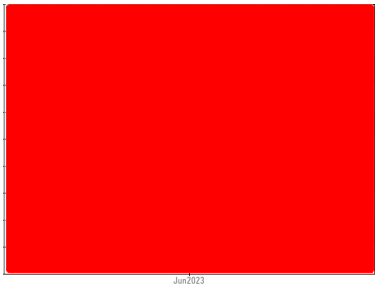
PROBLEM SUMMARY

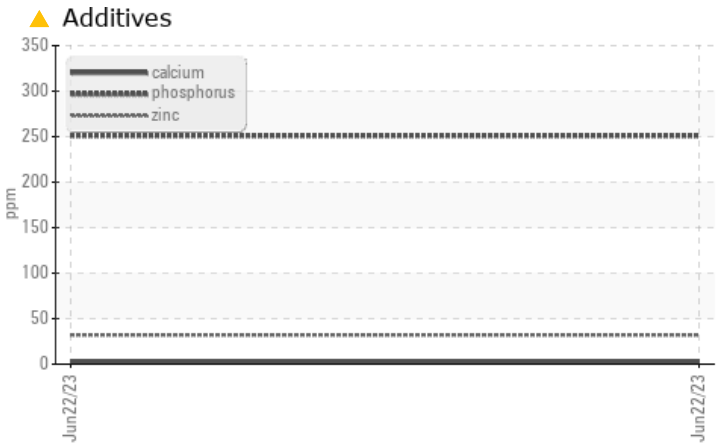
Sample Rating Trend



WEAR PARTICLES

Machine Id
PRESS 4 SOUTH
Component
Bull Gear
Fluid
PETRO CANADA ENDURATEX EP 220 (--- LTR)

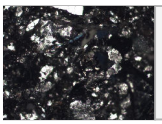
COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for visible metal particles in the oil. Wear particles and/or ppm levels are abnormally high indicating the need to review OEM limits with attention to components that may generate this type of wear. Include all test results and maintenance activities that have been performed since the abnormal condition was first detected in this review. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. An inspection for the source(s) of wear may be warranted at this time. We recommend an early resample to monitor this condition. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF). NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	---	---
Ferrous Rubbing	Scale 0-10	ASTM D7684*		8		
Ferrous Sliding	Scale 0-10	ASTM D7684*		7		
Ferrous Rolling	Scale 0-10	ASTM D7684*		7		
Zinc	ppm	ASTM D5185(m)	0	▲ 32	---	---
Sulfur	ppm	ASTM D5185(m)	11200	▲ 3360	---	---
White Metal	scalar	Visual*	NONE	**HEAVY**	---	---
PrtFilter					*no image*	*no image*

Customer Id: VENSTC
Sample No.: PC0061348
Lab Number: 02566273
Test Package: IND 2

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

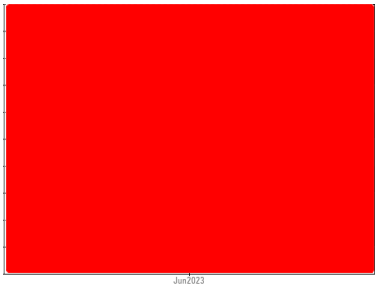
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	An inspection for the source(s) of wear may be warranted at this time.
Monitor	---	---	?	Wear particles and/or ppm levels are abnormally high indicating the need to review OEM limits with attention to components that may generate this type of wear. Include all test results and maintenance activities that have been performed since the abnormal condition was first detected in this review.
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF).
Alert	---	---	?	Wear particles and/or ppm levels are abnormally high indicating the need to review OEM limits with attention to components that may generate this type of wear. Include all test results and maintenance activities that have been performed since the abnormal condition was first detected in this review.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.
Check For Visual Metal	---	---	?	We advise that you check for visible metal particles in the oil.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR PARTICLES

Machine Id
PRESS 4 SOUTH
Component
Bull Gear
Fluid
PETRO CANADA ENDURATEX EP 220 (--- LTR)

DIAGNOSIS

Recommendation

We advise that you check for visible metal particles in the oil. Wear particles and/or ppm levels are abnormally high indicating the need to review OEM limits with attention to components that may generate this type of wear. Include all test results and maintenance activities that have been performed since the abnormal condition was first detected in this review. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. An inspection for the source(s) of wear may be warranted at this time. We recommend an early resample to monitor this condition. Re-sampling is suggested to confirm test results prior to significant maintenance activities being performed. Please indicate that this is a resample on your Sample Information Form (SIF). NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

Wear particle analysis indicates that the ferrous rolling, ferrous sliding and ferrous rubbing particles are severe. High concentration of visible metal present. Gear wear is indicated.

