

OIL ANALYSIS REPORT

Panolam - D01600 A2310033

Component **Hydraulic System**

AW HYDRAULIC OIL ISO 68 (--- GAL)

Sample Rating Trend NORMAL

Recommendation

This is a baseline read-out on the submitted sample.

Wear

Copper ppm levels are noted.

Contamination

{not applicable}

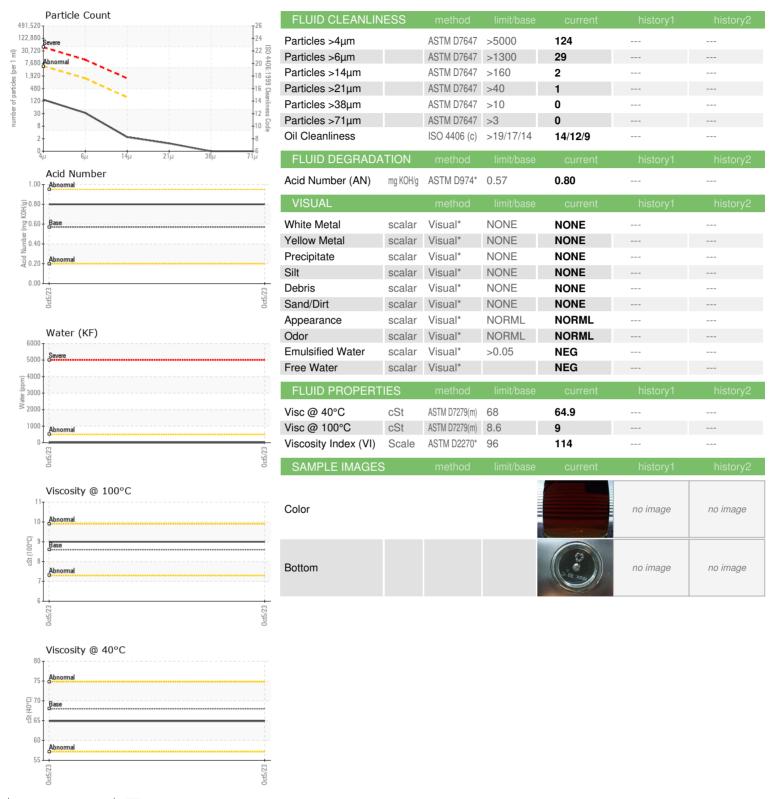
Fluid Condition

{not applicable}

Batch # Client Info 2023 09 0370 Machine ID Client Info A2310033 Department Client Info Production Sample From Client Info Machine Production Stage Client Info Final Sent to WC Client Info 10/05/2023 Sample Number Client Info E30000485 Sample Date Client Info 05 Oct 2023 Machine Age hrs Client Info 0 Oil Age hrs Client Info N/A					Oct2023		
Machine D	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Department Cilient Info Production Sample From Cilient Info Machine Sample From Cilient Info Machine Sent to WC Cilient Info 10/05/2023 Sent to WC Cilient Info 10/05/2023 Sample Number Cilient Info 05 Oct 2023 Sample Date Cilient Info 05 Oct 2023 Sample Date Cilient Info 0 Sample Date Cilient Info 0 Sample Date Cilient Info 0 Sample Status Sample S	Batch #		Client Info		2023 09 0370		
Sample From Client Info Machine	Machine ID		Client Info		A2310033		
Production Stage Client Info Final Sent to WC Client Info 10/05/2023 Sample Number Client Info 53mple Number Client Info 05 Oct 2023	Department		Client Info		Production		
Sent to WC Client Info 10/05/2023 Sample Number Client Info E30000485 Sample Date Client Info 05 Oct 2023	Sample From		Client Info		Machine		
Sample Number Client Info Client Info Client Info O5 Oct 2023	Production Stage		Client Info		Final		
Sample Date	Sent to WC		Client Info		10/05/2023		
Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Oil Changed Client Info N/A Sample Status NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >20 10 Chromium ppm ASTM D5185(m) >20 <1 Nickel ppm ASTM D5185(m) >20 <1 Titanium ppm ASTM D5185(m) >20 <1 Silver ppm ASTM D5185(m) >20 10 Aluminum ppm ASTM D5185(m) >20 10 Aluminum ppm ASTM D5185(m) >20 10 Aluminum ppm ASTM D5185(m) >20 10 Copper ppm ASTM D5185(m) >20 10 Tin ppm ASTM D5185(m) >20 44 Tin ppm ASTM D5185(m) >20 <1 Antimony ppm ASTM D5185(m) >20 <1 Antimony ppm ASTM D5185(m) 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 5 <1 ASTM D5185(m) 5 <1 ASTM D5185(m) 20 91 Phosphorus ppm ASTM D5185(m) 370 632 Calcium ppm ASTM D5185(m) 370 632 CONTAMINANTS method limit/base current history1 history2 Contamina ppm ASTM D5185(m) 370 632 CONTAMINANTS method limit/base current history1 history2 Contamina ppm ASTM D5185(m) 370 632 Contamina ppm ASTM D5185(m)	Sample Number		Client Info		E30000485		
Oil Age hrs Client Info N/A Oil Changed Client Info N/A Sample Status normal NORMAL WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185(m) >20 -1 Chromium ppm ASTM D5185(m) >20 -1 Nickel ppm ASTM D5185(m) >20 -1 Silver ppm ASTM D5185(m) >20 1 Aluminum ppm ASTM D5185(m) >20 Ap	Sample Date		Client Info		05 Oct 2023		
Oil Changed Client Info N/A	Machine Age	hrs	Client Info		0		
NORMAL	Oil Age	hrs	Client Info		0		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >20 10 Chromium ppm ASTM D5185(m) >20 <1	Oil Changed		Client Info		N/A		
Iron	Sample Status				NORMAL		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185(m)	>20	10		
Description	Chromium	ppm	ASTM D5185(m)	>20	<1		
Silver	Nickel	ppm	ASTM D5185(m)	>20	<1		
Aluminum	Titanium	ppm	ASTM D5185(m)		0		
ASTM D5185(m) >20 10	Silver	ppm	ASTM D5185(m)		<1		
Copper ppm ASTM D5185(m) >20 44 Tin ppm ASTM D5185(m) >20 <1	Aluminum	ppm	ASTM D5185(m)	>20	1		
Tin	Lead	ppm	ASTM D5185(m)	>20	10		
