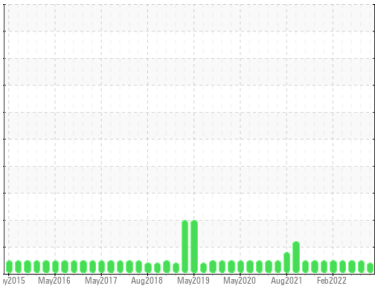
PROBLEM SUMMARY

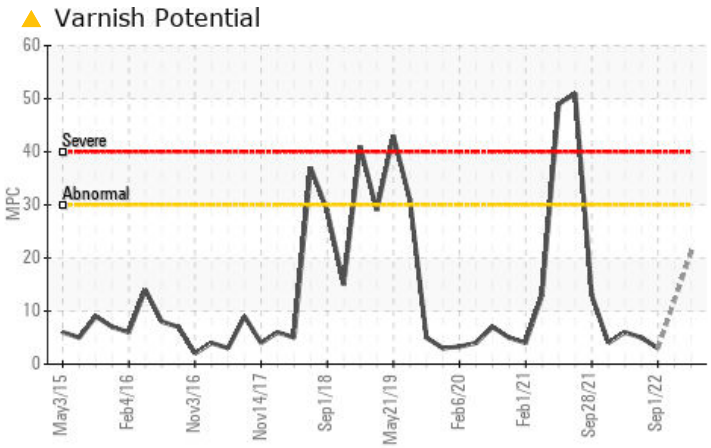
Sample Rating Trend



INSOLUBLES

Area
E1 RULer Conductivity
Machine Id
NUOVO-PIGNONE E1 Pignone Frame 5-70001-TB
Component
Turbine
Fluid
ROYAL PURPLE SYNFILM 32 (2730 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.
Conductivity is acceptable at 878 pS.

PROBLEMATIC TEST RESULTS

Sample Status				**MARGINAL**	NORMAL	NORMAL
MPC Varnish Potential	Scale	ASTM D7843	>15	▲ **21**	---	3

Customer Id: CONANCAK
Sample No.: WC0745593
Lab Number: 05850575
Test Package: AOM 1

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@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

12 Nov 2022 Diag: Doug Bogart

NORMAL

No corrective action is recommended at this time. 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 amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

01 Sep 2022 Diag: Doug Bogart

NORMAL

Resample at the next service interval to monitor. Please submit a sample of the new (unused) oil to establish a current RULer baseline. Conductivity is acceptable at 252 pS.All component wear rates are normal. MPC (Membrane Patch Colorimetry) test indicates acceptable levels of varnish present. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

05 May 2022 Diag: Doug Bogart

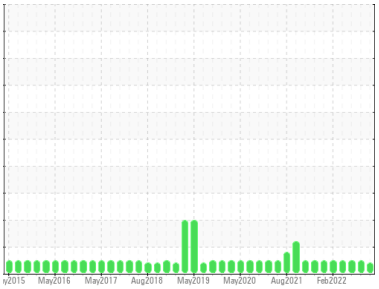
NORMAL

No corrective action is recommended at this time. 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 amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



INSOLUBLES

Area
E1 RULer Conductivity
Machine Id
NUOVO-PIGNONE E1 Pignone Frame 5-70001-TB
Component
Turbine
Fluid
ROYAL PURPLE SYNFILM 32 (2730 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Conductivity is acceptable at 878 pS.

Wear

All component wear rates are normal.

Contamination

MPC (Membrane Patch Colorimetry) test indicates a light concentration of varnish present. The amount and size of particulates present in the system are acceptable.

