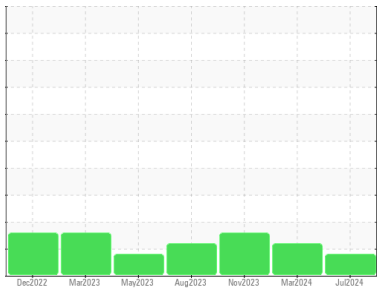
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
FLARE
Machine Id
[FLARE] TOTE 19 - TURBINE 150
Component
New (Unused) Oil
Fluid
BELRAY Turbine Oil 150 (1000 GAL)

DIAGNOSIS

Recommendation
This is a baseline read-out on the submitted sample.

Contamination
There is a moderate amount of silt (particulates < 6 microns in size) present in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**RP0042846**	RP0042875	RP0038972
Sample Date		Client Info		**12 Jul 2024**	08 Mar 2024	28 Nov 2023
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ATTENTION**	ATTENTION	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>5	**0**	0	<1
Chromium	ppm	ASTM D5185m	>5	**0**	0	<1
Nickel	ppm	ASTM D5185m	>5	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>5	**0**	0	0
Aluminum	ppm	ASTM D5185m	>5	**0**	0	2
Lead	ppm	ASTM D5185m	>5	**0**	0	0
Copper	ppm	ASTM D5185m	>5	**0**	0	<1
Tin	ppm	ASTM D5185m	>5	**0**	0	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		**1**	0	0
Barium	ppm	ASTM D5185m		**<1**	0	2
Molybdenum	ppm	ASTM D5185m		**2**	<1	1
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**11**	0	8
Calcium	ppm	ASTM D5185m		**28**	10	17
Phosphorus	ppm	ASTM D5185m		**49**	23	45
Zinc	ppm	ASTM D5185m		**27**	0	6

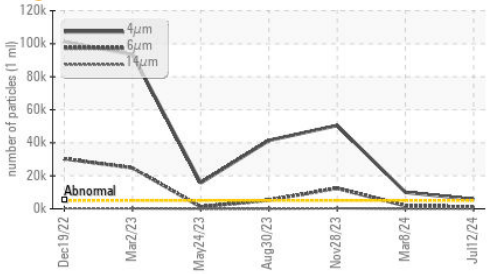
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	3	<1
Sodium	ppm	ASTM D5185m		**2**	0	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	0
Water	%	ASTM D6304		**0.001**	0.003	0.004
ppm Water	ppm	ASTM D6304		**9**	31	47

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**5685**	10000	50484
Particles >6µm		ASTM D7647	>1300	**1124**	1879	12463
Particles >14µm		ASTM D7647	>160	**76**	42	349
Particles >21µm		ASTM D7647	>40	**22**	2	23
Particles >38µm		ASTM D7647	>10	**3**	0	3
Particles >71µm		ASTM D7647	>3	**0**	0	1
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**20/17/13**	20/18/13	23/21/16

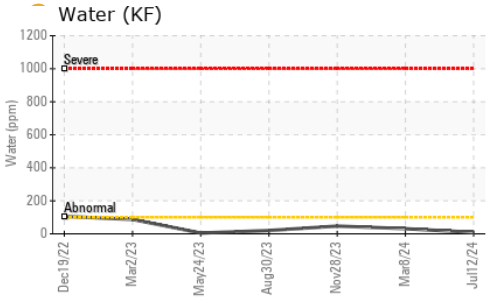
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.075**	0.089	0.085

OIL ANALYSIS REPORT

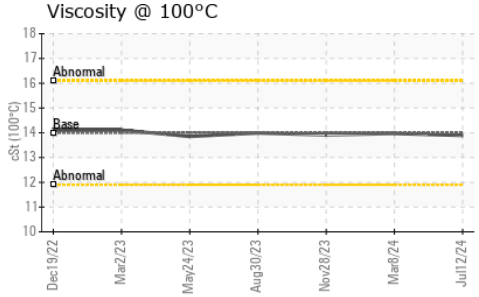
Particle Trend



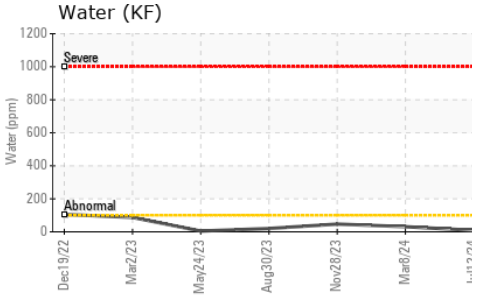
Water (KF)