Antimony	Copper	ppm	ASTM D5185(m)	>20	44		
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) 5 <1 Barium ppm ASTM D5185(m) 5 <1 Molybdenum ppm ASTM D5185(m) 5 <1 Manganese ppm ASTM D5185(m) 25 46 Magnesium ppm ASTM D5185(m) 20 91 Calcium ppm ASTM D5185(m) 300 592 Phosphorus ppm ASTM D5185(m) 370 632 Sulfur ppm ASTM D5185(m) 2500 1755	Tin	ppm	ASTM D5185(m)	>20	<1		
Beryllium	Antimony	ppm	ASTM D5185(m)		0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 5 <1	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES	Beryllium	ppm	ASTM D5185(m)		0		
Boron ppm ASTM D5185(m) 5 <1	Cadmium	ppm	ASTM D5185(m)		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 5 0 Manganese ppm ASTM D5185(m) 25 46 Calcium ppm ASTM D5185(m) 200 91 Phosphorus ppm ASTM D5185(m) 300 592 Zinc ppm ASTM D5185(m) 370 632 Sulfur ppm ASTM D5185(m) 2500 1755 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 7 Sodium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	Boron	ppm	ASTM D5185(m)	5	<1		
Manganese ppm ASTM D5185(m) <1 Magnesium ppm ASTM D5185(m) 25 46 Calcium ppm ASTM D5185(m) 200 91 Phosphorus ppm ASTM D5185(m) 300 592 Zinc ppm ASTM D5185(m) 370 632 Sulfur ppm ASTM D5185(m) 2500 1755 Lithium ppm ASTM D5185(m) <1	Barium	ppm	ASTM D5185(m)	5	<1		
Magnesium ppm ASTM D5185(m) 25 46 Calcium ppm ASTM D5185(m) 200 91 Phosphorus ppm ASTM D5185(m) 300 592 Zinc ppm ASTM D5185(m) 370 632 Sulfur ppm ASTM D5185(m) 2500 1755 Lithium ppm ASTM D5185(m) <1	Molybdenum	ppm	ASTM D5185(m)	5	0		
Calcium ppm ASTM D5185(m) 200 91 Phosphorus ppm ASTM D5185(m) 300 592 Zinc ppm ASTM D5185(m) 370 632 Sulfur ppm ASTM D5185(m) 2500 1755 Lithium ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)		<1		
Phosphorus ppm ASTM D5185(m) 300 592 Zinc ppm ASTM D5185(m) 370 632 Sulfur ppm ASTM D5185(m) 2500 1755 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 7 Sodium ppm ASTM D5185(m) >20 0 Potassium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	Magnesium	ppm	ASTM D5185(m)	25	46		
Zinc ppm ASTM D5185(m) 370 632 Sulfur ppm ASTM D5185(m) 2500 1755 Lithium ppm ASTM D5185(m) <1	Calcium	ppm	ASTM D5185(m)	200	91		
Sulfur ppm ASTM D5185(m) 2500 1755 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 7 Sodium ppm ASTM D5185(m) 3 Potassium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	Phosphorus	ppm	ASTM D5185(m)	300	592		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 7 Sodium ppm ASTM D5185(m) 3 Potassium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	Zinc	ppm	ASTM D5185(m)	370	632		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >15 7 Sodium ppm ASTM D5185(m) 3 Potassium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	Sulfur	ppm	ASTM D5185(m)	2500	1755		
Silicon ppm ASTM D5185(m) >15 7 Sodium ppm ASTM D5185(m) 3 Potassium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	Lithium	ppm	ASTM D5185(m)		<1		
Sodium ppm ASTM D5185(m) 3 Potassium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185(m) >20 0 Water % ASTM D6304* >0.05 0.001	Silicon	ppm	ASTM D5185(m)	>15	7		
Water % ASTM D6304* >0.05 0.001	Sodium	ppm	ASTM D5185(m)		3		
	Potassium	ppm	ASTM D5185(m)	>20	0		
ppm Water	Water	%	ASTM D6304*	>0.05	0.001		
	ppm Water	ppm	ASTM D6304*	>500	0.9		



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 : E30000485

: 02587991

Received

: 10 Oct 2023 Diagnosed : 11 Oct 2023 Diagnostician : Tatiana Sorkina

: 5657057 Test Package : IND 2 (Additional Tests: KF, KV100, TAN Man, VI) 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.

Environmental 360 Solutions Ltd.

640 Victoria Street Cobourg, ON **CA K9A 5H5** Contact: Aylwin Lee

aylwinlee@e360s.ca T: (905)372-2251 F: (905)373-4950