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		**WC0745593**	WC0670617	WC0670621
Sample Date		Client Info		**14 May 2023**	12 Nov 2022	01 Sep 2022
Machine Age	hrs	Client Info		**194625**	190241	0
Oil Age	hrs	Client Info		**194625**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**MARGINAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>15	**0**	0	0
Chromium	ppm	ASTM D5185m	>4	**0**	0	0
Nickel	ppm	ASTM D5185m	>2	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>10	**3**	<1	0
Lead	ppm	ASTM D5185m		**0**	0	0
Copper	ppm	ASTM D5185m	>5	**12**	11	10
Tin	ppm	ASTM D5185m	>5	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

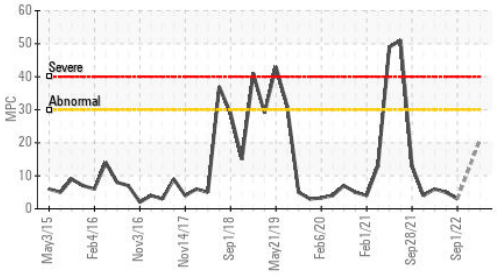
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	0	0
Magnesium	ppm	ASTM D5185m	90	**69**	71	14
Calcium	ppm	ASTM D5185m		**6**	2	0
Phosphorus	ppm	ASTM D5185m		**0**	4	0
Zinc	ppm	ASTM D5185m		**18**	0	0
Sulfur	ppm	ASTM D5185m		**18902**	20747	21710

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	<1	1
Sodium	ppm	ASTM D5185m		**7**	6	0
Potassium	ppm	ASTM D5185m	>20	**2**	3	<1
Water	%	ASTM D6304	>0.03	**0.006**	0.016	0.003
ppm Water	ppm	ASTM D6304	>300	**69.1**	166.8	35.2

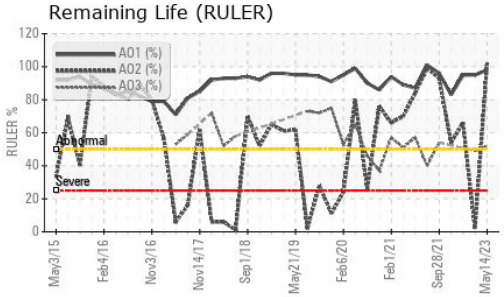
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	**200**	432	1440
Particles >6µm	ASTM D7647	>1300	**72**	142	433
Particles >14µm	ASTM D7647	>160	**7**	17	19
Particles >21µm	ASTM D7647	>40	**2**	5	2
Particles >38µm	ASTM D7647	>10	**0**	1	0
Particles >71µm	ASTM D7647	>3	**0**	1	0
Oil Cleanliness	ISO 4406 (c)	>20/17/14	**15/13/10**	16/14/11	18/16/11

OIL ANALYSIS REPORT

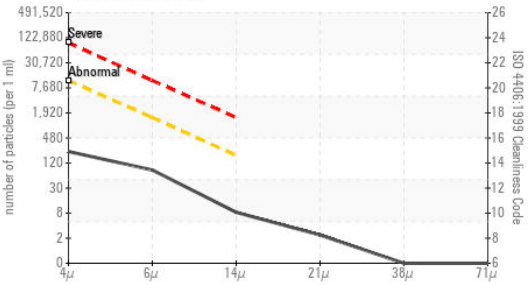
Varnish Potential



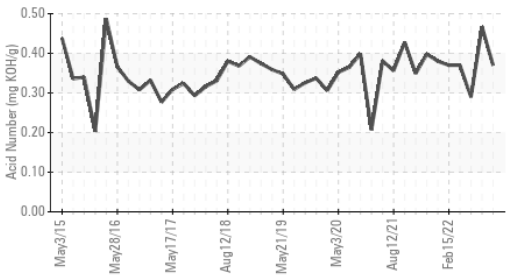
Remaining Life (RULER)



