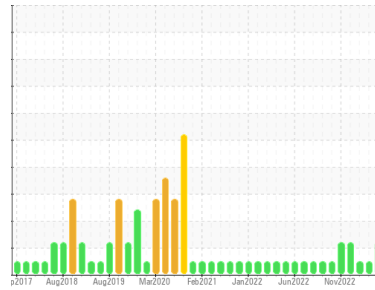




PROBLEM SUMMARY

Sample Rating Trend



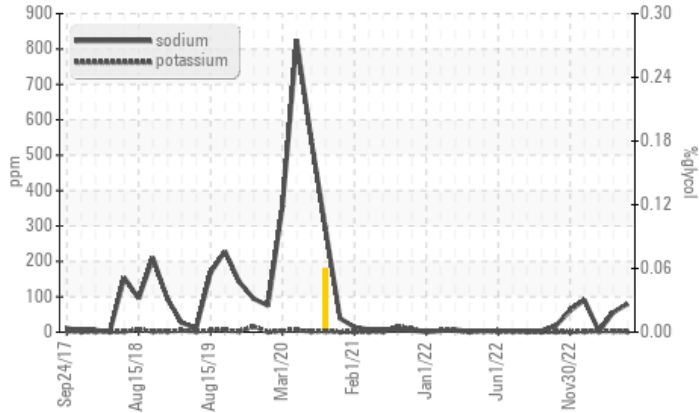
COOLANT



Area
PATRICIA I HART
 Machine Id
[PATRICIA I HART] 003 590874-3
 Component
Starboard Main Engine
 Fluid
CHEVRON DELO 710 LE (200 GAL)

COMPONENT CONDITION SUMMARY

▲ Glycol Contamination



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				ATTENTION	NORMAL	NORMAL
Sodium	ppm	ASTM D5185m	>75	▲ 80	56	2

Customer Id: INGPAD
 Sample No.: MW0059893
 Lab Number: 06001143
 Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

01 Sep 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



01 Aug 2023 Diag: Sean Felton

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



07 Jul 2023 Diag: Don Baldrige

COOLANT



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. The high sodium (Na) level indicates the possible presence of salt water. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

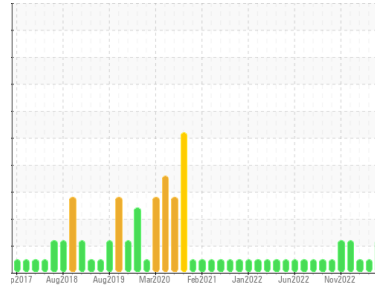
view report





OIL ANALYSIS REPORT

Sample Rating Trend



COOLANT



Area
PATRICIA I HART
 Machine Id
[PATRICIA I HART] 003 590874-3
 Component
Starboard Main Engine
 Fluid
CHEVRON DELO 710 LE (200 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

The high sodium (Na) level indicates the possible presence of salt water.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining 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		MW0059893	MW0059888	MW0038734
Sample Date	Client Info		01 Nov 2023	01 Sep 2023	01 Aug 2023
Machine Age	hrs	Client Info	24416	22971	18177
Oil Age	hrs	Client Info	17510	16065	11322
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			ATTENTION	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >75	13	14	20
Chromium	ppm	ASTM D5185m >8	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >3	0	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >15	2	0	<1
Lead	ppm	ASTM D5185m >18	5	5	5
Copper	ppm	ASTM D5185m >80	14	13	15
Tin	ppm	ASTM D5185m >14	4	4	4
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	55	58	37
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	45	49	48
Manganese	ppm	ASTM D5185m	1	<1	<1
Magnesium	ppm	ASTM D5185m	15	28	10
Calcium	ppm	ASTM D5185m	3461	3808	3562
Phosphorus	ppm	ASTM D5185m	1	14	8
Zinc	ppm	ASTM D5185m 10	4	6	1
Sulfur	ppm	ASTM D5185m	2439	2991	2185

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	12	10	4
Sodium	ppm	ASTM D5185m >75	▲ 80	56	2
Potassium	ppm	ASTM D5185m >20	1	3	2
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