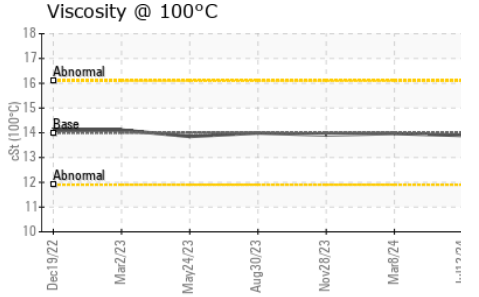
Viscosity @ 100°C



Water (KF)



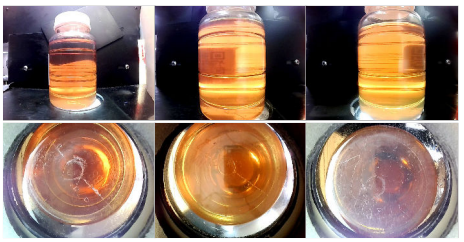
Viscosity @ 100°C



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

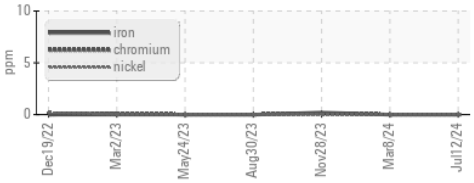
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	142.2	**136.0**	138.3	137.4
Visc @ 100°C	cSt	ASTM D445	14.0	**13.89**	13.97	13.91
Viscosity Index (VI)	Scale	ASTM D2270	99	**98**	97	97

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



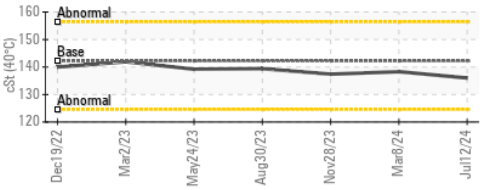
GRAPHS

Ferrous Alloys

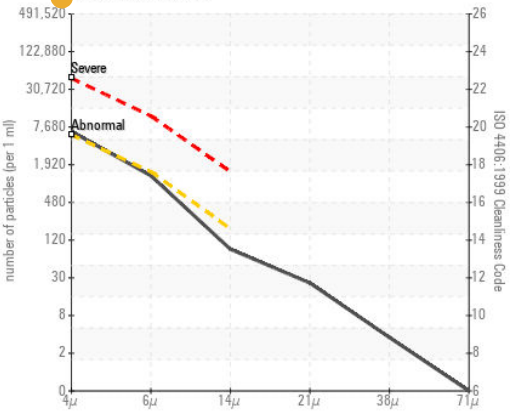


Non-ferrous Metals

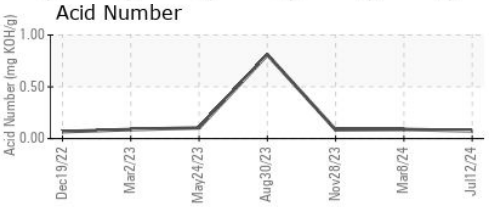
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0042846
Lab Number : 06238301
Unique Number : 11127135
Test Package : IND 2 (Additional Tests: FT-IR, KV100, PrtCount, VI)

Received : 16 Jul 2024
Tested : 19 Jul 2024
Diagnosed : 19 Jul 2024 - Jonathan Hester

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)

CALUMET
3333 MIDWAY AVENUE
SHREVEPORT, LA
US 71109
Contact: NICHOLAS LESAGE
nicholas.lesage@clmt.com
T:
F:

Report Id: CALSHR [WUSCAR] 06238301 (Generated: 07/21/2024 12:51:43) Rev: 1

Submitted By: CODY COMPTON