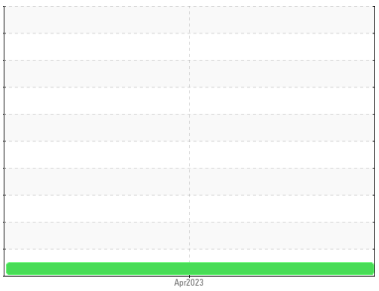
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
(C-GRXM)
Machine Id
PILATWS PCE-R40095 AGB
Component
Chip Detector Jet Turbine
Fluid
EASTMAN TURBO OIL 2380 (--- GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
three particles from a chip detector were submitted for analysis. The particles were affixed onto packing tape, rendering us unable to determine if the particles are ferrous or non-ferrous. Particle 1 measures 1.34mm x 0.75mm (image 2), form is flake (rolling fatigue wear particle) and was used for the acid digest. Particle 2 measures 0.53mm x 0.42mm, form is flake (image 1, bottom right). Particle 3 measures 0.77mm x 0.37mm (image 3), form is flake. Particle 2 was digested and analysed by ICP Spectroscopy. The closes alloy match is aluminum.

Contamination
{not applicable}

Fluid Condition
{not applicable}

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PP**	---	---
Sample Date		Client Info		**20 Apr 2023**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**NORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>8	**6**	---	---
Chromium	ppm	ASTM D5185(m)	>2	**<1**	---	---
Nickel	ppm	ASTM D5185(m)	>2	**0**	---	---
Titanium	ppm	ASTM D5185(m)	>2	**0**	---	---
Silver	ppm	ASTM D5185(m)	>2	**4**	---	---
Aluminum	ppm	ASTM D5185(m)	>2	**43**	---	---
Lead	ppm	ASTM D5185(m)	>3	**2**	---	---
Copper	ppm	ASTM D5185(m)	>3	**4**	---	---
Tin	ppm	ASTM D5185(m)	>2	**3**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**<1**	---	---
Beryllium	ppm	ASTM D5185(m)		**<1**	---	---
Cadmium	ppm	ASTM D5185(m)		**<1**	---	---

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*				
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		**1**		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*				
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*		**1**		
Nonferrous Other	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*				
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*				
Patch Weight	mg	ASTM D7684*		**N/A**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Molybdenum	ppm	ASTM D5185(m)	0	**1**	---	---
Manganese	ppm	ASTM D5185(m)		**<1**	---	---
Magnesium	ppm	ASTM D5185(m)	0	**4**	---	---
Zinc	ppm	ASTM D5185(m)	0	**16**	---	---

OIL ANALYSIS REPORT

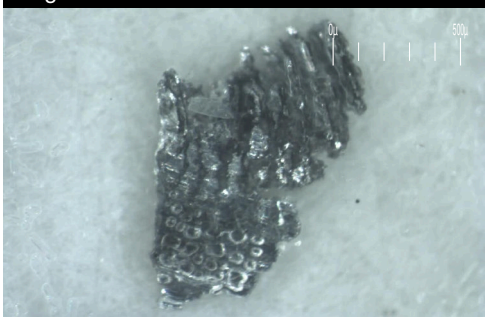
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>8	**4**	---	---

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

GRAPHS

Magn: 10x Illum: RW

Magn: 45x Illum: RW



Magn: 45x Illum: RW

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP **Received** : 24 Apr 2023
Lab Number : 02553217 **Diagnosed** : 24 Apr 2023
Unique Number : 5566232 **Diagnostician** : Bill Quesnel
Test Package : FLTRO (Additional Tests: ICP, ICP-DIGEST)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

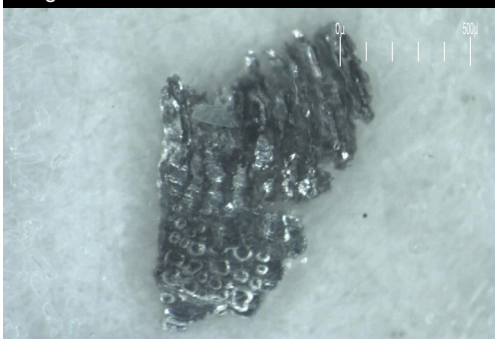
ORNGE
5130 EXPLORER DRIVE
MISSISSAUGA, ON
CA L4W 5N8
Contact: Darrell Topolinsky
dtopolinsky@ornge.ca
T: (647)428-2005
F:

FILTER REPORT

Area
(C-GRXM)
Machine Id
PILATWS PCE-R40095 AGB
Component
Chip Detector Jet Turbine
Fluid
EASTMAN TURBO OIL 2380 (--- GAL)

Magn: 10x Illum: RW

Magn: 45x Illum: RW



Magn: 45x Illum: RW

FERROGRAPHY		method	limit/base	current	history1	history2
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Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		**1**		
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*				
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*		**1**		
Nonferrous Other	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*				
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*				
Patch Weight	mg	ASTM D7684*		**N/A**	---	---

WEAR

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