



WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
CATHERINE PREE [6738]
Machine Id
YANMAR KMH40A 00439
Component
Inboard Gearbox
Fluid
{not provided} (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA055813	---	---
Sample Date		Client Info		20 Jun 2024	---	---
Machine Age	hrs	Client Info		229	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				ABNORMAL	---	---

WEAR

The copper level is abnormal. All other component wear rates are normal.

PQ		ASTM D8184		28	---	---
Iron	ppm	ASTM D5185m	>150	37	---	---
Chromium	ppm	ASTM D5185m	>10	<1	---	---
Nickel	ppm	ASTM D5185m	>10	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		<1	---	---
Aluminum	ppm	ASTM D5185m	>5	4	---	---
Lead	ppm	ASTM D5185m	>65	35	---	---
Copper	ppm	ASTM D5185m	>80	▲ 176	---	---
Tin	ppm	ASTM D5185m	>8	1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Elemental level of silicon (Si) above normal indicating ingress of seal material.

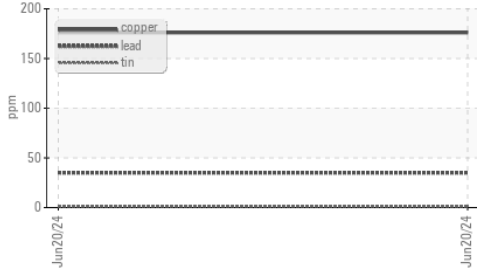
Silicon	ppm	ASTM D5185m	>20	▲ 38	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Water		WC Method	>0.2	NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

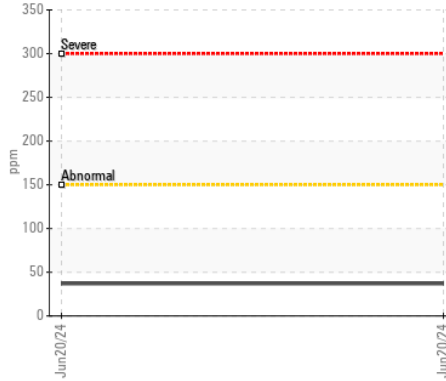
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		8	---	---
Boron	ppm	ASTM D5185m		312	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		30	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		12	---	---
Calcium	ppm	ASTM D5185m		3133	---	---
Phosphorus	ppm	ASTM D5185m		1026	---	---
Zinc	ppm	ASTM D5185m		1239	---	---
Sulfur	ppm	ASTM D5185m		4401	---	---
Visc @ 40°C	cSt	ASTM D445		85.8	---	---

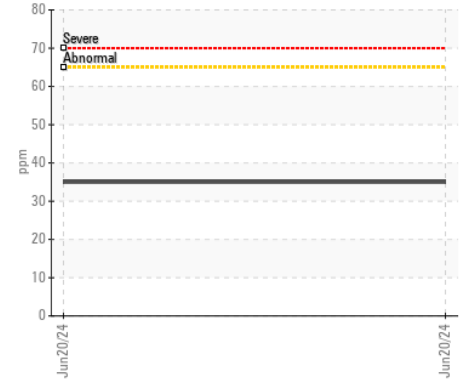
▲ Non-ferrous Metals



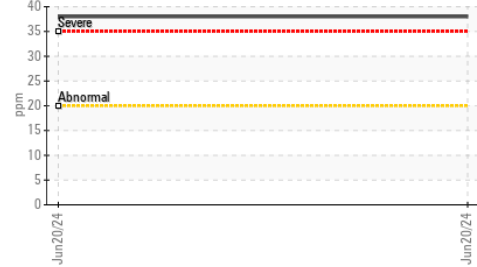
Iron (ppm)



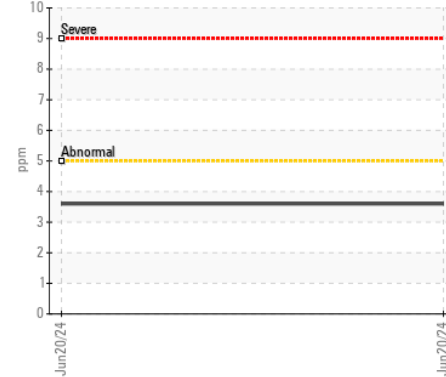
Lead (ppm)