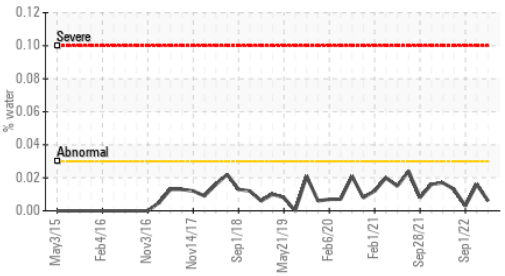
Particle Count



Acid Number



Water

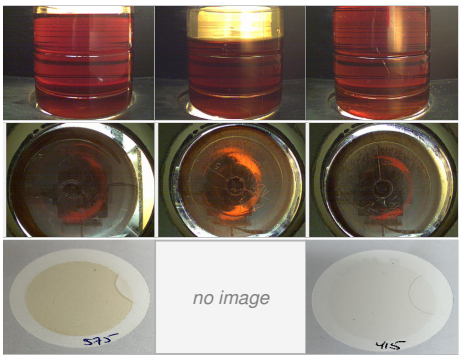


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.37**	0.467	0.29
Anti-Oxidant 1	%	ASTM D6971	<25	**98**	---	---
Anti-Oxidant 2	%	ASTM D6971	<25	**101**	---	---
Anti-Oxidant 3	%	ASTM D6971	<25	**52**	---	---
MPC Varnish Potential	Scale	ASTM D7843	>15	▲ **21**	---	3

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	>0.03	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32	**32.4**	34.0	32.4
Resistivity	10^{12}ohmcm	ASTM D1169		**878**	---	252

