

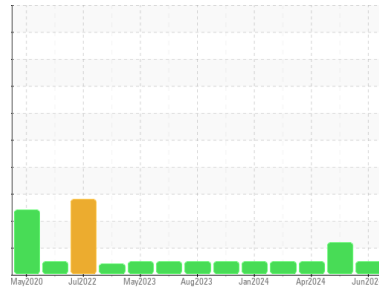


OIL ANALYSIS REPORT



Area
Action Newark
Machine Id
CATERPILLAR 5582
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

Sample Rating Trend



NORMAL

DIAGNOSIS

- Recommendation**
Resample at the next service interval to monitor.
- Wear**
All component wear rates are normal.
- Contamination**
Fuel content negligible. There is no indication of any contamination in the oil.
- Fluid Condition**
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0941207	WC0924896	WC0924837
Sample Date	Client Info		01 Jun 2024	18 Apr 2024	13 Apr 2024
Machine Age	hrs	Client Info	0	34935	29589
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	ABNORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	17	4	7
Chromium	ppm	ASTM D5185m >20	<1	<1	0
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	2	<1
Lead	ppm	ASTM D5185m >40	6	0	<1
Copper	ppm	ASTM D5185m >330	2	4	<1
Tin	ppm	ASTM D5185m >15	1	<1	0
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 250	9	9	8
Barium	ppm	ASTM D5185m 10	0	<1	<1
Molybdenum	ppm	ASTM D5185m 100	55	51	55
Manganese	ppm	ASTM D5185m	0	1	0
Magnesium	ppm	ASTM D5185m 450	792	803	803
Calcium	ppm	ASTM D5185m 3000	1123	1086	1145
Phosphorus	ppm	ASTM D5185m 1150	875	989	976
Zinc	ppm	ASTM D5185m 1350	1106	1126	1189
Sulfur	ppm	ASTM D5185m 4250	2817	3378	3520

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	3	3
Sodium	ppm	ASTM D5185m >158	<1	<1	2
Potassium	ppm	ASTM D5185m >20	1	0	0
Fuel	%	ASTM D3524 >5	0.2	▲ 5.6	<1.0

INFRA-RED

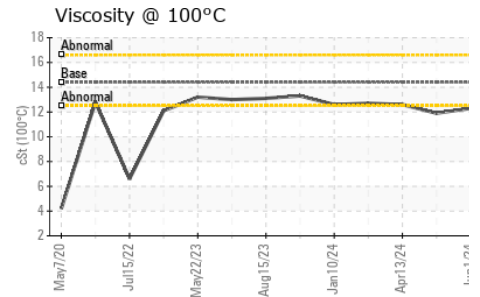
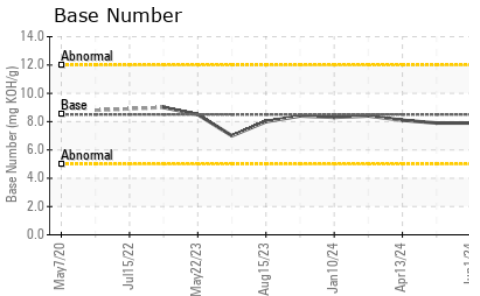
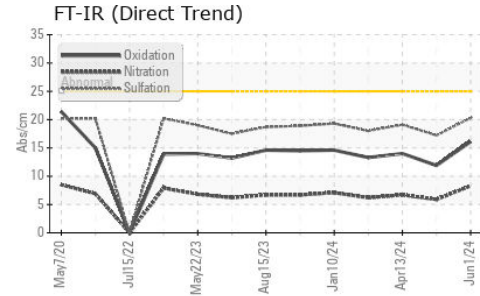
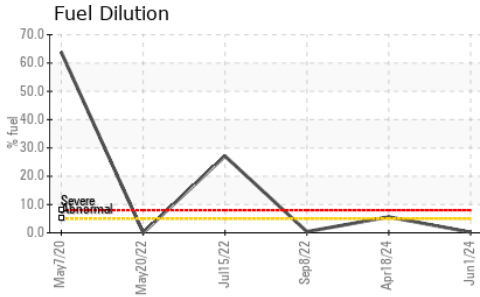
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.5	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	8.3	5.9	6.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.3	17.2	19.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.1	11.9	14.0
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	7.9	7.9	8.1