Contaminants

There is no indication of any contamination in the oil.

Oil Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**PC0061348**	---	---
Sample Date		Client Info		**22 Jun 2023**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**SEVERE**	---	---

WEAR METALS		method	limit/base	current	history 1	history 2
PQ		ASTM D8184*		**13**	---	---
Iron	ppm	ASTM D5185(m)	>150	**48**	---	---
Chromium	ppm	ASTM D5185(m)	>10	**<1**	---	---
Nickel	ppm	ASTM D5185(m)	>10	**<1**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)		**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>25	**1**	---	---
Lead	ppm	ASTM D5185(m)	>100	**2**	---	---
Copper	ppm	ASTM D5185(m)	>50	**29**	---	---
Tin	ppm	ASTM D5185(m)	>10	**2**	---	---
Antimony	ppm	ASTM D5185(m)	>5	**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

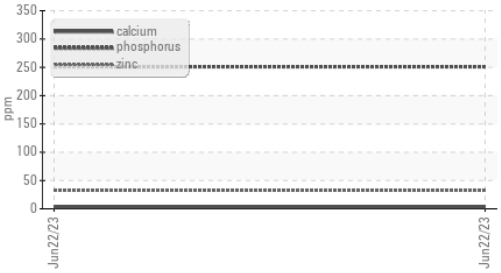
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185(m)	60	**7**	---	---
Barium	ppm	ASTM D5185(m)	0	**3**	---	---
Molybdenum	ppm	ASTM D5185(m)	0	**0**	---	---
Manganese	ppm	ASTM D5185(m)	0	**1**	---	---
Magnesium	ppm	ASTM D5185(m)	0	**1**	---	---
Calcium	ppm	ASTM D5185(m)	0	**3**	---	---
Phosphorus	ppm	ASTM D5185(m)	270	**251**	---	---
Zinc	ppm	ASTM D5185(m)	0	▲ **32**	---	---
Sulfur	ppm	ASTM D5185(m)	11200	▲ **3360**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	>50	**14**	---	---
Sodium	ppm	ASTM D5185(m)		**1**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**1**	---	---

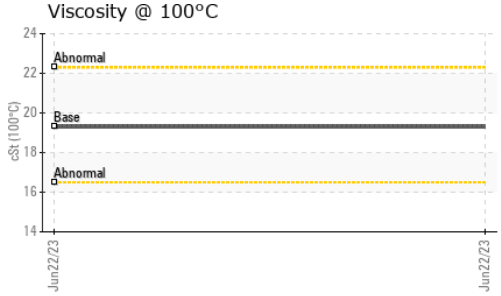
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	**0.32**	---	---

OIL ANALYSIS REPORT

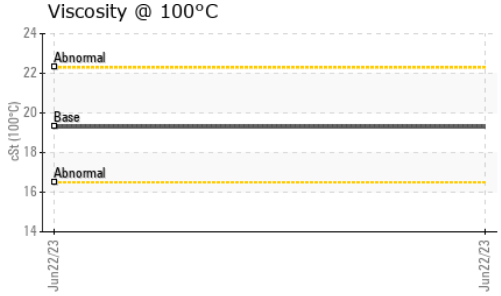
Additives



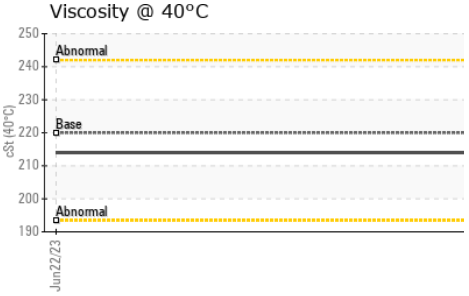
Viscosity @ 100°C



Viscosity @ 100°C



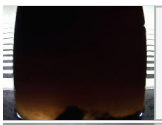
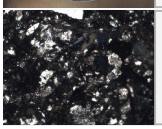
Viscosity @ 40°C



