

WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION ABNORMAL

Area SOUTH HOLLAND Machine Id SHUTTLELIFT SCD25 CD2384 (S/N 322384) Component Diesel Engine

DIESEL ENGINE OIL 10W40 (--- GAL)

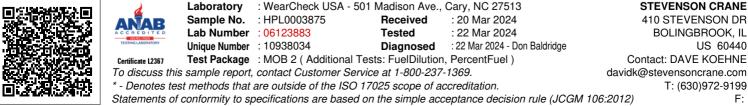
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
We advise that you check the fuel injection system. Resample at the next service interval to monitor.	Sample Number		Client Info		HPL0003875		
	Sample Date		Client Info		18 Mar 2024		
	Machine Age	hrs	Client Info		1301		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		N/A		
	Filter Changed		Client Info		N/A		
	Sample Status				ABNORMAL		
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m	>100	68		
	Chromium	ppm	ASTM D5185m	>20	<1		
	Nickel	ppm	ASTM D5185m		0		
	Titanium	ppm	ASTM D5185m		0		
	Silver	ppm	ASTM D5185m	>3	0		
	Aluminum	ppm	ASTM D5185m		4		
	Lead	ppm	ASTM D5185m		0		
	Copper	ppm	ASTM D5185m		10		
	Tin	ppm	ASTM D5185m		0		
	Vanadium	ppm	ASTM D5185m	210	0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
		Scalai	v isuai				
	Silicon	ppm	ASTM D5185m	>25	9		
There is a moderate amount of fuel present in the oil.	Potassium	ppm	ASTM D5185m	>20	5		
	Fuel	%	ASTM D3524	>5	6.8		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>3	0.6		
	Nitration	Abs/cm	*ASTM D7624	>20	14.6		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	37.9		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
	Appearance	scalar	*Visual	NORML	NORML		
	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
FLUID CONDITION	Sodium		ASTM D5185m		2		
	Boron	ppm	ASTM D5185m	250	2 28		
Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.	Barium	ppm ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		467		
	Manganese	ppm	ASTM D5185m		<1 <1		
	Magnesium	ppm	ASTM D5185m	450	839		
	Calcium	ppm	ASTM D5185m		2719		
	Phosphorus	ppm	ASTM D5185m		979		
	Zinc	ppm	ASTM D5185m		979 1179		
	Sulfur	ppm	ASTM D5185m		12629		
	Oxidation	Abs/.1mm	*ASTM D5185111 *ASTM D7414		38.9		
	Base Number (BN)				36.9 11.77		
	Dase Nulliber (DN)	IIIY NOR/9	AGTINI D2090	0.5	11.77		

Visc @ 100°C cSt

ASTM D445 14.4

12.0





Contact/Location: DAVE KOEHNE - STEBOL