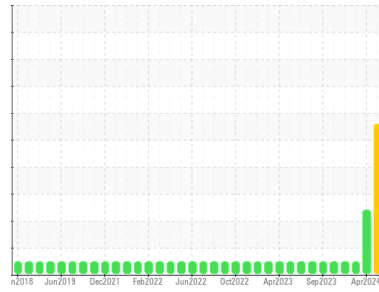




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
Durham unit 2 (S/N 6181211)
 Component
Natural Gas Engine
 Fluid
D-A Lubricant Blue Flame HB-8 40W (--- GAL)

DIAGNOSIS

▲ Recommendation

We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

▲ Wear

The aluminum level is abnormal. All other component wear rates are normal.

▲ Contamination

Elemental level of silicon (Si) above normal.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WCM2249831	WCM2249791	WCM2249788
Sample Date	Client Info		12 Jul 2024	02 Apr 2024	09 Jan 2024
Machine Age	hrs	Client Info	20115	18037	16362
Oil Age	hrs	Client Info	0	0	1183
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>60	13	11	10
Chromium	ppm	ASTM D5185m	>5	2	1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	▲ 14	▲ 13	7
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>100	3	2	2
Tin	ppm	ASTM D5185m	>12	4	3	3
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		2	<1	1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	5	6
Manganese	ppm	ASTM D5185m		<1	0	0
Magnesium	ppm	ASTM D5185m		42	45	48
Calcium	ppm	ASTM D5185m		2502	2580	2460
Phosphorus	ppm	ASTM D5185m		372	382	410
Zinc	ppm	ASTM D5185m		450	458	445
Sulfur	ppm	ASTM D5185m		4141	4429	3978

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	▲ 262	▲ 246	205
Sodium	ppm	ASTM D5185m	>20	3	3	0
Potassium	ppm	ASTM D5185m	>20	1	0	3

INFRA-RED

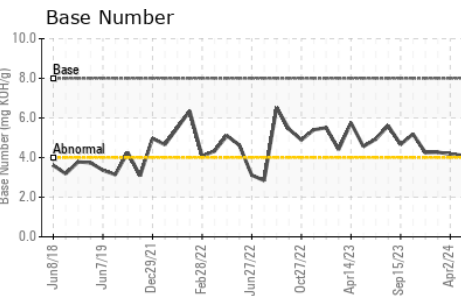
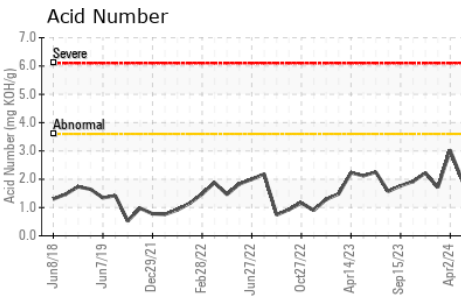
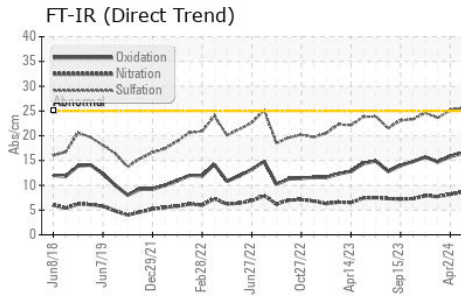
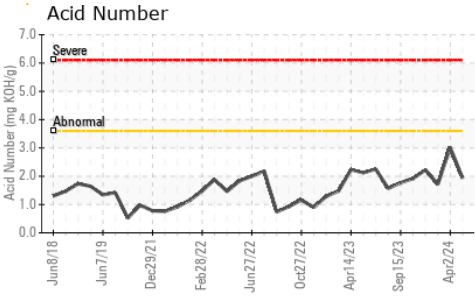
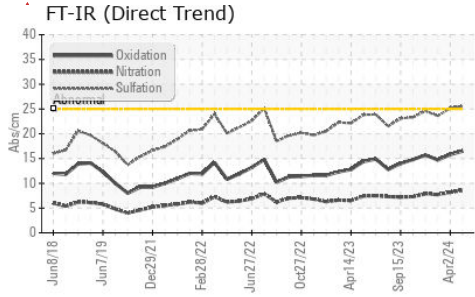
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>2	0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	8.6	8.2	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.6	25.2	23.6