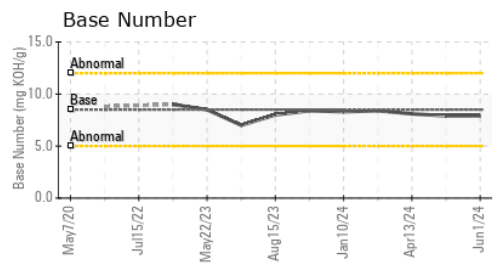
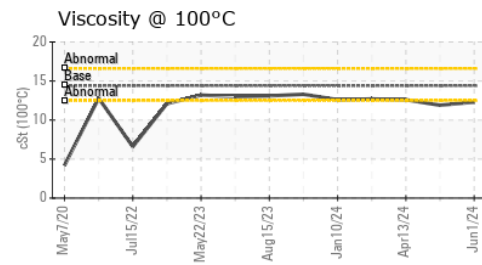
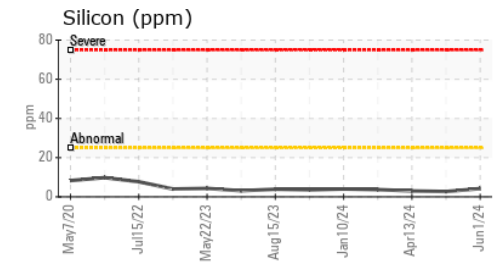
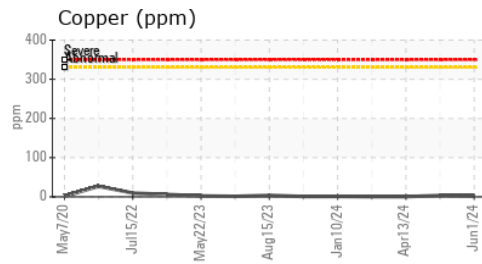
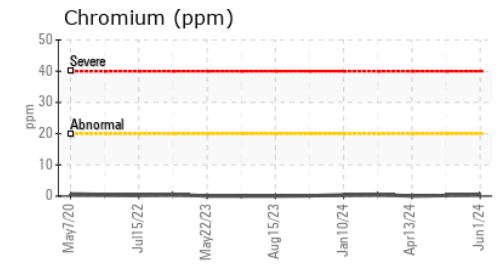
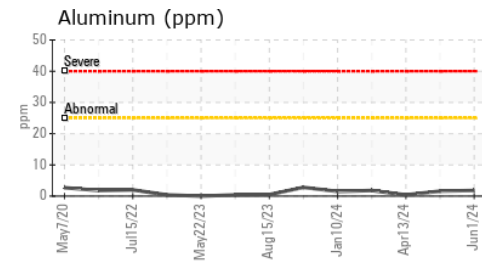
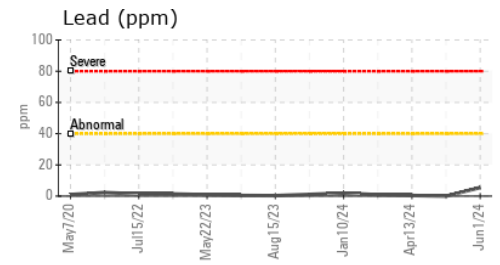
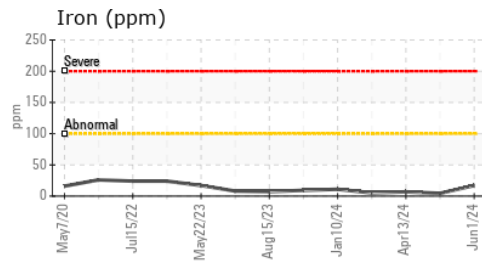
OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.3	▲ 11.9

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0941207 **Received** : 13 Jun 2024
Lab Number : 06208431 **Tested** : 19 Jun 2024
Unique Number : 11075892 **Diagnosed** : 19 Jun 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

INTERSTATE WASTE-NEWARK
 110 EVERGREEN AVE, BAY 3
 NEWARK, NJ
 US 07114
 Contact: Robert Witynski
 RWitynski@interstatewaste.com

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)