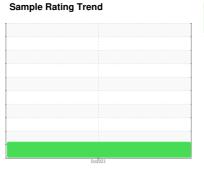


OIL ANALYSIS REPORT



ISO



Machine Id 22-HU-1 POWER PACK

Component

Hydraulic System

SHELL TELLUS S4 VX 32 (--- GAL)

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

▲ Contamination

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

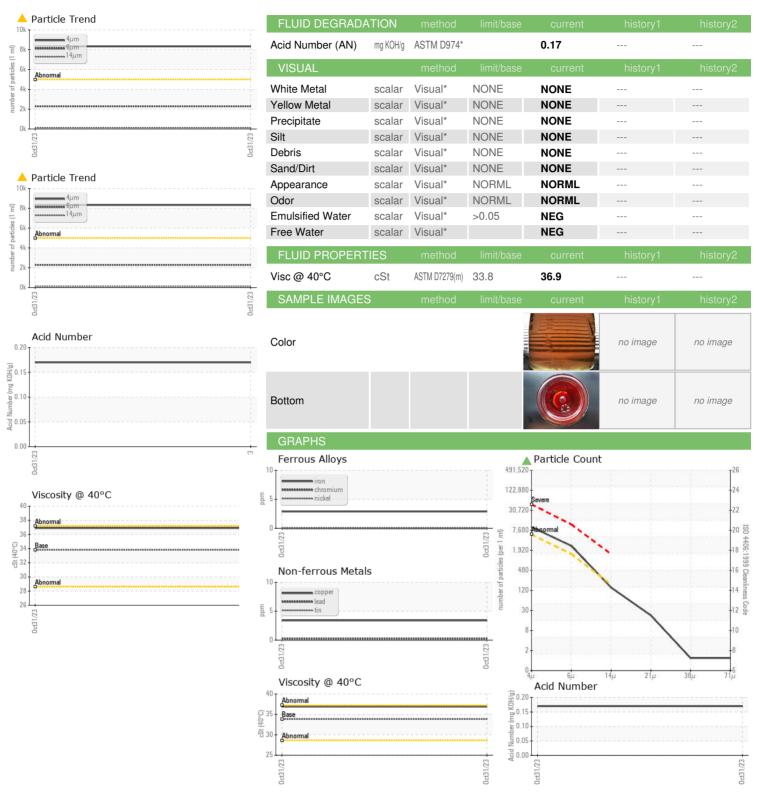
Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

				Oct2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0837958		
Sample Date		Client Info		31 Oct 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ATTENTION		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	3		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>20	<1		
Lead	ppm	ASTM D5185(m)	>20	<1		
Copper	ppm	ASTM D5185(m)	>20	3		
Tin	ppm	ASTM D5185(m)	>20	0		
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
ADDITIVES		memou	mint baco	Odifont	riistory i	
Boron	ppm	ASTM D5185(m)	mmubacco	0		
	ppm		mm bacc			•
Boron		ASTM D5185(m)	mm, bacc	0		
Boron Barium	ppm	ASTM D5185(m) ASTM D5185(m)		0		
Boron Barium Molybdenum	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		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)		0 0 0 0 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		0 0 0 0 <1 6		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185(m)		0 0 0 0 <1 6 614		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m)		0 0 0 0 <1 6 614 52		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base	0 0 0 0 <1 6 614 52 638		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)		0 0 0 0 <1 6 614 52 638 <1		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANT	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base	0 0 0 0 <1 6 614 52 638 <1		history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm	ASTM D5185(m) method ASTM D5185(m)	limit/base	0 0 0 0 <1 6 614 52 638 <1 current	 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm	ASTM D5185(m)	limit/base >15	0 0 0 0 <1 6 614 52 638 <1 current	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185(m)	limit/base >15 >20	0 0 0 0 <1 6 614 52 638 <1 current		history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm	ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base >15 >20 limit/base	0 0 0 0 <1 6 6 614 52 638 <1 current 1 <1 0		history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIF	ppm	ASTM D5185(m)	limit/base >15 >20 limit/base >5000	0 0 0 0 <1 6 614 52 638 <1 current 1 <1 0 current	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIE Particles >4µm Particles >6µm	ppm	ASTM D5185(m) method ASTM D5185(m)	limit/base >15 >20 limit/base >5000 >1300	0 0 0 0 0 <1 6 614 52 638 <1 current 1 <1 0 current 8331 2290	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium Ptuli CLEANLIF Particles >4µm Particles >14µm	ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160	0 0 0 0 <1 6 614 52 638 <1 current 1 <1 0 current ▲ 8331 ▲ 2290 130	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLII Particles >4µm Particles >14µm Particles >21µm	ppm	ASTM D5185(m) MASTM D5185(m) MASTM 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 D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40	0 0 0 0 0 <1 6 614 52 638 <1 current 1 <1 0 current 8331 2290 130 19	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIF Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm	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 D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 limit/base >5000 >1300 >160 >40 >10	0 0 0 0 0 <1 6 614 52 638 <1 current 1 <1 0 current		history2 history2



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 : 02606236

: WC0837958 : 5707322

Recieved Diagnosed Diagnostician

: 03 Jan 2024

: 03 Jan 2024

: Wes Davis

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.

Vale - Clarabelle Mill MTW (Mill, Tailings & Water) COPPER CLIFF, ON CA P0M 1N0

Contact: Guy Gauthier guy.gauthier@vale.com T: (705)682-5646

F: (705)682-6273