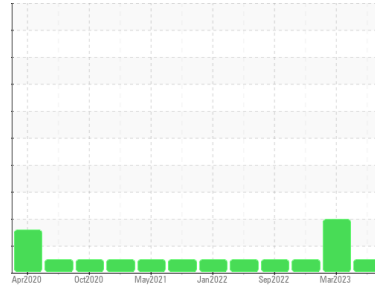




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
TURBOMOTIVE 2
 Component
Hydraulic System
 Fluid
MILITARY MIL-H-83282C (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

NAS 1638 Class: 6, Discrete particle counts [100 ml] 5-15µm = 6233, 15-25µm = 1275, 25-50µm = 405, 50-100µm = 24, >100µm = 0. There is a trace of moisture present in the oil. The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code.

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		WC0768892	WC0768887	WC0723449
Sample Date	Client Info		06 Jun 2023	16 Mar 2023	14 Dec 2022
Machine Age	yrs	Client Info	0	0	0
Oil Age	yrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	Filtered	Filtered
Sample Status			NORMAL	ABNORMAL	NORMAL

WEAR METALS

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

ADDITIVES

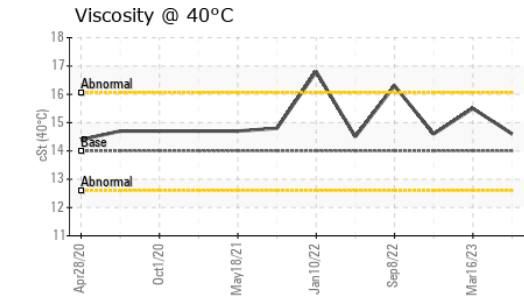
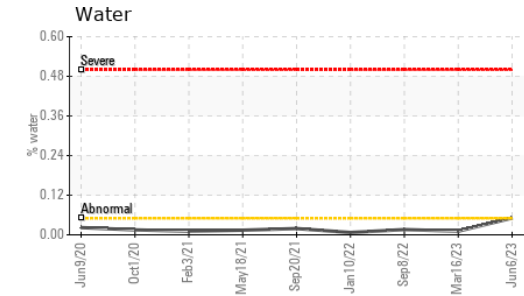
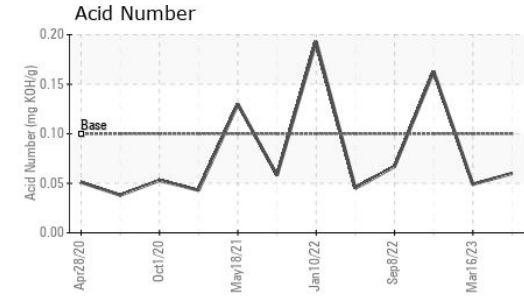
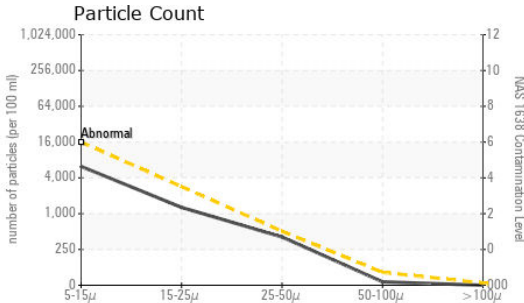
	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0
Barium	ppm	ASTM D5185m	2	2	2
Molybdenum	ppm	ASTM D5185m	0	0	0
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m	0	0	0
Calcium	ppm	ASTM D5185m	1	0	0
Phosphorus	ppm	ASTM D5185m	691	735	698
Zinc	ppm	ASTM D5185m	0	0	0
Sulfur	ppm	ASTM D5185m	6	0	7

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	2	4	4
Sodium	ppm	ASTM D5185m	0	0	0
Potassium	ppm	ASTM D5185m >20	0	0	<1
Water	%	ASTM D6304 >0.05	0.051	0.011	---
ppm Water	ppm	ASTM D6304 >500	510	114.9	---



OIL ANALYSIS REPORT



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		---	---	746
Particles >6µm		ASTM D7647	>16000	---	---	250
Particles >14µm		ASTM D7647	>2850	---	---	21
Particles >21µm		ASTM D7647	>506	---	---	4
Particles >38µm		ASTM D7647	>90	---	---	0
Particles >71µm		ASTM D7647	>16	---	---	0
Oil Cleanliness		ISO 4406 (c)	>6	---	---	17/15/12
Particles 5-15µm	count	*NAS 1638	>16000	6233	▲ 66353	---
Particles 15-25µm	count	*NAS 1638	>2850	1275	▲ 2893	---
Particles 25-50µm	count	*NAS 1638	>506	405	▲ 1557	---
Particles 50-100µm	count	*NAS 1638	>90	24	▲ 198	---
Particles >100µm	count	*NAS 1638	>16	0	▲ 19	---
NAS 1638	Class	*NAS 1638	>6	6	9	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.1	0.06	0.049	0.163

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	>0.05	0.2%	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	14.0	14.6	15.5	14.6

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0768892 **Received** : 13 Jun 2023
Lab Number : **05872664** **Diagnosed** : 15 Jun 2023
Unique Number : 10512448 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: KF, PrtCountNAS)

NORTHLAND-WILLETTE INC
 12 HIGH ST
 PLAINVILLE, MA
 US 02762
 Contact: JIM ALLEN
 JALLEN@NWHYDINC.COM
 T:
 F: (508)699-4017

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)