

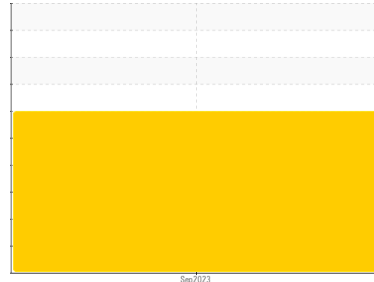
PROBLEM SUMMARY

Sample Rating Trend

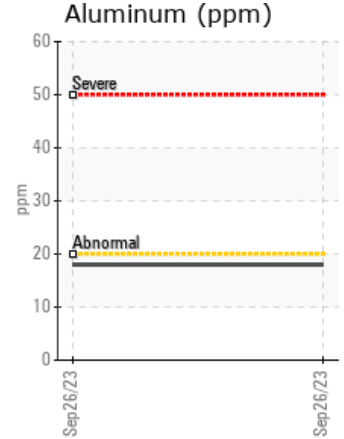
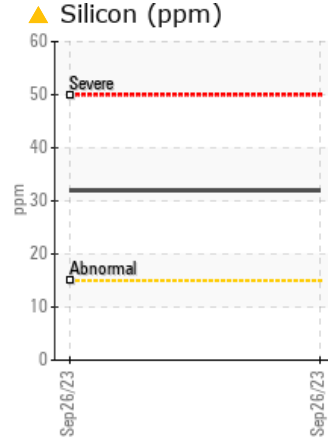
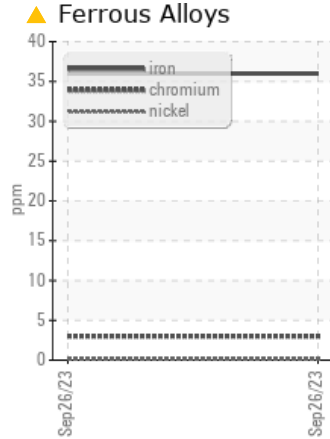
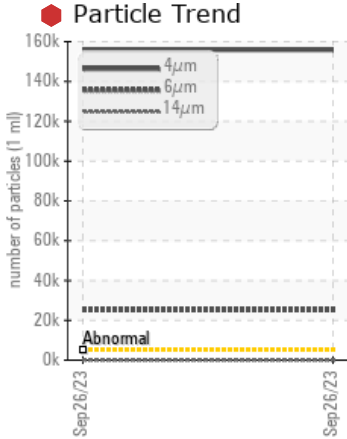
ISO



Machine Id
CATERPILLAR E-14
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

Vérifier les scelles et/ou les filters pour des points d'entrée des contaminants. Nous vous recommandons de vérifier tous les endroits par lesquels de la saleté peut pénétrer dans le système. Le reniflard d'air doit être réparé. S'il n'est pas classé, nous vous recommandons de le remplacer par un reniflard à air adapté au micron et / ou au dessiccant. Si évalué, nous vous recommandons de réparer / remplacer le reniflard. Nous vous recommandons de remplacer le filtre et d'utiliser un système de filtrage hors-ligne afin d'améliorer la propreté du fluide. Nous avons pris note que le filtre a été remplacé au moment de l'échantillonnage. Échantillonner de nouveau dans 30 à 45 jours afin de contrôler la situation. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185(m)	>20	▲ 36	---	---
Silicon	ppm	ASTM D5185(m)	>15	▲ 32	---	---
Particles >4µm		ASTM D7647	>5000	● 155878	---	---
Particles >6µm		ASTM D7647	>1300	● 25173	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	● 24/22/12	---	---

Customer Id: HUIQUE
Sample No.: PC0070369
Lab Number: 02592675
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
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RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS



Machine Id
CATERPILLAR E-14
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)



DIAGNOSIS

Recommendation

Vérifier les scelles et/ou les filters pour des points d'entrée des contaminants. Nous vous recommandons de vérifier tous les endroits par lesquels de la saleté peut pénétrer dans le système. Le reniflard d'air doit être réparé. S'il n'est pas classé, nous vous recommandons de le remplacer par un reniflard à air adapté au micron et / ou au dessiccant. Si évalué, nous vous recommandons de réparer / remplacer le reniflard. Nous vous recommandons de remplacer le filtre et d'utiliser un système de filtrage hors-ligne afin d'améliorer la propreté du fluide. Nous avons pris note que le filtre a été remplacé au moment de l'échantillonnage. Échantillonner de nouveau dans 30 à 45 jours afin de contrôler la situation. À NOTER: S.V.P. inclure, avec le prochain échantillon, des détails de la capacité du réservoir et le type et le degré de filtration.

