



Area
JOHN M RIVERS
Machine Id
[JOHN M RIVERS] 002 633894-2
Component
Center Main Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check for possible coolant leak. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0058711	---	---
Sample Date		Client Info		16 Jul 2024	---	---
Machine Age	days	Client Info		0	---	---
Oil Age	days	Client Info		0	---	---
Filter Age	days	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	42	---	---
Chromium	ppm	ASTM D5185m	>8	2	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m	>3	<1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>15	2	---	---
Lead	ppm	ASTM D5185m	>18	12	---	---
Copper	ppm	ASTM D5185m	>80	22	---	---
Tin	ppm	ASTM D5185m	>14	11	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

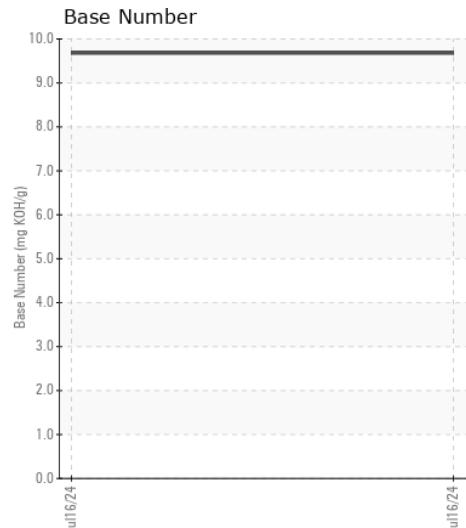
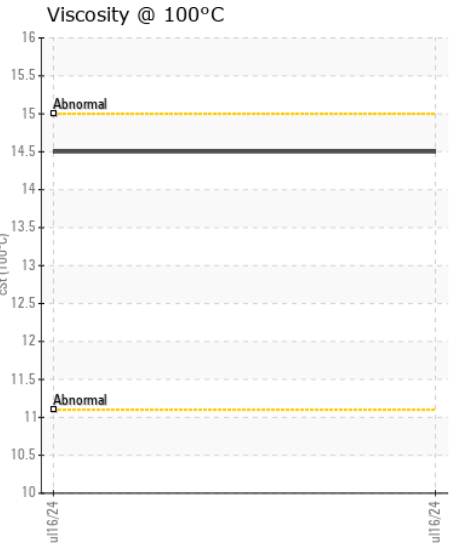
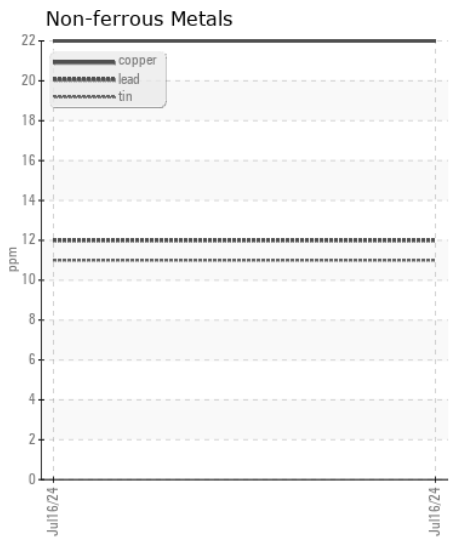
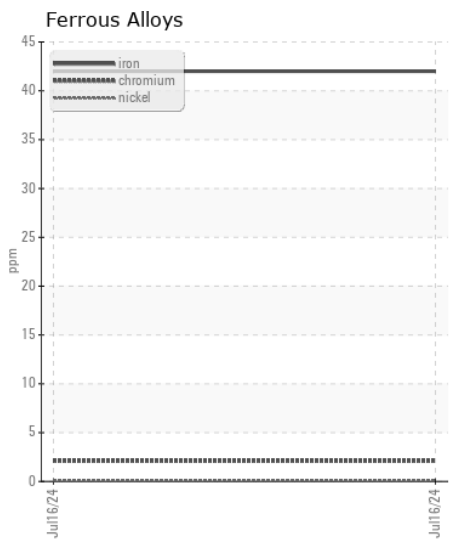
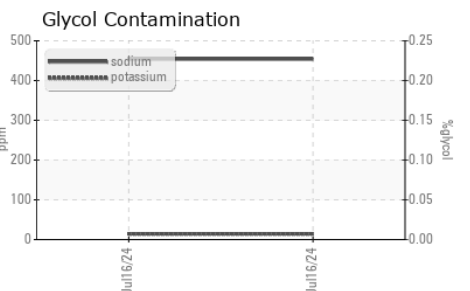
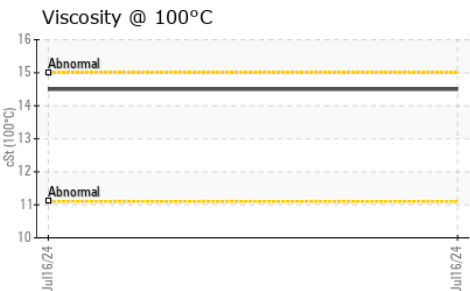
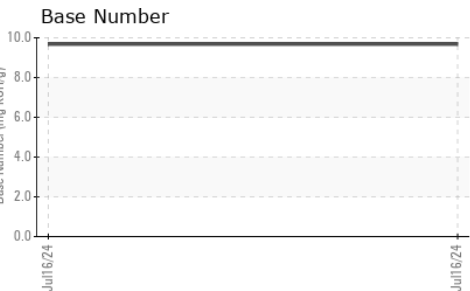
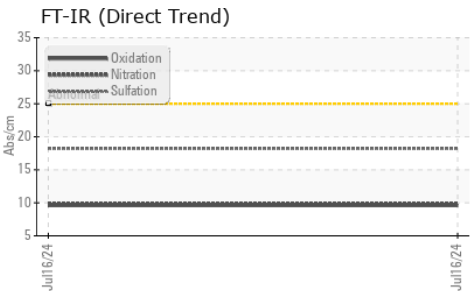
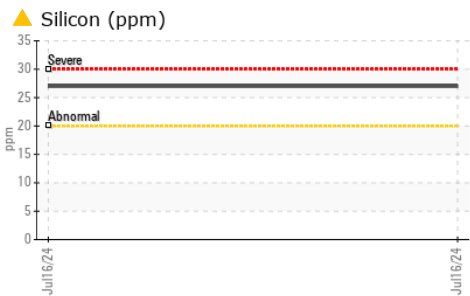
Sodium and/or potassium levels are high. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>20	▲ 27	---	---
Potassium	ppm	ASTM D5185m	>20	▲ 14	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol	%	*ASTM D2982		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.9	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	---	---
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	>0.1	NEG	---	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>75	▲ 454	---	---
Boron	ppm	ASTM D5185m		117	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		48	---	---
Manganese	ppm	ASTM D5185m		3	---	---
Magnesium	ppm	ASTM D5185m		25	---	---
Calcium	ppm	ASTM D5185m		3266	---	---
Phosphorus	ppm	ASTM D5185m		49	---	---
Zinc	ppm	ASTM D5185m		36	---	---
Sulfur	ppm	ASTM D5185m		2307	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		9.68	---	---
Visc @ 100°C	cSt	ASTM D445		14.5	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0058711 **Received** : 16 Jul 2024
Lab Number : 06238573 **Tested** : 19 Jul 2024
Unique Number : 11127407 **Diagnosed** : 19 Jul 2024 - Jonathan Hester
Test Package : MAR 2 (Additional Tests: Glycol)

INGRAM BARGE
 900 S 3RD ST
 PADUCAH, KY
 US 42003

Contact: JEFF BISHOP
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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) F: (615)695-3697