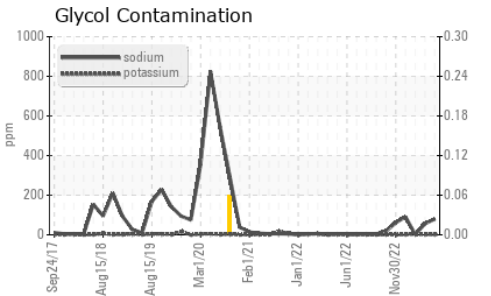
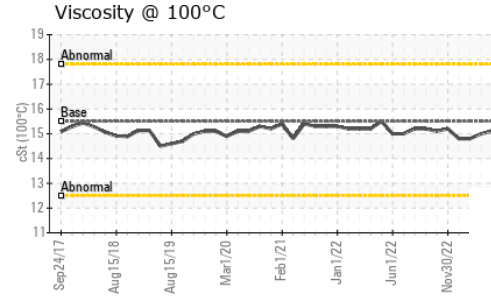
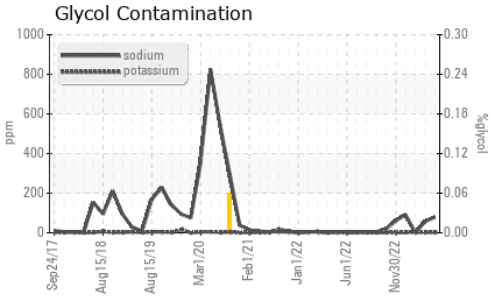
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	8.6	8.1	9.2
Sulfation	Abs.1mm	*ASTM D7415 >30	17.5	16.4	16.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs.1mm	*ASTM D7414 >25	9.5	8.7	9.2
Base Number (BN)	mg KOH/g	ASTM D2896 9.2	10.71	9.21	9.03



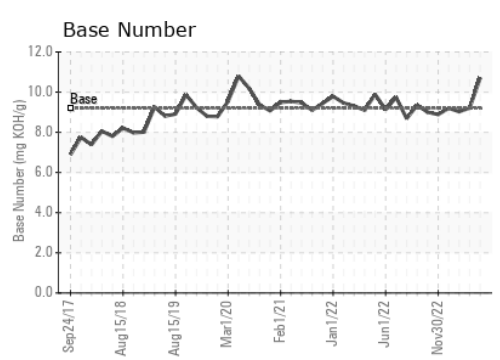
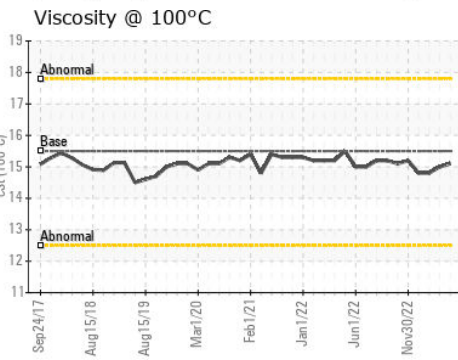
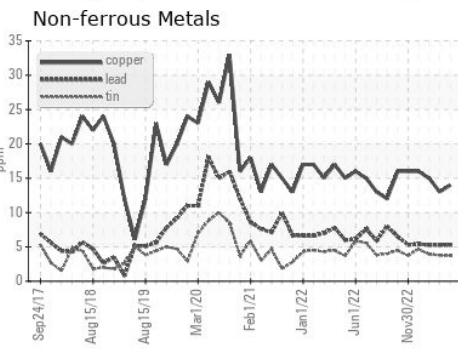
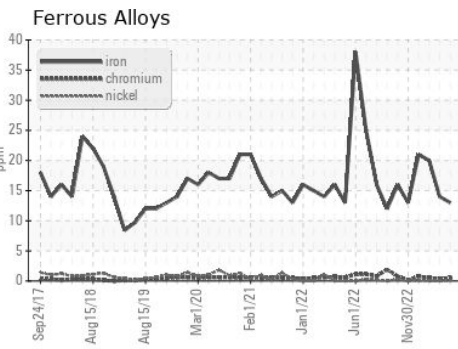
OIL ANALYSIS REPORT



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	15.1	15.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0059893 **Received** : 07 Nov 2023
Lab Number : 06001143 **Diagnosed** : 09 Nov 2023
Unique Number : 10729503 **Diagnostician** : Sean Felton
Test Package : MAR 2 (Additional Tests: Glycol)

INGRAM BARGE
 900 S 3RD ST
 PADUCAH, KY
 US 42003
 Contact: JEFF BISHOP
 jeff.bishop@ingrambargo.com
 T:
 F: (615)695-3697

Certificate L2367
 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)