Wear

Le taux de fer est anormal. Le bas indice ferreux (PQ) indique que l'usure ferreuse est due à de la corrosion.

Contamination

Il y a une grande quantité de limon (particules de 4 à 14 microns) dans l'huile. Les niveaux élémentaires de silicone (Si) et d'aluminium (Al) indiquent l'infiltration d'alumine-silicate (grosses particules de poussière).

Fluid Condition

Le AN est acceptable pour ce fluide. l'huile n'est plus en état de service en raison d'une usure anormale et/ou sévère.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC0070369	---	---
Sample Date	Client Info	26 Sep 2023	---	---
Machine Age	hrs Client Info	8259	---	---
Oil Age	hrs Client Info	8259	---	---
Oil Changed	Client Info	Not Chngd	---	---
Sample Status		SEVERE	---	---

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	---	---
Iron	ppm ASTM D5185(m) >20	▲ 36	---	---
Chromium	ppm ASTM D5185(m) >20	3	---	---
Nickel	ppm ASTM D5185(m) >20	<1	---	---
Titanium	ppm ASTM D5185(m)	0	---	---
Silver	ppm ASTM D5185(m)	<1	---	---
Aluminum	ppm ASTM D5185(m) >20	18	---	---
Lead	ppm ASTM D5185(m) >20	3	---	---
Copper	ppm ASTM D5185(m) >20	13	---	---
Tin	ppm ASTM D5185(m) >20	<1	---	---
Antimony	ppm ASTM D5185(m)	0	---	---
Vanadium	ppm ASTM D5185(m)	0	---	---
Beryllium	ppm ASTM D5185(m)	0	---	---
Cadmium	ppm ASTM D5185(m)	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 0	2	---	---
Barium	ppm ASTM D5185(m) 0	2	---	---
Molybdenum	ppm ASTM D5185(m) 0	0	---	---
Manganese	ppm ASTM D5185(m) 1	<1	---	---
Magnesium	ppm ASTM D5185(m) 0	8	---	---
Calcium	ppm ASTM D5185(m) 100	113	---	---
Phosphorus	ppm ASTM D5185(m) 670	653	---	---
Zinc	ppm ASTM D5185(m) 850	849	---	---
Sulfur	ppm ASTM D5185(m) 1600	1596	---	---
Lithium	ppm ASTM D5185(m)	<1	---	---

