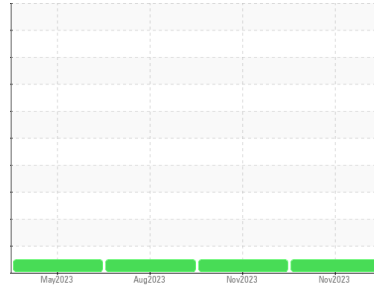




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
102-LYO-902

Component
Hydraulic System

Fluid
NAVI-GUARD PREMIUM AW-32 HYDRAULIC (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

MPC (Membrane Patch Colorimetry) test indicates acceptable levels of varnish present. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. Linear Sweep Voltammetry (RULER – ASTM D6971) testing indicates normal levels of anti-oxidants present 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		WC0770767	WC0850081	WC0770766
Sample Date	Client Info		15 Nov 2023	09 Nov 2023	07 Aug 2023
Machine Age	yrs	Client Info	0	0	0
Oil Age	yrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	---	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	0
Chromium	ppm	ASTM D5185m	>20	0	0
Nickel	ppm	ASTM D5185m	>20	0	0
Titanium	ppm	ASTM D5185m		0	0
Silver	ppm	ASTM D5185m		0	0
Aluminum	ppm	ASTM D5185m	>20	<1	0
Lead	ppm	ASTM D5185m	>20	0	0
Copper	ppm	ASTM D5185m	>20	1	<1
Tin	ppm	ASTM D5185m	>20	0	0
Vanadium	ppm	ASTM D5185m		0	<1
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0
Barium	ppm	ASTM D5185m		6	0
Molybdenum	ppm	ASTM D5185m		4	4
Manganese	ppm	ASTM D5185m		0	0
Magnesium	ppm	ASTM D5185m		7	4
Calcium	ppm	ASTM D5185m		81	29
Phosphorus	ppm	ASTM D5185m		275	225
Zinc	ppm	ASTM D5185m		328	291
Sulfur	ppm	ASTM D5185m		4129	1041

CONTAMINANTS

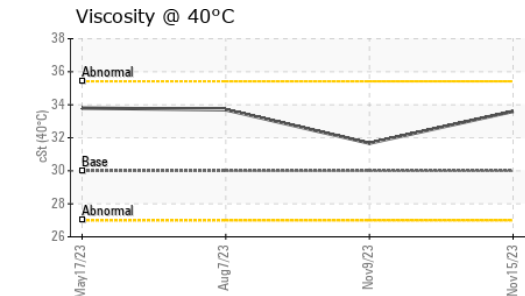
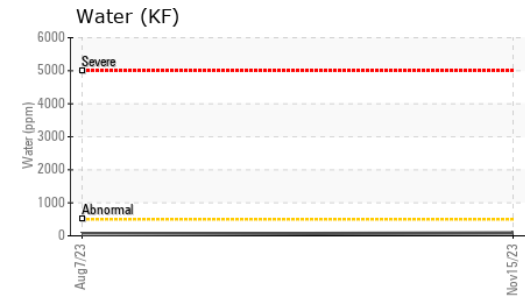
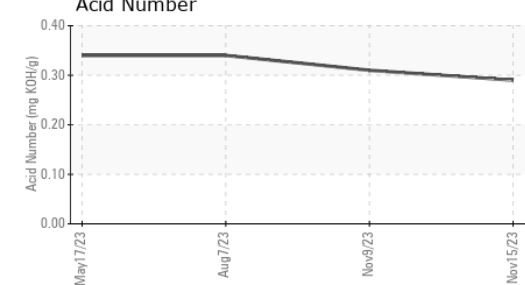
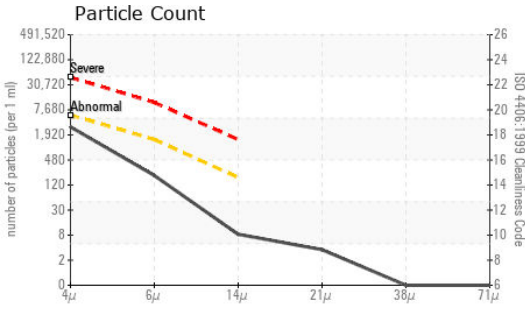
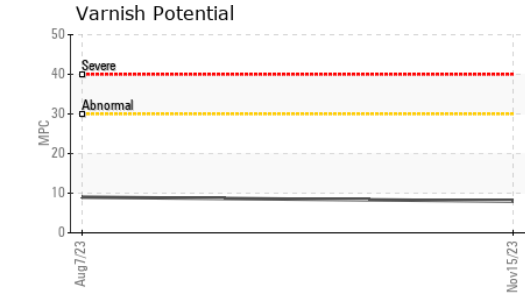
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	2	8
Sodium	ppm	ASTM D5185m		0	<1
Potassium	ppm	ASTM D5185m	>20	<1	2
Water	%	ASTM D6304	>0.05	0.008	---
ppm Water	ppm	ASTM D6304	>500	87.5	50.6

