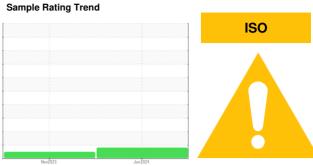


OIL ANALYSIS REPORT



Area [24156672] Lachine Id **B21613 - RATCHETER**

Gearbox

GEAR OIL ISO 680 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in

			Nov2023	Jun2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0930398	WC0866688	
Sample Date		Client Info		03 Jun 2024	29 Nov 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ABNORMAL	NORMAL	
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	1	2	
Chromium	ppm	ASTM D5185m	>15	<1	0	
Nickel	ppm	ASTM D5185m	>15	<1	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m		0	0	
Aluminum	ppm	ASTM D5185m	>25	2	0	
Lead	ppm	ASTM D5185m	>100	<1	0	
Copper	ppm	ASTM D5185m	>200	<1	0	
Tin	ppm	ASTM D5185m	>25	<1	0	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	24	21	
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	50 15	24 0	21	
Barium	ppm	ASTM D5185m	15	0	0	
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15	0	0 0 0	
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50	0 0 0	0 0 0 0	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50	0 0 0 <1 0 315	0 0 0	
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50	0 0 0 <1 0	0 0 0 0 8 368	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350	0 0 0 <1 0 315	0 0 0 0 8 368	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100	0 0 0 <1 0 315	0 0 0 0 8 368	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100 12500 limit/base	0 0 0 <1 0 315 0 11366	0 0 0 0 8 368 0 10122	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100 12500 limit/base	0 0 0 <1 0 315 0 11366	0 0 0 0 8 368 0 10122 history1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	15 15 50 50 350 100 12500 limit/base >50	0 0 0 <1 0 315 0 11366 current	0 0 0 0 8 368 0 10122 history1	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	15 15 50 50 350 100 12500 limit/base >50	0 0 0 <1 0 315 0 11366 current 7	0 0 0 0 8 368 0 10122 history1 2	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	15 15 50 50 350 100 12500 limit/base >50	0 0 0 <1 0 315 0 11366 current 7 0 <1	0 0 0 0 8 368 0 10122 history1 2 0	 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100 12500 limit/base >50 limit/base	0 0 0 <1 0 315 0 11366 current 7 0 <1	0 0 0 0 8 368 0 10122 history1 2 0 0	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >20000	0 0 0 <1 0 315 0 11366 current 7 0 <1 current 41373	0 0 0 0 8 368 0 10122 history1 2 0 0	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >20000 >5000	0 0 0 <1 0 315 0 11366 current 7 0 <1 current ▲ 41373 3382	0 0 0 0 8 368 0 10122 history1 2 0 0 history1 3289 1791	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >20000 >5000 >640	0 0 0 <1 0 315 0 11366 current 7 0 <1 current ▲ 41373 3382 40	0 0 0 0 8 368 0 10122 history1 2 0 0 0 history1 3289 1791 305	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >20000 >5000 >640 >160 >40	0 0 0 <1 0 315 0 11366 current 7 0 <1 current 41373 3382 40 4	0 0 0 0 8 368 0 10122 history1 2 0 0 history1 3289 1791 305 103	history2 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	15 15 50 50 350 100 12500 limit/base >50 >20 limit/base >20000 >5000 >640 >160 >40	0 0 0 <1 0 315 0 11366 current 7 0 <1 current 41373 3382 40 4 0	0 0 0 0 8 368 0 10122 history1 2 0 0 history1 3289 1791 305 103 16	history2 history2

Acid Number (AN)

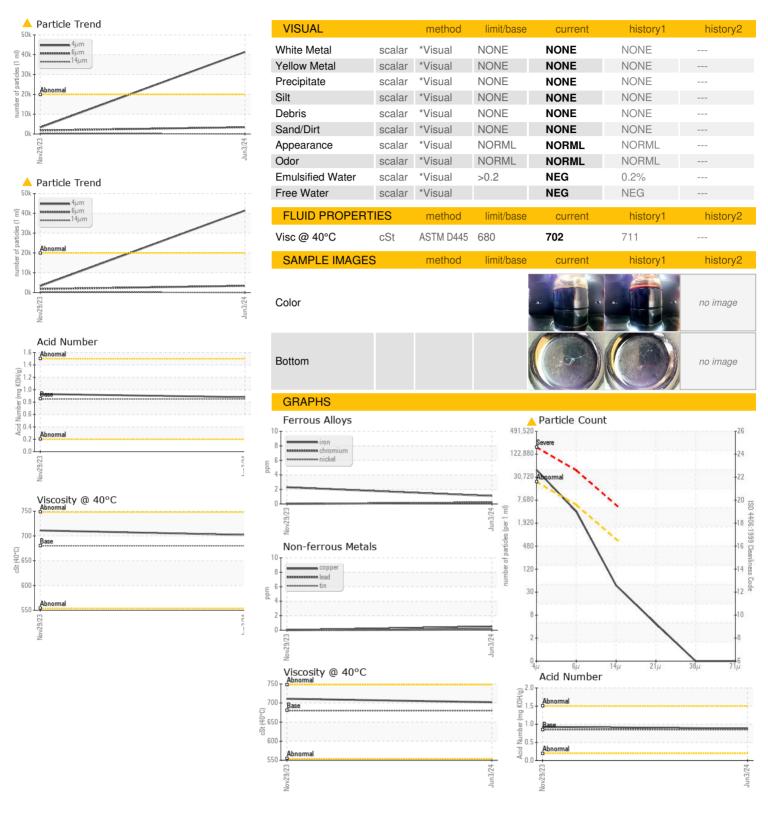
mg KOH/g ASTM D8045 0.85

0.93

Contact/Location: Craig Bennett - HORBEL



OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0930398 Lab Number : 06207755 Unique Number : 11075216

Received **Tested**

: 12 Jun 2024 : 13 Jun 2024 Diagnosed

: 14 Jun 2024 - Angela Borella

Test Package : IND 2 (Additional Tests: PrtCount) To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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