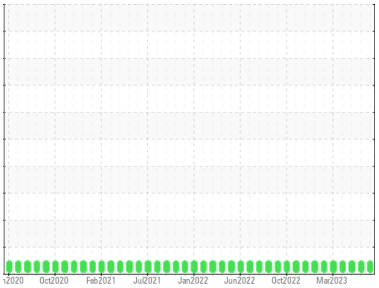
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
Ohio Valley
Machine Id
[Ohio Valley] Oil - Starboard Reduction Gear
Component
Starboard Reduction Gear
Fluid
GEAR OIL SAE 85W140 (180 GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0735689**	WC0683581	WC0735749
Sample Date		Client Info		**09 Jul 2023**	11 Jun 2023	12 May 2023
Machine Age	hrs	Client Info		**22257**	21899	21724
Oil Age	hrs	Client Info		**22257**	21899	21724
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**NORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	**53**	50	52
Chromium	ppm	ASTM D5185m	>10	**0**	0	<1
Nickel	ppm	ASTM D5185m	>10	**0**	0	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	1
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**10**	8	9
Lead	ppm	ASTM D5185m	>100	**0**	<1	<1
Copper	ppm	ASTM D5185m	>50	**4**	5	5
Tin	ppm	ASTM D5185m	>10	**0**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	**19**	19	21
Barium	ppm	ASTM D5185m	200	**0**	2	0
Molybdenum	ppm	ASTM D5185m	12	**<1**	<1	4
Manganese	ppm	ASTM D5185m		**<1**	<1	1
Magnesium	ppm	ASTM D5185m	12	**4**	9	18
Calcium	ppm	ASTM D5185m	150	**42**	47	128
Phosphorus	ppm	ASTM D5185m	1650	**914**	900	878
Zinc	ppm	ASTM D5185m	125	**28**	34	53
Sulfur	ppm	ASTM D5185m	22500	**17938**	17375	16695

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**9**	8	11
Sodium	ppm	ASTM D5185m		**1**	0	3
Potassium	ppm	ASTM D5185m	>20	**33**	35	34
Water	%	ASTM D6304	>0.1	**0.013**	0.013	0.007
ppm Water	ppm	ASTM D6304	>1000	**131.2**	132.4	71.5

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	2.00	**1.80**	1.79	1.95

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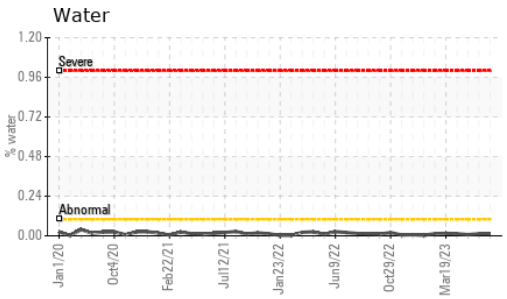
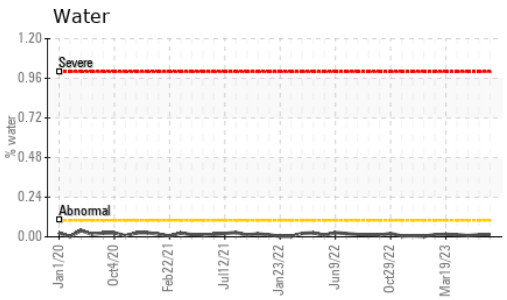
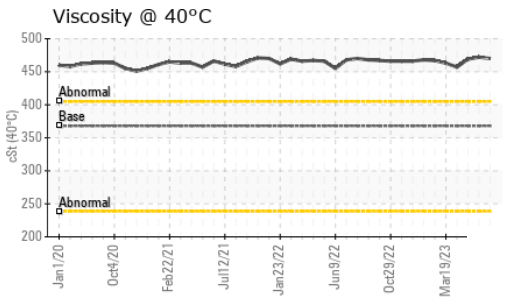
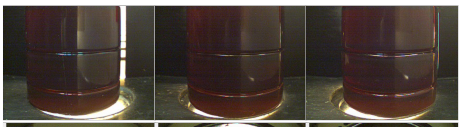
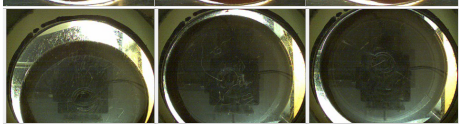




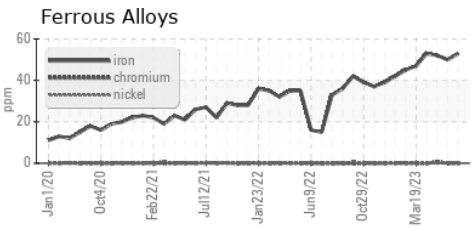


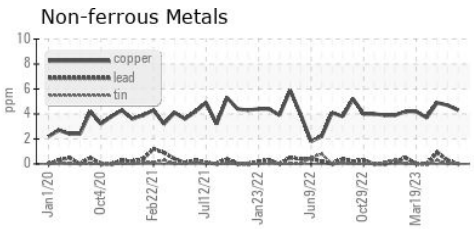
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**MODER**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

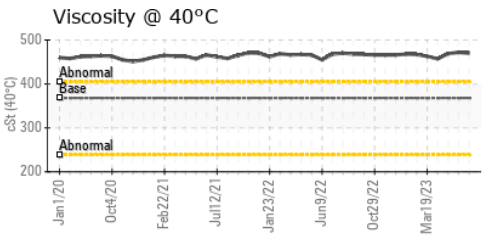
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	368	**470**	472	469

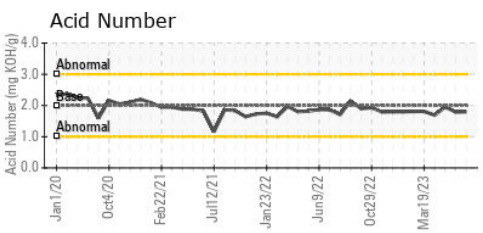
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0735689 **Received** : 17 Jul 2023
Lab Number : 05900030 **Diagnosed** : 19 Jul 2023
Unique Number : 10561386 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: KF)

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)

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