PQ

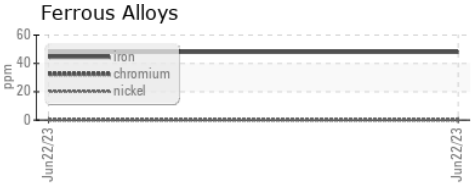
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	**HEAVY**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**VLITE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.1	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	220	**214**	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	19.35	**19.3**	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	99	**101**	---	---

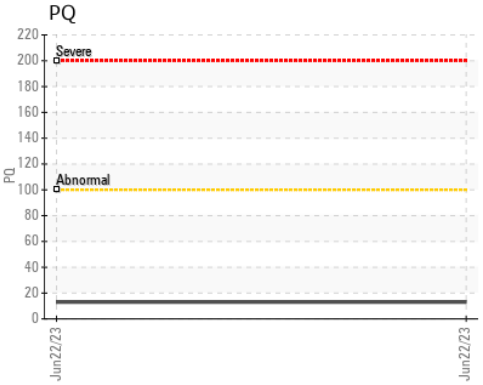
SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color				*no image*	*no image*
Bottom				*no image*	*no image*
PrtFilter				*no image*	*no image*

GRAPHS

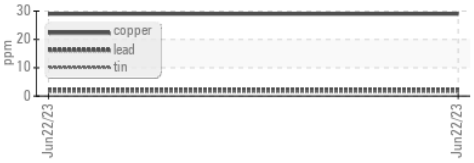
Ferrous Alloys



PQ

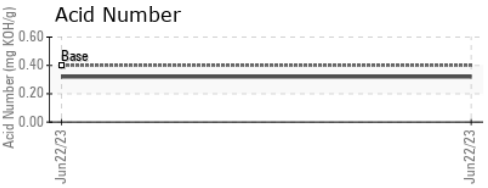


Non-ferrous Metals



Viscosity @ 40°C

Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0061348 **Received** : 23 Jun 2023
Lab Number : 02566273 **Diagnosed** : 06 Jul 2023
Unique Number : 5603319 **Diagnostician** : Bill Quesnel
Test Package : IND 2 (Additional Tests: A-Ferr, Bottom, BottomAnalysis, FilterPatch, KV100, TAN Man, VI)

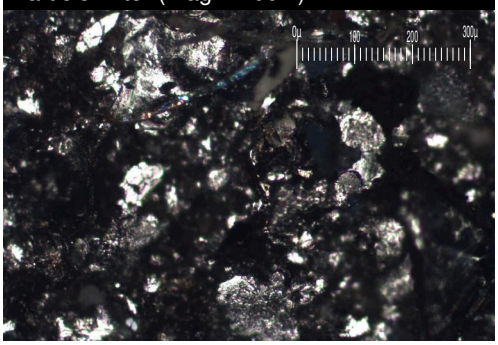
To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

Venest Industries Inc.
2032 First Street Louth
St. Catharines, ON
CA L2S 0C5
Contact: Allen Taylor
allen.taylor@magna.com
T: (905)401-9948
F:

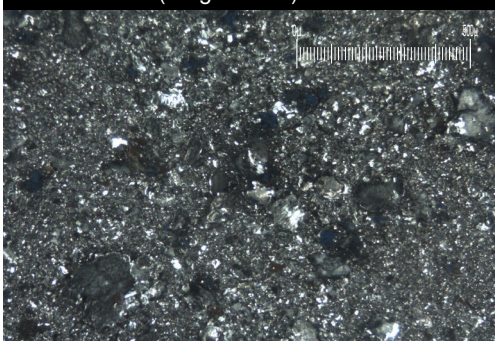
PARTICLE FILTER REPORT

Machine Id
PRESS 4 SOUTH
Component
Bull Gear
Fluid
PETRO CANADA ENDURATEX EP 220 (--- LTR)

Particle Filter (Magn: 100 x)



Particle Filter (Magn: 60 x)



FERROGRAPHY	method		limit/base	current	history 1	history 2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		8		
Ferrous Sliding	Scale 0-10	ASTM D7684*		7		
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		7		
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*				
Nonferrous Other	Scale 0-10	ASTM D7684*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	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*				

WEAR

Wear particle analysis indicates that the ferrous rolling, ferrous sliding and ferrous rubbing particles are severe. High concentration of visible metal present. Gear wear is indicated.

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