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	2610	215	3696
Particles >6µm	ASTM D7647	>1300	179	45	176
Particles >14µm	ASTM D7647	>160	7	4	8
Particles >21µm	ASTM D7647	>40	3	1	2
Particles >38µm	ASTM D7647	>10	0	1	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	19/15/10	15/13/9	19/15/10



OIL ANALYSIS REPORT



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0770767 **Received** : 16 Nov 2023
Lab Number : 06009637 **Diagnosed** : 05 Dec 2023
Unique Number : 10743399 **Diagnostician** : Doug Bogart
Test Package : AOM 1 (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.

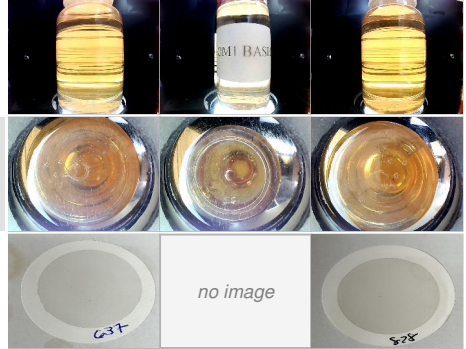
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

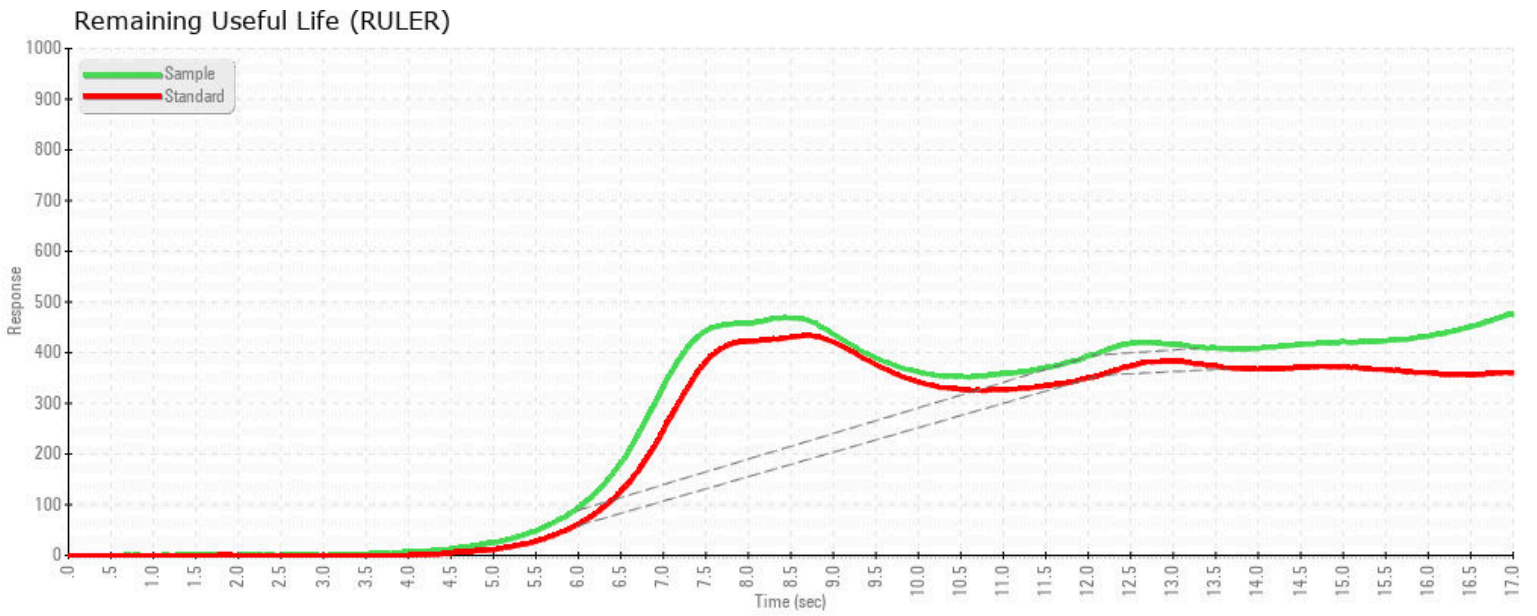
FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.29	0.31	0.34
Anti-Oxidant 1	%	ASTM D6971	101	---	---
Anti-Oxidant 2	%	ASTM D6971	74	---	---
MPC Varnish Potential	Scale	ASTM D7843	8	---	9

