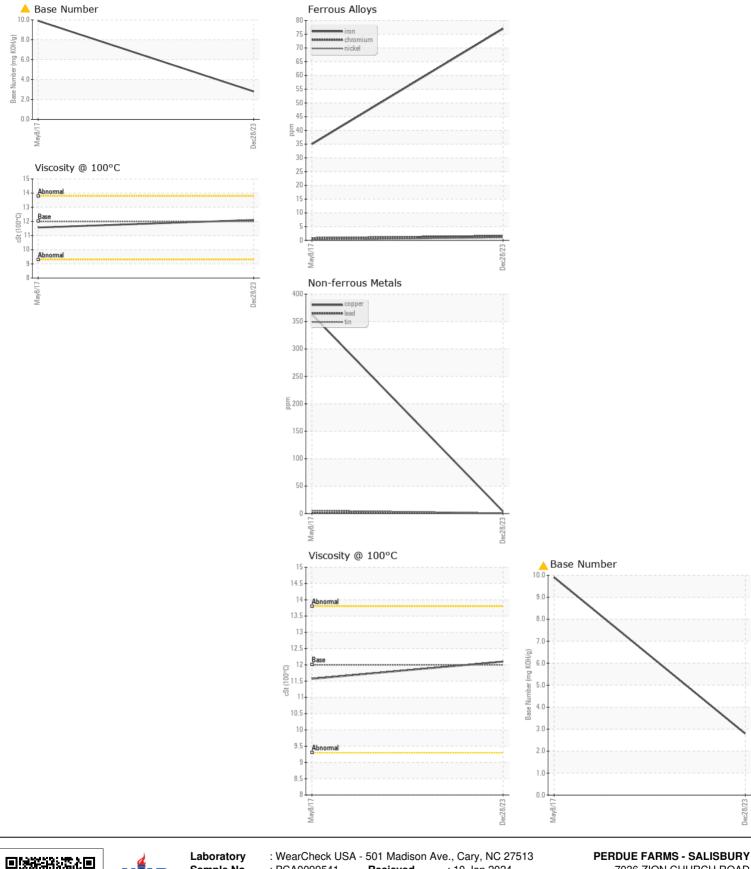
2.8

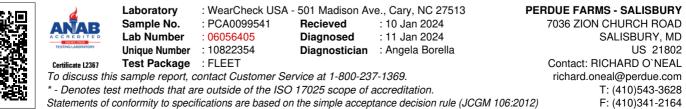
12.1

Abs/.1mm \*ASTM D7414 >25

ASTM D445 12.00

Base Number (BN) mg KOH/g ASTM D2896





Contact/Location: RICHARD O`NEAL - PERSALMD