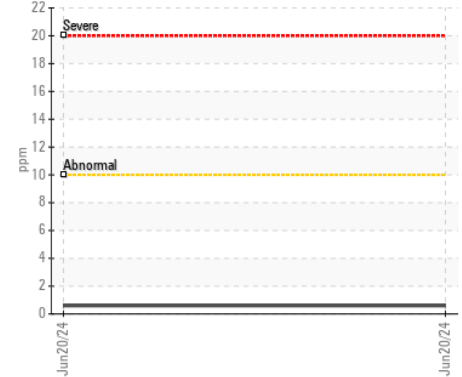
▲ Silicon (ppm)



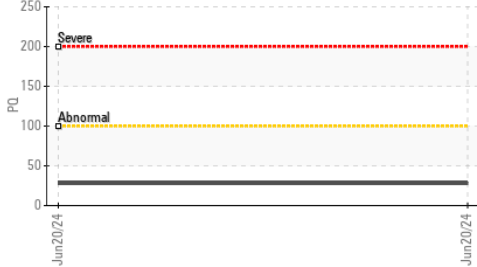
Aluminum (ppm)



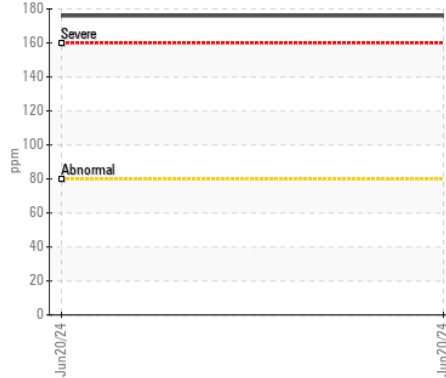
Chromium (ppm)



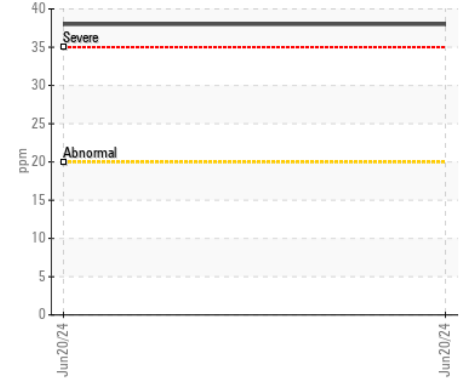
PQ



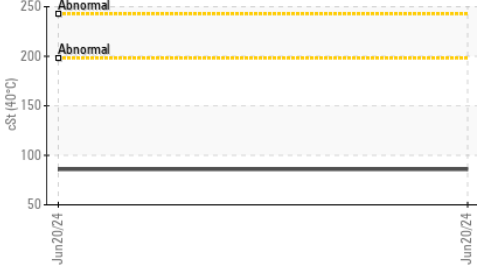
▲ Copper (ppm)



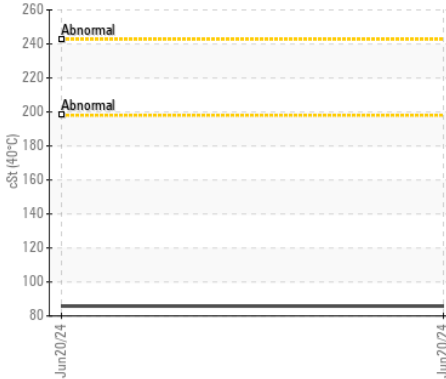
▲ Silicon (ppm)



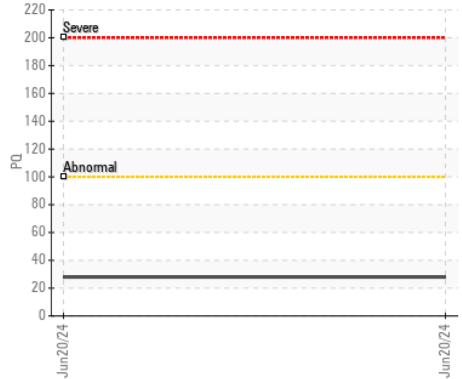
Viscosity @ 40°C



Viscosity @ 40°C



PQ



Certificate L2367

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

Sample No. : VPA055813

Lab Number : 06220067

Unique Number : 11098264

Test Package : MOB 1 (Additional Tests: PQ)

Received : 25 Jun 2024

Tested : 26 Jun 2024

Diagnosed : 27 Jun 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)

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