

	chine Id 329	
Coi	mponent	
	iesel Engine	
Flui		SAE 5W30 (QTS)
\mathbf{R}	FCOMMENDATION	

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
	Sample Number		Client Info		HRE0000662	WC0836279	
Resample at the next service interval to monitor.	Sample Date		Client Info		18 Jun 2024	03 Sep 2023	
	Machine Age	mls	Client Info		213370	113812	
	Oil Age	mls	Client Info		50000	50000	
	Filter Age	mls	Client Info		50000	50000	
	Oil Changed		Client Info		Changed	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	ABNORMAL	
WEAR	Iron	ppm	ASTM D5185m	>100	80	1 29	
	Chromium	ppm	ASTM D5185m	>20	<1	1	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		<1	<1	
	Titanium	ppm	ASTM D5185m		0	<1	
	Silver	ppm	ASTM D5185m	>3	<1	<1	
	Aluminum	ppm	ASTM D5185m	>20	12	31	
	Lead	ppm	ASTM D5185m	>40	0	1	
	Copper	ppm	ASTM D5185m	>330	10	22	
	Tin	ppm	ASTM D5185m	>15	1	3	
	Vanadium	ppm	ASTM D5185m		0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION Silicon ppm ASTM D5185m >25						4 25	
CONTAMINATION	Potassium	ppm	ASTM D5185m		24 16	91	
There is no indication of any contamination in the oil.	Fuel	ppm	WC Method		<1.0	<1.0	
	Water		WC Method		NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>3	1	0.8	
	Nitration	Abs/cm	*ASTM D7624	>20	14.4	14.4	
	Sulfation	Abs/.1mm	*ASTM D7415		32.3	31.7	
	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	nom	ASTM D5185m		6	10	
TEOD CONDITION	Boron	ppm ppm	ASTM D5185m	250	9	13	
The BN result indicates that there is suitable alkalinity remaining in the	Barium		ASTM D5185m		0	0	
oil. The condition of the oil is acceptable for the time in service.	Molybdenum	ppm ppm	ASTM D5185m		61	37	
	Manganese	ppm	ASTM D5185m	100	2	3	
	Magnesium	ppm	ASTM D5185m	450	1130	1052	
	Calcium	ppm	ASTM D5185m		925	1350	
	Phosphorus	ppm	ASTM D5185m		1107	1038	
	Zinc	ppm	ASTM D5185m		1350	1248	
	Sulfur	ppm	ASTM D5185m		3604	4135	
	Oxidation		*ASTM D5105111		3004	30.2	
	Unidation		AUTIVI D7414	2CJ	52.5	JU.Z	

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

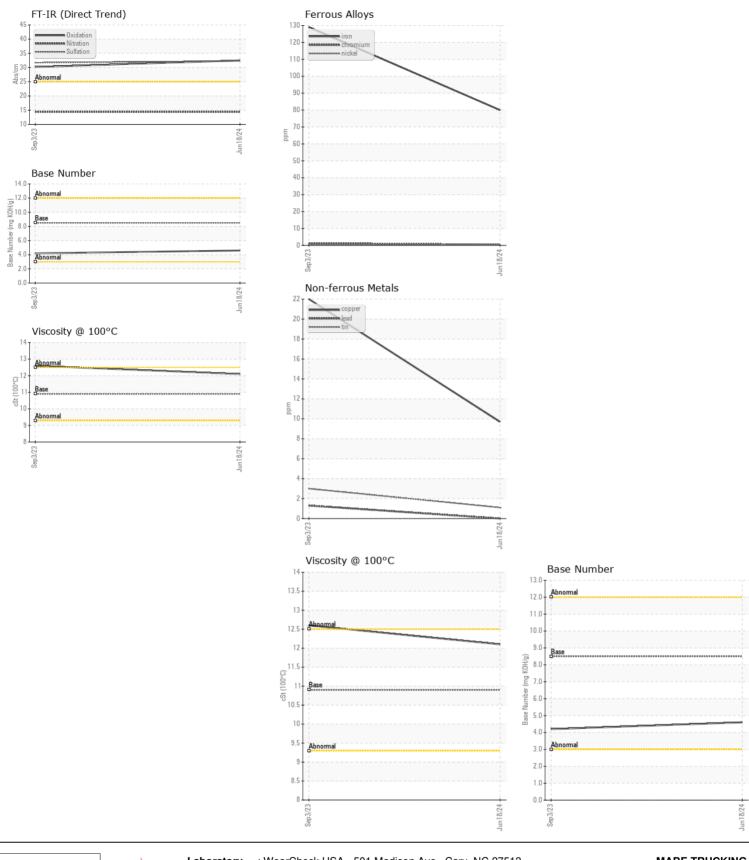
Visc @ 100°C cSt ASTM D445 10.9

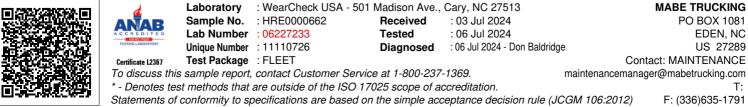
4.2

12.6

4.6

12.1





Contact/Location: MAINTENANCE ? - MABEDE Page 2 of 2