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	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

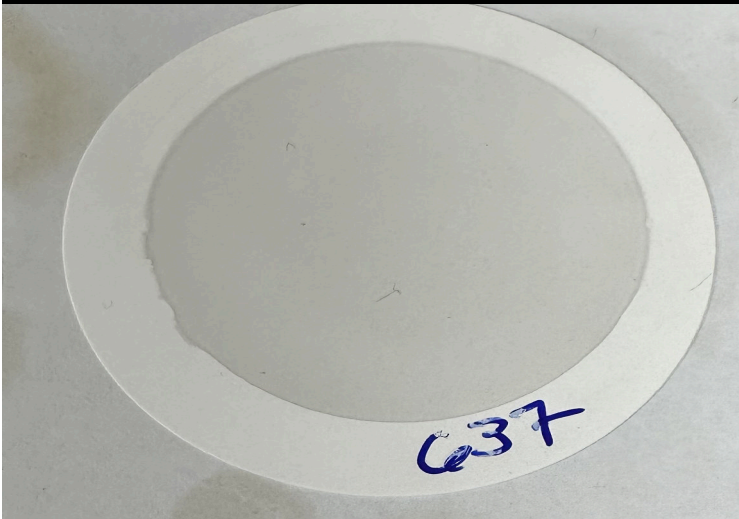
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	33.6	31.67	33.7
Visc @ 100°C	cSt	ASTM D445	---	6.15	---
Viscosity Index (VI)	Scale	ASTM D2270	---	▲ 146	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
MPC					

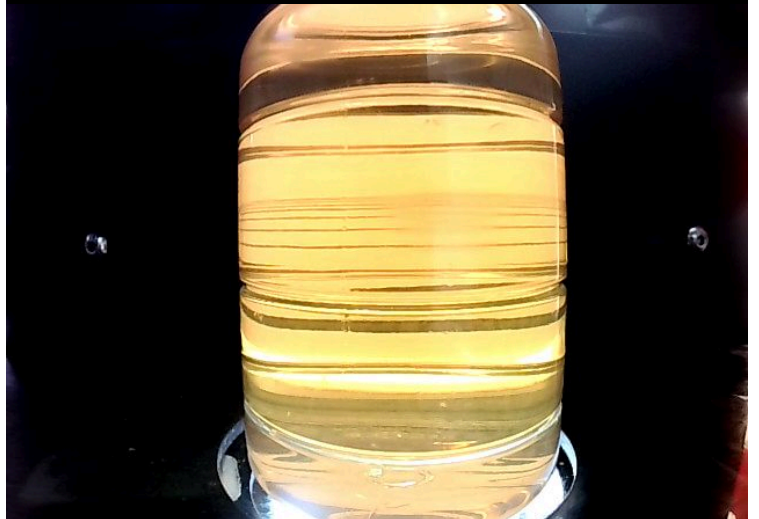




MPC (Varnish Test)



Sample Color & Clarity



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