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
MPC				no image	

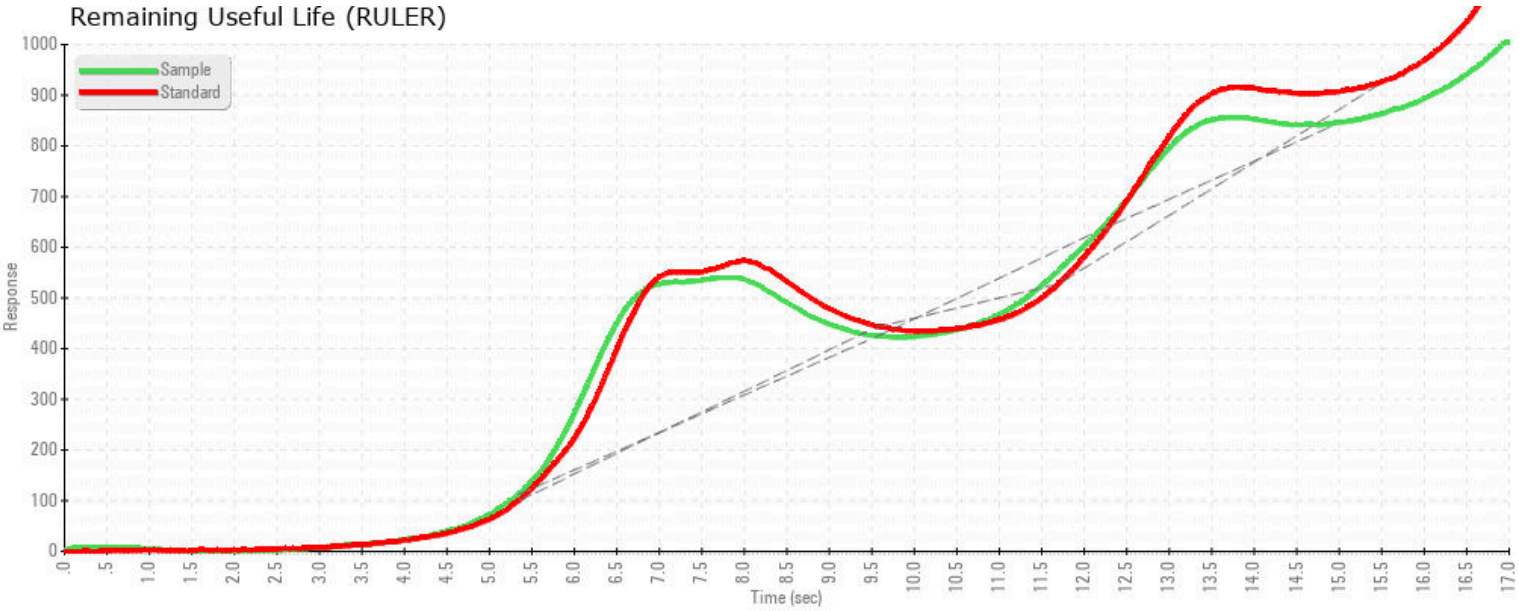


Certificate L2367

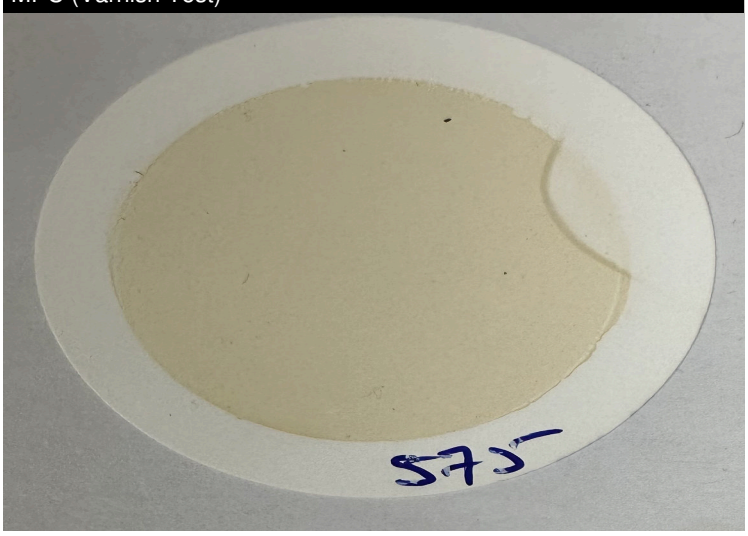
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0745593 **Received** : 18 May 2023
Lab Number : 05850575 **Diagnosed** : 06 Jun 2023
Unique Number : 10479930 **Diagnostician** : Doug Bogart
Test Package : AOM 1 (Additional Tests: KF, RESISTIVITY)

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)

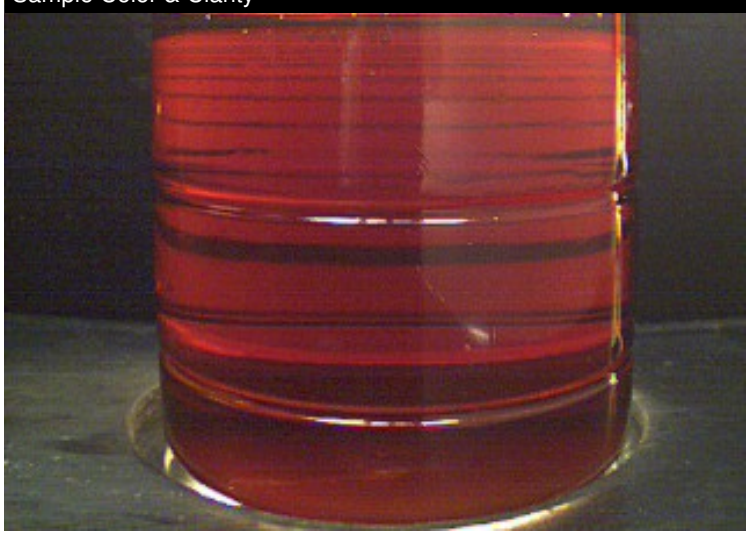
Conoco Phillips ALASKA INC
C/O LAF (ALPINE), 6441 S AIRPARK PL
ANCHORAGE, AK
US 99502
Contact: GREG MARKLE HEATH CABANSKI
alp1279@conocophillips.com
T: (907)670-4143
F: (907)670-4143



MPC (Varnish Test)



Sample Color & Clarity



This page left intentionally blank