

NORMAL WEAR NORMAL CONTAMINATION FLUID CONDITION NORMAL

SOUTH HOLLAND

KENWORTH T880 ST22 (S/N 445481)

Diesel Engine

Area

DIESEL ENGINE OIL 10W40 (--- GAL)

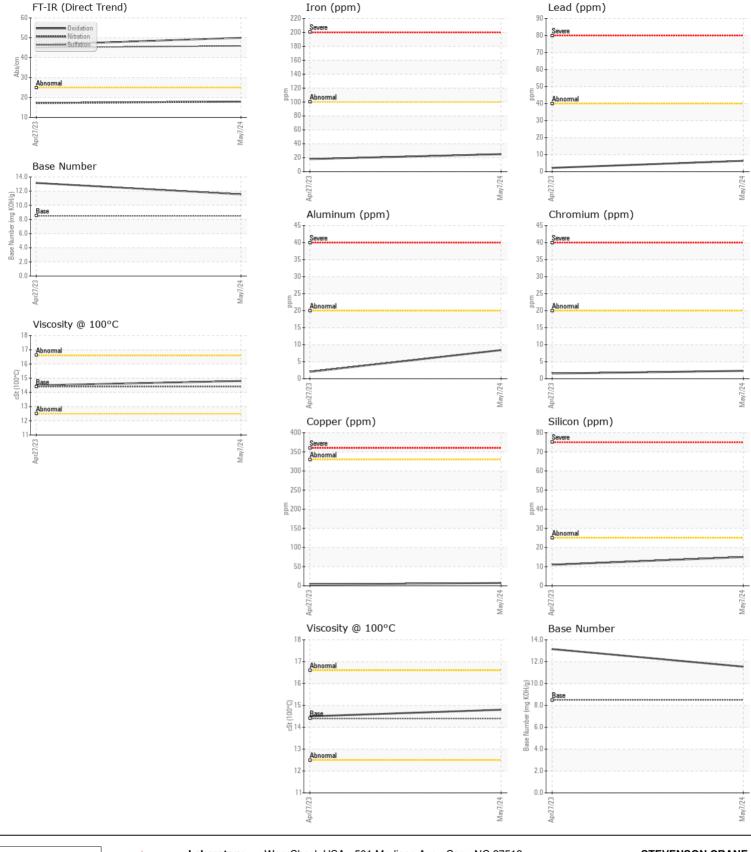
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		HPL0005128	HPL0002902	
	Sample Date		Client Info		07 May 2024	27 Apr 2023	
	Machine Age	hrs	Client Info		9375	8525	
	Oil Age	hrs	Client Info		0	726	
	Filter Age	hrs	Client Info		0	726	
	Oil Changed		Client Info		N/A	Changed	
	Filter Changed		Client Info		N/A	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron		ASTM D5185m	. 100	05	18	
WEAN	Chromium	ppm	ASTM D5185m		25 2	2	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		∠ <1	<1	
	Titanium	ppm	ASTM D5185m	>4		0	
	Silver	ppm		. 0	<1		
		ppm	ASTM D5185m		0	0	
	Aluminum	ppm	ASTM D5185m		8	2	
	Lead	ppm	ASTM D5185m		6 7	2	
	Copper Tin	ppm	ASTM D5185m				
		ppm	ASTM D5185m	>15	1	<1	
	Vanadium White Metal	ppm	ASTM D5185m *Visual		<1	<1	
		scalar		NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	15	11	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	7	5	
	Fuel		WC Method	>5	<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.5	0.4	
	Nitration	Abs/cm	*ASTM D7624	>20	17.9	17.2	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	45.9	45.1	
	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		0	2	
	Boron	ppm	ASTM D5185m	250	<1	8	
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	10	0	0	
	Molybdenum	ppm	ASTM D5185m	100	653	632	
	Manganese	ppm	ASTM D5185m		1	<1	
	Magnesium	ppm	ASTM D5185m	450	1087	1012	
	Calcium	ppm	ASTM D5185m	3000	2917	2906	
	Phosphorus	ppm	ASTM D5185m	1150	1245	1116	
	Zinc	ppm	ASTM D5185m	1350	1415	1356	
	Sulfur	ppm	ASTM D5185m	4250	9091	8919	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	50.0	46.5	
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	11.54	13.15	
	Vice @ 100°C	oC+		1 4 4	14.0	145	

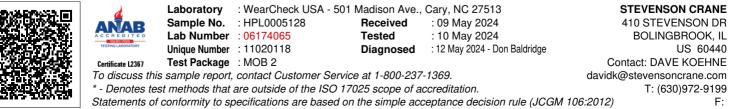
Visc @ 100°C cSt

ASTM D445 14.4

14.5

14.8





Contact/Location: DAVE KOEHNE - STEBOL Page 2 of 2