

## Machine Id SHUTTLELIFT 3339 CD1525 Component Diesel Engine

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		HPL0005097		
	Sample Date		Client Info		08 May 2024		
	Machine Age	hrs	Client Info		1324		
	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				NORMAL		
WEAR	Iron	ppm	ASTM D5185m	>100	8		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		5		
	Nickel		ASTM D5185m		0		
	Titanium	ppm	ASTM D5185m	>4	0		
	Silver	ppm	ASTM D5185m	. 2	0		
		ppm					
	Aluminum	ppm	ASTM D5185m		2		
	Lead	ppm	ASTM D5185m		2		
	Copper	ppm	ASTM D5185m		6		
	Tin	ppm	ASTM D5185m	>15	0		
	Vanadium	ppm	ASTM D5185m	NONE	0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION There is no indication of any contamination in the oil.	Silicon	ppm	ASTM D5185m	>25	12		
	Potassium	ppm	ASTM D5185m	>20	<1		
	Fuel		WC Method	>5	<1.0		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	*ASTM D7844	>3	0.2		
	Nitration	Abs/cm	*ASTM D7624	>20	6.7		
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6		
	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	Codium				•		
	Sodium	ppm	ASTM D5185m	050	2		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		359		
	Barium	ppm	ASTM D5185m		<1		
	Molybdenum	ppm	ASTM D5185m	100	99		
	Manganese	ppm	ASTM D5185m	450	<1		
	Magnesium	ppm	ASTM D5185m		569		
	Calcium	ppm	ASTM D5185m		1583		
	Phosphorus	ppm	ASTM D5185m		840		
	Zinc	ppm	ASTM D5185m		995		
	Sulfur	ppm	ASTM D5185m		3307		
	Oxidation	Abs/.1mm	*ASTM D7414		15.7		
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.40		
	Vier @ 10000	- 01		4 4 4			

Visc @ 100°C cSt ASTM D445 14.4

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12.7





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