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	15.8	14.7
Acid Number (AN)	mg KOH/g	ASTM D8045		1.93	3.02	1.71
Base Number (BN)	mg KOH/g	ASTM D2896	8	4.11	4.18	4.27



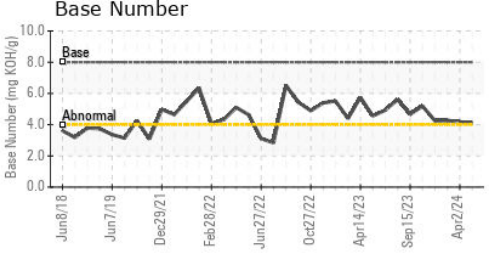
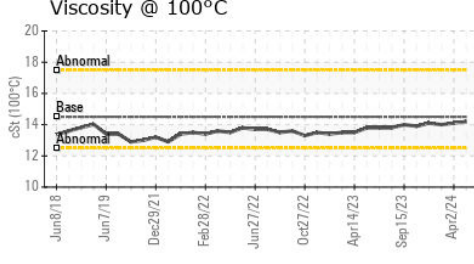
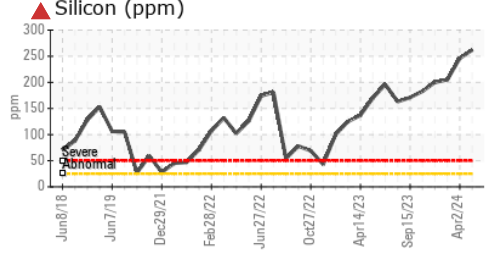
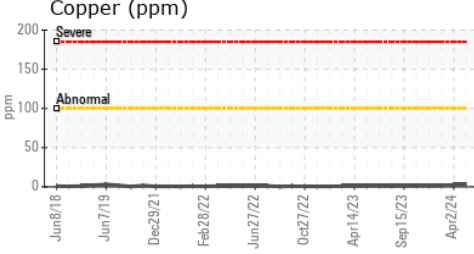
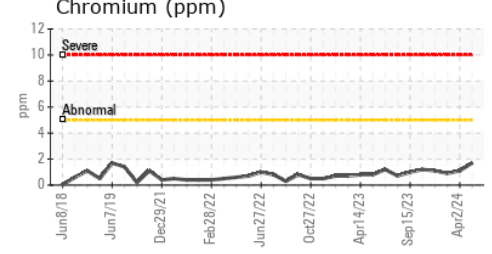
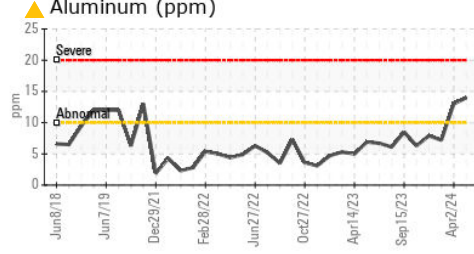
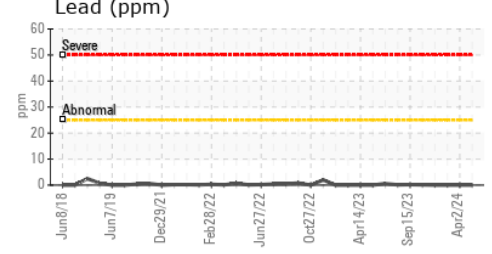
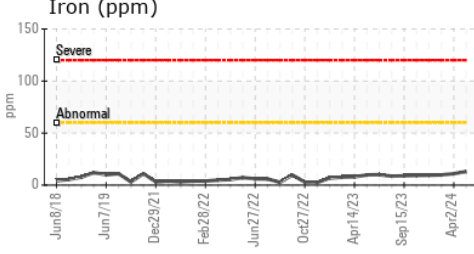
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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	>.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.5	14.2	14.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WCM2249831 **Received** : 15 Jul 2024
Lab Number : 06236246 **Tested** : 16 Jul 2024
Unique Number : 11125080 **Diagnosed** : 16 Jul 2024 - Sean Felton
Test Package : MOB 2

METHANE POWER DURHAM - MAS ENERGY
 2115 EAST CLUB BLVD
 DURHAM, NC
 US 27704

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)