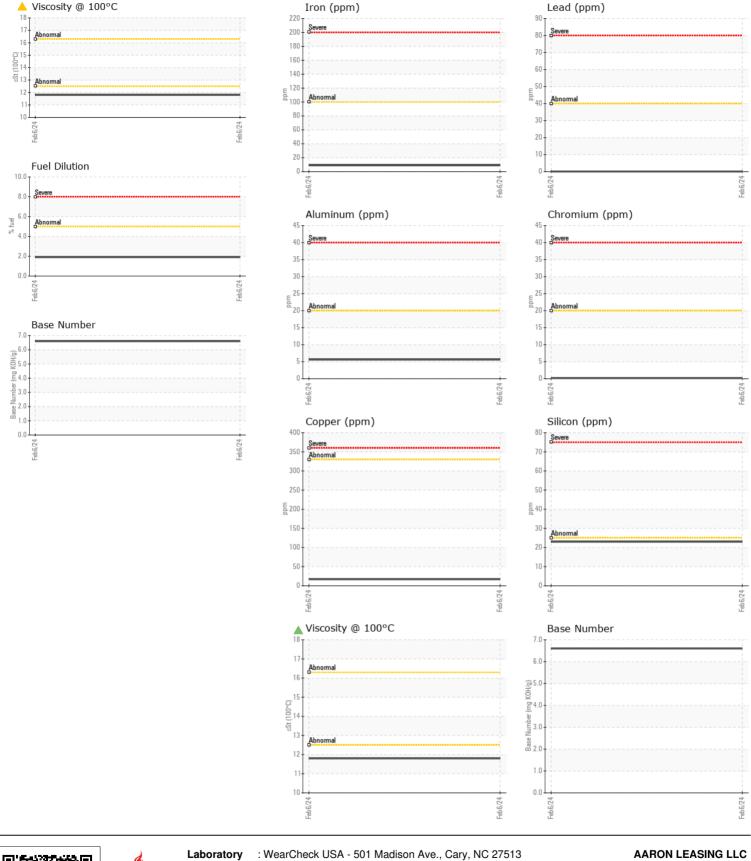
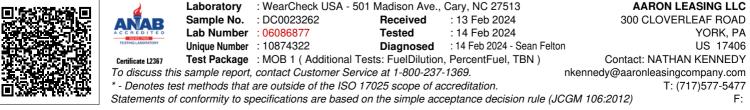


## NORMAL WEAR NORMAL CONTAMINATION FLUID CONDITION **ATTENTION**

## Area MACHINE\_FIELD CASE 2047 160 D (S/N NNS7F1998) Component Diesel Engine DURALENE Dura-Max 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.	Sample Number		Client Info		DC0023262		
	Sample Date		Client Info		06 Feb 2024		
	Machine Age	hrs	Client Info		432		
	Oil Age	hrs	Client Info		300		
	Filter Age	hrs	Client Info		300		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ATTENTION		
WEAR Metal levels are typical for a new component breaking in.	Iron	ppm	ASTM D5185m		9		
	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m	>4	0		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		0		
	Aluminum	ppm	ASTM D5185m		6		
	Lead	ppm	ASTM D5185m	>40	0		
	Copper	ppm	ASTM D5185m		17		
	Tin	ppm	ASTM D5185m	>15	0		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	23		
CONTAMINATION	Potassium	ppm	ASTM D5185m		4		
Fuel content negligible. No other contaminants were detected in the oil.	Fuel	%	ASTM D310311		1.9		
	Water	70	WC Method		NEG		
	Glycol		WC Method	20.2	NEG		
	Soot %	%	*ASTM D7844	13	0.1		
	Nitration	Abs/cm	*ASTM D7624	>20	6.5		
	Sulfation	Abs/.1mm	*ASTM D7415		14.0		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	LIGHT		
	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	ppm	ASTM D5185m		<1		
	Boron	ppm	ASTM D5185m		190		
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.	Barium	ppm	ASTM D5185m		0		
	Molybdenum	ppm	ASTM D5185m		0		
	Manganese	ppm	ASTM D5185m		0		
	Magnesium	ppm	ASTM D5185m		13		
	Calcium	ppm	ASTM D5185m		2133		
	Phosphorus	ppm	ASTM D5185m		971		
	Zinc	ppm	ASTM D5185m		1173		
	Sulfur	ppm	ASTM D5185m		2776		
	Oxidation	Abs/.1mm	*ASTM D7414	>25	8.4		
	Base Number (BN)	mg KOH/g	ASTM D2896		6.6		
	Visc @ 100°C	cSt	ASTM D445		<b>11.8</b>		





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