

PROBLEM SUMMARY

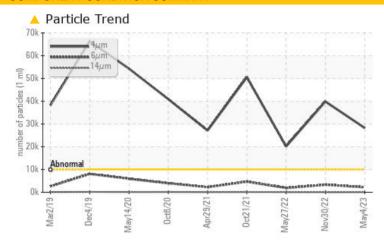
[199036] HCP G UGBR/THBR

Component **Bearing** Fluid

ESSO TERESSO ISO 68 (364 LTR)

Sample Rating Trend ISO

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TES	T RESULTS				
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL
Particles >4µm	ASTM D7647	>10000	28233	△ 39855	<u>^</u> 20145
Oil Cleanliness	ISO 4406 (c)	>20/18/14	22/18/13	22/19/12	22/18/13

Customer Id: NEWSTJ **Sample No.:** WC0455580 Lab Number: 02563183 Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data: Kevin Marson +1 (289)291-4644 x4644 Kevin.Marson@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
Change Filter			?	We recommend you service the filters on this component.
Resample			?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

30 Nov 2022 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles $>4\mu m$ and oil cleanliness are abnormally high. Particles $>6\mu m$ are notably high. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



27 May 2022 Diag: Kevin Marson

150



We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >4µm and oil cleanliness are abnormally high. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



21 Oct 2021 Diag: Kevin Marson

ISO



We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. Particles $>4\mu m$ are abnormally high. Particles $>6\mu m$ are notably high. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





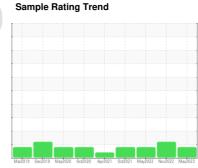
OIL ANALYSIS REPORT

Area [199036] **HCP G UGBR/THBR**

Component

Bearing

ESSO TERESSO ISO 68 (364 LTR)





DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

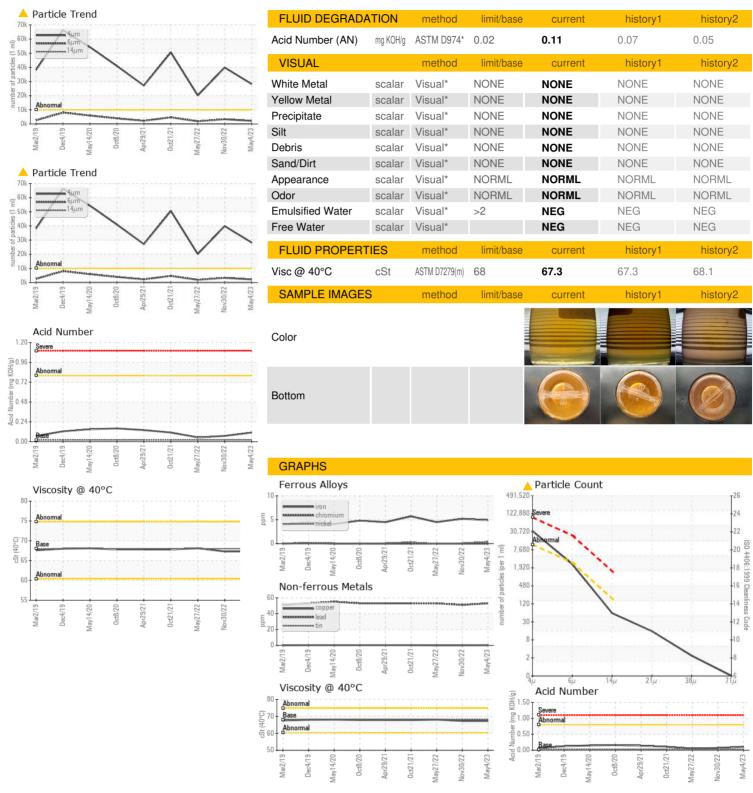
Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORM	AATION	mathad	limit/booo	OLUMNO 10t	hiotomut	hiotomyO
	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0455580	WC0455774	WC0445381
Sample Date		Client Info		04 May 2023	30 Nov 2022	27 May 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>63	5	5	4
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>161	53	51	53
Copper	ppm	ASTM D5185(m)	>13	<1	0	0
Tin	ppm	ASTM D5185(m)	>27	0	0	<1
Antimony	ppm	ASTM D5185(m)		<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185(m)	limit/base	current <1	history1	history2
	ppm					
Boron		ASTM D5185(m)	4.5	<1	<1	0
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)	4.5 0.4	<1 0	<1 0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	4.5 0.4 0	<1 0 0	<1 0 0	0 0 0
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	4.5 0.4 0	<1 0 0 0	<1 0 0 0	0 0 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	4.5 0.4 0	<1 0 0 0 0	<1 0 0 0 0 0 0 0	0 0 0 0 0 0 <1 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0 0	<1 0 0 0 0 0	<1 0 0 0 0 0	0 0 0 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0 0	<1 0 0 0 0 0 0	<1 0 0 0 0 0 0 0	0 0 0 0 0 0 <1 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0 0.7	<1 0 0 0 0 0 0 8 4	<1 0 0 0 0 0 0 5	0 0 0 0 0 <1 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0 0.7	<1 0 0 0 0 0 0 8 4 2124	<1 0 0 0 0 0 0 5 3 2052	0 0 0 0 0 <1 5 3 2073
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0 0.7 0 1315	<1 0 0 0 0 0 0 8 4 2124	<1 0 0 0 0 0 0 5 3 2052 <1	0 0 0 0 0 <1 5 3 2073
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0.7 0 1315	<1 0 0 0 0 0 0 8 4 2124 <1	<1 0 0 0 0 0 0 5 3 2052 <1 history1	0 0 0 0 0 0 <1 5 3 2073 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m)	4.5 0.4 0 0 0 0.7 0 1315	<1 0 0 0 0 0 0 8 4 2124 <1 current	<1 0 0 0 0 0 0 5 3 2052 <1 history1	0 0 0 0 0 0 <1 5 3 2073 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0.7 0 1315 Iimit/base	<1 0 0 0 0 0 0 8 4 2124 <1 current 2	<1 0 0 0 0 0 0 5 3 2052 <1 history1 2 <1	0 0 0 0 0 <1 5 3 2073 <1 history2 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0.7 0 1315 limit/base >12 >20	<1 0 0 0 0 0 0 8 4 2124 <1 current 2 0 <1	<1 0 0 0 0 0 0 5 3 2052 <1 history1 2 <1 <1	0 0 0 0 0 <1 5 3 2073 <1 history2 2 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m)	4.5 0.4 0 0 0 0.7 0 1315 limit/base >12 >20 limit/base	<1 0 0 0 0 0 0 8 4 2124 <1 current 2 0 <1	<1 0 0 0 0 0 0 5 3 2052 <1 history1 2 <1 <1 history1	0 0 0 0 0 0 <1 5 3 2073 <1 history2 2 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	4.5 0.4 0 0 0 0.7 0 1315 limit/base >12 >20 limit/base	<1 0 0 0 0 0 8 4 2124 <1 current 2 0 <1 current	<1 0 0 0 0 0 0 5 3 2052 <1 history1 2 <1 <1 history1 A 39855	0 0 0 0 0 0 <1 5 3 2073 <1 history2 2 <1 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) method ASTM D5185(m)	4.5 0.4 0 0 0 0.7 0 1315 limit/base >12 >20 limit/base >10000 >2500	<1 0 0 0 0 0 0 8 4 2124 <1 current 2 0 <1 current 4 28233 2218	<1 0 0 0 0 0 0 5 3 2052 <1 history1 2 <1 <1 history1 39855 3320	0 0 0 0 0 0 <1 5 3 2073 <1 history2 2 <1 <1 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7647	4.5 0.4 0 0 0 0.7 0 1315 limit/base >12 >20 limit/base >10000 >2500 >160	<1 0 0 0 0 0 0 8 4 2124 <1 current 2 0 <1 current 28233 2218 52	<1 0 0 0 0 0 0 5 3 2052 <1 history1 2 <1 <1 history1	0 0 0 0 0 0 <1 5 3 2073 <1 history2 2 <1 <1 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) METHOD ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	4.5 0.4 0 0 0 0.7 0 1315 limit/base >12 >20 limit/base >10000 >2500 >40	<1 0 0 0 0 0 0 8 4 2124 <1 current 2 0 <1 current ▲ 28233 2218 52 13	<1 0 0 0 0 0 0 0 5 3 2052 <1 history1 2 <1 <1 history1 ▲ 39855 ▲ 3320 28 5	0 0 0 0 0 0 <1 5 3 2073 <1 history2 2 <1 <1 history2 △ 20145 1918 51 14



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number **Unique Number**

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

: WC0455580 : 02563183

Received Diagnosed

: 09 Jun 2023 : 12 Jun 2023 Diagnostician : Kevin Marson

: 5592224 Test Package : IND 2 (Additional Tests: TAN Man)

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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