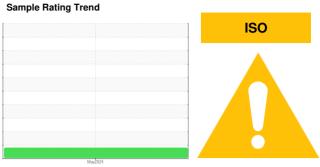


# **OIL ANALYSIS REPORT**





### **DIAGNOSIS**

### Recommendation

The filter change at the time of sampling has been noted. 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.

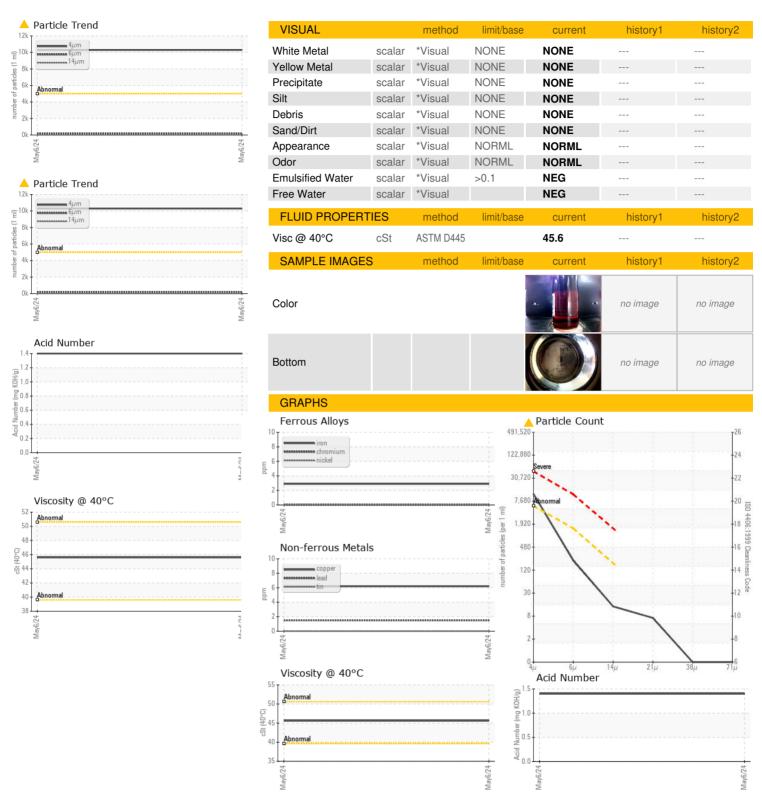
			ħ	1ay2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		RW0005482		
Sample Date		Client Info		06 May 2024		
Machine Age	hrs	Client Info		1315		
Oil Age	hrs	Client Info		393		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	3		
Chromium	ppm	ASTM D5185m	>10	0		
Nickel	ppm	ASTM D5185m	>10	0		
Titanium	ppm	ASTM D5185m	>10	0		
Silver		ASTM D5185m		0		
Aluminum	ppm		10			
	ppm	ASTM D5185m	>10	<1		
Lead	ppm	ASTM D5185m	>10	2		
Copper	ppm	ASTM D5185m	>75	6		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		3		
Barium	ppm	ASTM D5185m		0		
		AO HVI DO TOOTII				
		ASTM D5185m		1		
Molybdenum	ppm			1 <1		
Molybdenum Manganese	ppm ppm	ASTM D5185m		<del>-</del>		
Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		<1 25		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m		<1 25 1840		
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 25 1840 936		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 25 1840		
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	<1 25 1840 936 1030		
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		<1 25 1840 936 1030 3142 current	    history1	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	limit/base >20	<1 25 1840 936 1030 3142 current 3	   history1	   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>20	<1 25 1840 936 1030 3142  current 3 1	   history1	    history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>20 >20	<1 25 1840 936 1030 3142  current 3 1 <1	  history1	   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>20 >20 limit/base	<1 25 1840 936 1030 3142	   history1	   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m	>20 >20	<1 25 1840 936 1030 3142	  history1	   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>20 >20 limit/base	<1 25 1840 936 1030 3142	  history1	   history2
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	>20 >20 limit/base >5000	<1 25 1840 936 1030 3142	history1 history1	history2 history2
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	>20 >20 limit/base >5000 >1300	<1 25 1840 936 1030 3142	history1 history1	history2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m ASTM D7647 ASTM D7647	>20   >20   limit/base   >5000   >1300   >160	<1 25 1840 936 1030 3142	history1 history1	history2 history2
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	>20   >20   limit/base   >5000   >1300   >160   >40	<1 25 1840 936 1030 3142	history1 history1	history2 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm 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	>20	<1 25 1840 936 1030 3142	history1 history1	history2 history2

Acid Number (AN)

mg KOH/g ASTM D8045



# **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

Test Package : MOB 2

: RW0005482 Lab Number : 06176072 Unique Number : 11022125

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 10 May 2024 **Tested** 

: 14 May 2024 Diagnosed : 14 May 2024 - Wes Davis

4223 W POLK HART, MI US 49420 Contact: DAN HALLACK KARL BUTCHER

HALLACK CONTRACTING, INC.

shop@hallackcontracting.com

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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