

Machine Id CR1224

Component Diesel Engine Fluid

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor.	Sample Number		Client Info		WC0951999	WC0704591	
	Sample Date		Client Info		21 Jun 2024	15 Jun 2022	
	Machine Age	hrs	Client Info		2495	825	
	Oil Age	hrs	Client Info		815	563	
	Filter Age	hrs	Client Info		0	563	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185m	>100	14	19	
	Chromium	ppm	ASTM D5185m	>20	<1	<1	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m	>4	<1	<1	
	Titanium	ppm	ASTM D5185m		<1	<1	
	Silver	ppm	ASTM D5185m	>3	<1	<1	
	Aluminum	ppm	ASTM D5185m		3	1	
	Lead	ppm	ASTM D5185m		1	1	
	Copper	ppm	ASTM D5185m		11	37	
	Tin	ppm	ASTM D5185m		1	1	
	Vanadium	ppm	ASTM D5185m		<1	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
					_	40	
CONTAMINATION	Silicon	ppm	ASTM D5185m		5	10	
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m		2	0	
	Fuel		WC Method		<1.0	<1.0	
	Water		WC Method	>0.2	NEG	NEG	
	Glycol	<u> </u>	WC Method	0	NEG	NEG	
	Soot %	%	*ASTM D7844		0.1	0.1	
	Nitration	Abs/cm	*ASTM D7624		8.5	9.5	
	Sulfation	Abs/.1mm	*ASTM D7415		19.5	28.4	
	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	>158	2	2	
	Boron	ppm	ASTM D5185m	250	61	55	
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	<1	5	
	Molybdenum	ppm	ASTM D5185m	100	51	49	
	Manganese	ppm	ASTM D5185m		<1	2	
	Magnesium	ppm	ASTM D5185m	450	839	850	
	Calcium	ppm	ASTM D5185m	3000	1095	1326	
	Phosphorus	ppm	ASTM D5185m	1150	1018	865	
	Zinc	ppm	ASTM D5185m	1350	1196	1103	
	Sulfur	ppm	ASTM D5185m	4250	3070	3201	
	Oxidation	Abs/.1mm	*ASTM D7414		17.3	31.0	
	Deep Number (DNI)	ma 1/011/-		0.5	7.0	7.0	

Base Number (BN) mg KOH/g ASTM D2896 8.5

ASTM D445 14.4

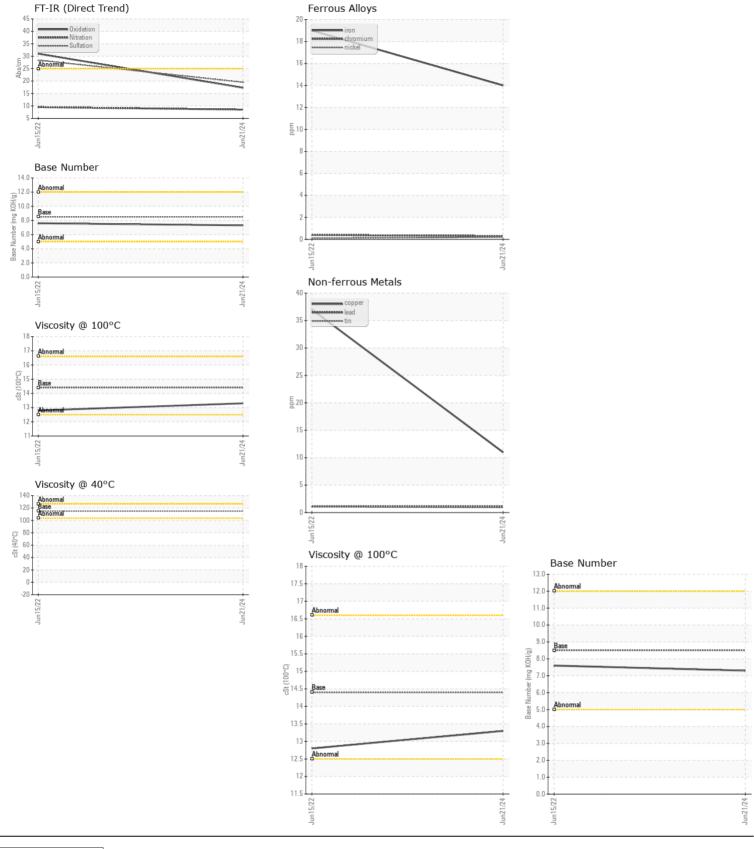
Visc @ 100°C cSt

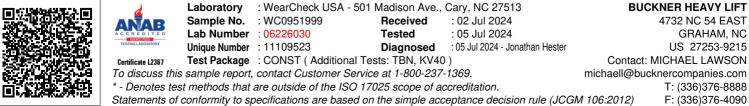
7.3

13.3

7.6

12.8





Contact/Location: MICHAEL LAWSON - BUCGRA Page 2 of 2