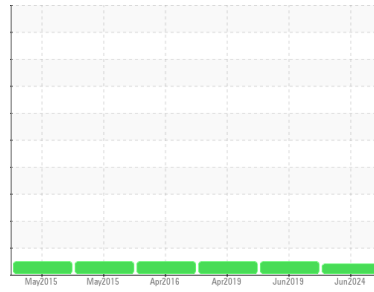




OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Machine Id
MISS IRENE - CRANE OIL
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (10 GAL)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

▲ Contamination

Moderate concentration of visible dirt/debris present in the oil. The water content is negligible.

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			WC0773894	WCMFC42668	WCMFC37439
Sample Date	Client Info			03 Jun 2024	12 Jun 2019	22 Apr 2019
Machine Age	hrs	Client Info		38007	0	15007
Oil Age	hrs	Client Info		250	0	372
Oil Changed	Client Info			Changed	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>5	<1.0	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	9	6	5
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		2	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	11	2	3
Lead	ppm	ASTM D5185m	>40	2	0	0
Copper	ppm	ASTM D5185m	>330	3	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Antimony	ppm	ASTM D5185m		---	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	343	290	398
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	118	90	69
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	675	375	324
Calcium	ppm	ASTM D5185m	3000	1668	1891	1350
Phosphorus	ppm	ASTM D5185m	1150	756	941	836
Zinc	ppm	ASTM D5185m	1350	872	1134	944
Sulfur	ppm	ASTM D5185m	4250	3045	2882	3540

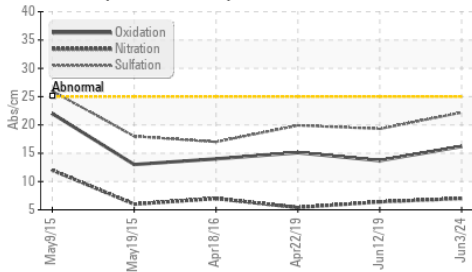
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	8	4	4
Sodium	ppm	ASTM D5185m	>158	6	2	1
Potassium	ppm	ASTM D5185m	>20	2	0	<1
Water	%	ASTM D6304	>0.2	0.151	---	0.109
ppm Water	ppm	ASTM D6304	>2000	1510	---	1090
Glycol	%	*ASTM D2982		NEG	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.0	6.4	5.4
Sulfation	Abs./1mm	*ASTM D7415	>30	22.2	19.3	19.9

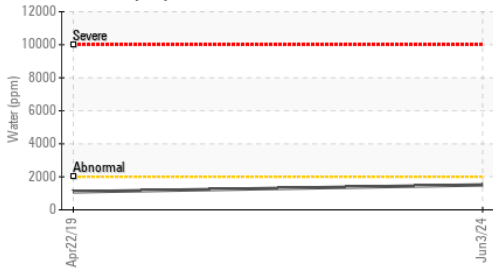


OIL ANALYSIS REPORT

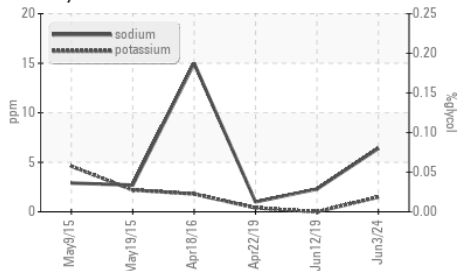
FT-IR (Direct Trend)



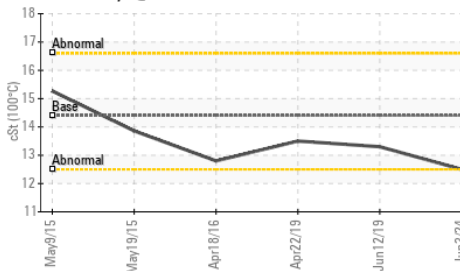
Water (KF)



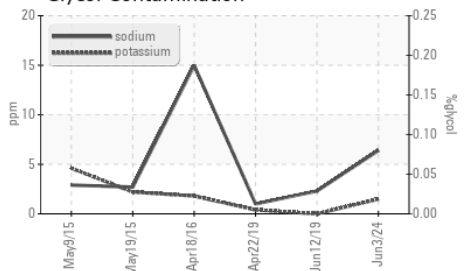
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination



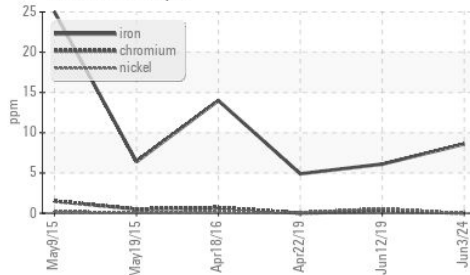
FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	13.7	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.1	7.7	8.7

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	▲ MODER	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	0.2%	NEG
Free Water	scalar	*Visual		NEG	NEG

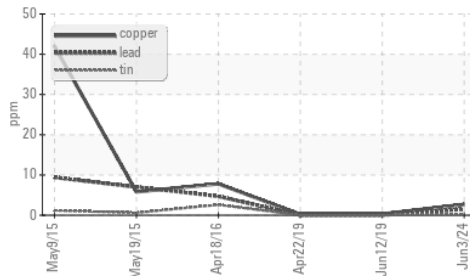
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	12.5	13.3	13.5

GRAPHS

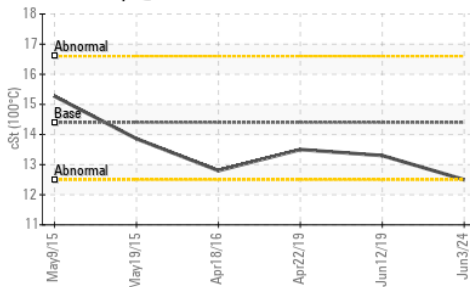
Ferrous Alloys



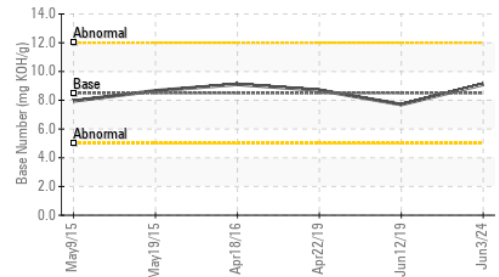
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0773894

Lab Number : 06206015

Unique Number : 11073476

Test Package : FLEET (Additional Tests: Glycol, KF)

Received : 10 Jun 2024

Tested : 13 Jun 2024

Diagnosed : 13 Jun 2024 - Sean Felton

ASSOCIATED TERMINALS - CRANE

CONVENT, LA

US 70723

Contact: GREG JOSEY

gjoyse@associatedterminals.com

T:

F: (225)562-3515

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)