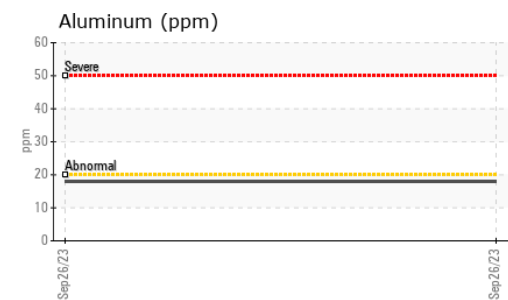
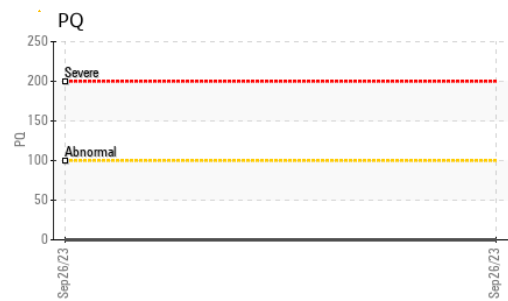
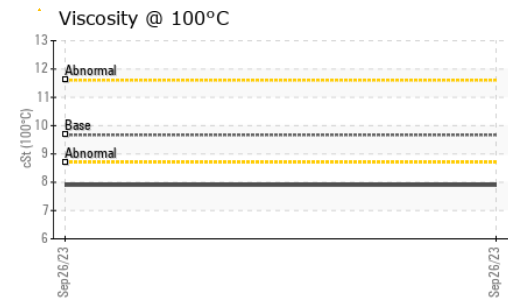
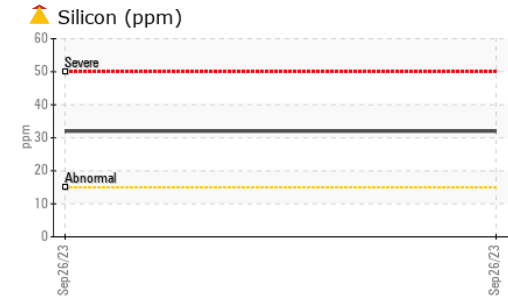
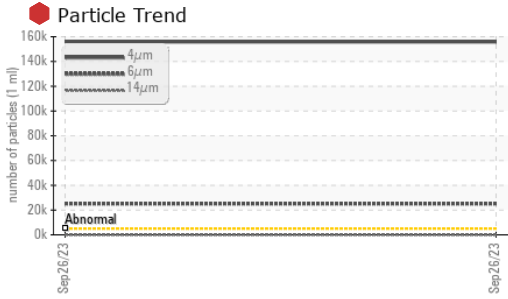
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	▲ 32	---	---
Sodium	ppm ASTM D5185(m)	4	---	---
Potassium	ppm ASTM D5185(m) >20	5	---	---

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	● 155878	---	---
Particles >6µm	ASTM D7647 >1300	● 25173	---	---
Particles >14µm	ASTM D7647 >160	33	---	---
Particles >21µm	ASTM D7647 >40	5	---	---
Particles >38µm	ASTM D7647 >10	2	---	---
Particles >71µm	ASTM D7647 >3	1	---	---
Oil Cleanliness	ISO 4406 (c) >19/17/14	● 24/22/12	---	---

OIL ANALYSIS REPORT



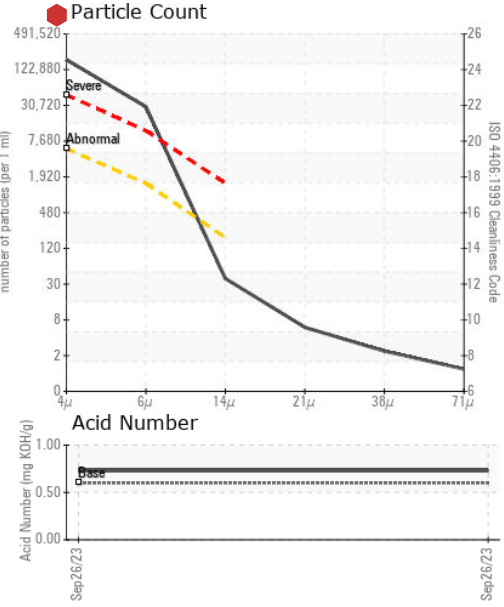
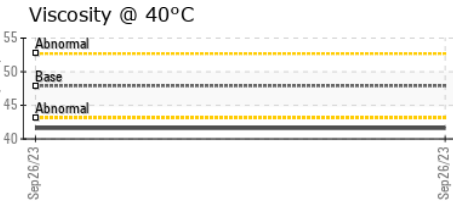
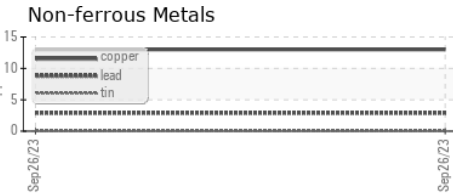
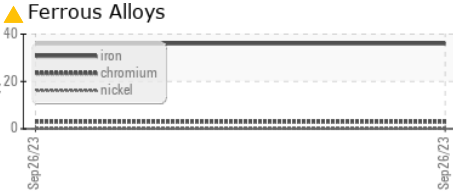
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.73	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.05	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	41.6	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	9.67	7.9	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	192	164	---	---

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0070369 **Received** : 30 Oct 2023
Lab Number : **02592675** **Diagnosed** : 01 Nov 2023
Unique Number : 5669754 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: KV100, PQ, VI)

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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.