# PROBLEM SUMMARY

Sample Rating Trend


WEAR PARTICLES

Machine Id
## PCE-FA0624 R/H (S/N 818)
Component
**Chip Detector Jet Turbine**
Fluid
**NOT GIVEN (--- GAL)**

## COMPONENT CONDITION SUMMARY

No relevant graphs to display

## RECOMMENDATION

Material was submitted from a chip detector for analysis. A single large wear particle (size 1000µm x 500µm, form platelet / rolling fatigue) was digested and analysed by ICP Spectroscopy. The most likely alloy match is Case Hardening Steel (AMS 6265). We recommend that you resample in 25 hours to monitor.

## PROBLEMATIC TEST RESULTS

| | | | | | | |
|---|---|---|---|---|---|---|
| Sample Status | | | | MARGINAL | --- | --- |
| Ferrous Rolling | Scale 0-10 | ASTM D7684* | | 2 | | |

**Customer Id:** PORTORTOR
**Sample No.:** PP
**Lab Number:** 02578952
**Test Package:** FLTRO

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Bill Quesnel CLS,OMA II,MLA-III,LLA-I +1 (289)291-4641 x4641
Bill.Quesnel@wearcheck.com

*To change component or sample information:*
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

# OIL ANALYSIS REPORT

Sample Rating Trend


WEAR PARTICLES

Machine Id
## PCE-FA0624 R/H (S/N 818)
Component
**Chip Detector Jet Turbine**
Fluid
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

**Recommendation**

Material was submitted from a chip detector for analysis. A single large wear particle (size 1000µm x 500µm, form platelet / rolling fatigue) was digested and analysed by ICP Spectroscopy. The most likely alloy match is Case Hardening Steel (AMS 6265). We recommend that you resample in 25 hours to monitor.

**Wear**

Wear particle analysis indicates that the ferrous rolling particles are marginal.

**Contamination**

There is no indication of any contamination in the component(unconfirmed).

**Fluid Condition**

{not applicable}

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PP** | --- | --- |
| Sample Date | | Client Info | | **27 Aug 2023** | --- | --- |
| Machine Age | hrs | Client Info | | **0** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **MARGINAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >8 | **214** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >2 | **5** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | **15** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | **4** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >2 | **22** | --- | --- |
| Lead | ppm | ASTM D5185(m) | >3 | **2** | --- | --- |
| Copper | ppm | ASTM D5185(m) | >3 | **4** | --- | --- |
| Tin | ppm | ASTM D5185(m) | >2 | **6** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | --- | --- |

| 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* | | **2** | | |
| 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* | | **1** | | |
| Nonferrous Sliding | Scale 0-10 | ASTM D7684* | | **1** | | |
| Nonferrous Cutting | Scale 0-10 | ASTM D7684* | | | | |
| Nonferrous Rolling | Scale 0-10 | ASTM D7684* | | | | |
| Nonferrous Other | Scale 0-10 | ASTM D7684* | | | | |
| Sand/Dirt | Scale 0-10 | ASTM D7684* | | **2** | | |
| Fibres | Scale 0-10 | ASTM D7684* | | **2** | | |
| Spheres | Scale 0-10 | ASTM D7684* | | | | |
| Other | Scale 0-10 | ASTM D7684* | | | | |
| Patch Weight | mg | ASTM D7684* | | **79** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Molybdenum | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | **2** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | **18** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | **7** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | **94** | --- | --- |

# OIL ANALYSIS REPORT

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

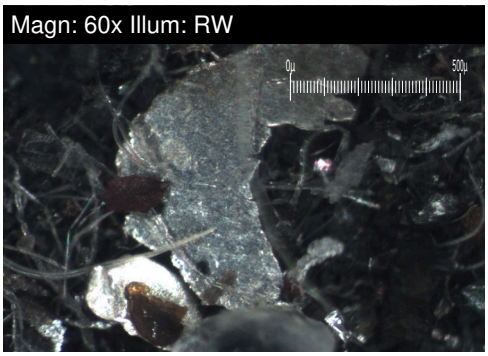
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | *no image* | *no image* | *no image* |
| Bottom | | | *no image* | *no image* | *no image* |

## GRAPHS

Magn: 10x Illum: RW

Magn: 30x Illum: RW

Magn: 60x Illum: RW



ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : PP
**Lab Number** : 02578952
**Unique Number** : 5632012
**Test Package** : FLTRO ( Additional Tests: ICP, ICP-DIGEST, PQ )
**Received** : 28 Aug 2023
**Diagnosed** : 29 Aug 2023
**Diagnostician** : Bill Quesnel

*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.*

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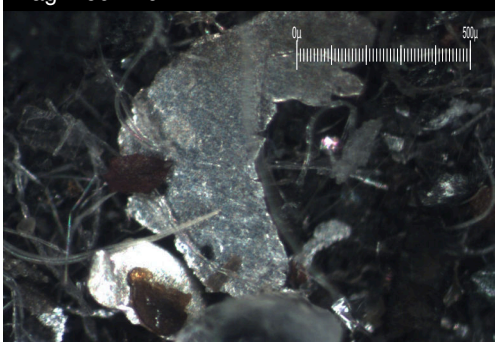
# FILTER REPORT

Machine Id
## PCE-FA0624 R/H (S/N 818)
Component
**Chip Detector Jet Turbine**
Fluid
**NOT GIVEN (--- GAL)**

Magn: 10x Illum: RW

Magn: 30x Illum: RW

Magn: 60x Illum: RW



| 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* | | 2 | | |
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| 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* | | 1 | | |
| Nonferrous Sliding | Scale 0-10 | ASTM D7684* | | 1 | | |
| Nonferrous Cutting | Scale 0-10 | ASTM D7684* | | | | |
| Nonferrous Rolling | Scale 0-10 | ASTM D7684* | | | | |
| Nonferrous Other | Scale 0-10 | ASTM D7684* | | | | |
| Sand/Dirt | Scale 0-10 | ASTM D7684* | | 2 | | |
| Fibres | Scale 0-10 | ASTM D7684* | | 2 | | |
| Spheres | Scale 0-10 | ASTM D7684* | | | | |
| Other | Scale 0-10 | ASTM D7684* | | | | |
| Patch Weight | mg | ASTM D7684* | | 79 | --- | --- |

### WEAR

Wear particle analysis indicates that the ferrous rolling particles are marginal.

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