

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

600HP Machine Id 217421 [600HP] Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 10W30 (38 QTS)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.	Sample Number		Client Info		PCA0098801	PCA0101210	PCA0101268
	Sample Date		Client Info		15 Mar 2024	06 Jan 2024	19 Oct 2023
	Machine Age	mls	Client Info		696724	671141	644103
	Oil Age	mls	Client Info		0	0	30000
	Filter Age	mls	Client Info		0	0	30000
	Oil Changed		Client Info		Changed	Changed	Changed
	Filter Changed		Client Info		Changed	Changed	Changed
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>65	10	14	16
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		<1	1	1
	Nickel	ppm	ASTM D5185m		0	<1	<1
	Titanium	ppm	ASTM D5185m		<1	<1	0
	Silver	ppm	ASTM D5185m		0	<1	<1
	Aluminum	ppm	ASTM D5185m		4	5	4
	Lead	ppm	ASTM D5185m		0	0	0
	Copper	ppm	ASTM D5185m		3	4	7
	Tin	ppm	ASTM D5185m		0	<1	<1
	Vanadium	ppm	ASTM D5185m		0	<1	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
						NONE	HOHL
CONTAMINATION	Silicon	ppm	ASTM D5185m	>15	3	5	5
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	0	4	4
	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
	Soot %	%	*ASTM D7844	>3	0.5	0.6	0.8
	Nitration	Abs/cm	*ASTM D7624	>20	8.1	8.5	8.8
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	20.4	21.2
	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
FLUID CONDITION	Sodium	ppm	ASTM D5185m		0	0	0
TEOD CONDITION	Boron	ppm	ASTM D5185m	250	9	15	0
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		0	<1	4
	Molybdenum	ppm	ASTM D5185m		62	63	75
	Manganese	ppm	ASTM D5185m		<1	<1	<1
	Magnesium	ppm	ASTM D5185m	450	965	866	1118
	Calcium	ppm	ASTM D5185m	3000	1116	1035	1279
	Phosphorus	ppm	ASTM D5185m		1049	1015	1092
	Zinc	ppm	ASTM D5185m		1299	1220	1463
	Sulfur	ppm	ASTM D5185m		3333	2965	3343
	Outstat			.200	45.0	10.4	17.4

Oxidation

Visc @ 100°C cSt

Abs/.1mm *ASTM D7414 >25

ASTM D445 10.9

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

16.4

6.4

12.6

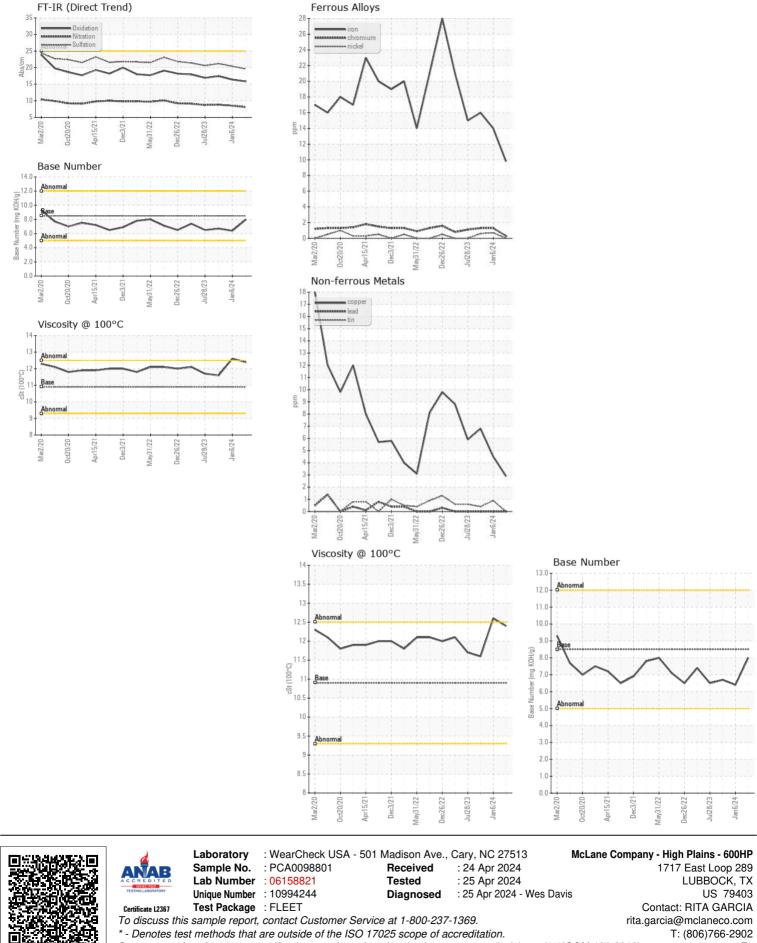
17.4 6.7

11.6

15.8

8.0

12.4



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: RITA GARCIA - MCLLUB Page 2 of 2

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