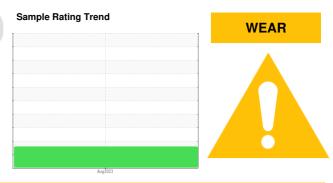


OIL ANALYSIS REPORT

Metex Heat Treating - M00800 A2308146

Component **Quench Oil**

NOT GIVEN (--- GAL)



DIAGNOSIS

Recommendation

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

Wear

Iron ppm levels are noted.

Contamination

There is a high amount of silt present in the quenching fluid.

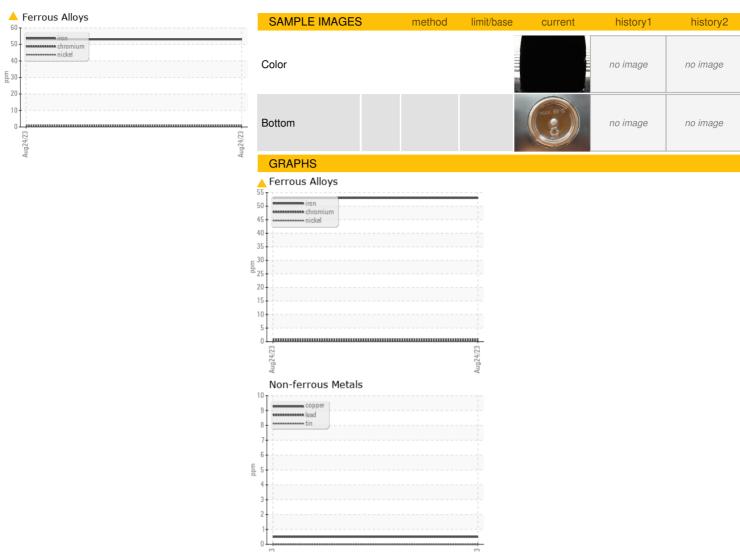
Fluid Condition

{not applicable}

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		E30000169		
Sample Date		Client Info		24 Aug 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ATTENTION		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)		△ 53		
Chromium	ppm	ASTM D5185(m)		<1		
Nickel	ppm	ASTM D5185(m)		1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)		<1		
Lead	ppm	ASTM D5185(m)		0		
Copper	ppm	ASTM D5185(m)		<1		
Tin	ppm	ASTM D5185(m)		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		
	PP					
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<1		
Barium	ppm	ASTM D5185(m)		0		
Molybdenum	ppm	ASTM D5185(m)		0		
Manganese		AOTH DELOCA		3		
J	ppm	ASTM D5185(m)		•		
Magnesium	ppm	ASTM D5185(m) ASTM D5185(m)		<1		
•		ASTM D5185(m) ASTM D5185(m)		_		
Magnesium Calcium Phosphorus	ppm	ASTM D5185(m)		<1 12 7		
Magnesium Calcium	ppm	ASTM D5185(m) ASTM D5185(m)		<1 12		
Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		<1 12 7		
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		<1 12 7 20		
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	limit/base	<1 12 7 20 281		
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	limit/base	<1 12 7 20 281 <1		
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185(m)	limit/base	<1 12 7 20 281 <1		
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m)	limit/base	<1 12 7 20 281 <1 current		
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) METHOD METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)		<1 12 7 20 281 <1 current 2 <1		
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20	<1 12 7 20 281 <1 current 2 <1 <1	 history1	 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) METHOD METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 limit/base	<1 12 7 20 281 <1 current 2 <1 <1 current	history1	history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) METHOD METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Visual*	>20 limit/base NONE	<1 12 7 20 281 <1 current 2 <1 <1 current NONE	history1 history1	history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Visual*	>20 limit/base NONE NONE	<1 12 7 20 281 <1 current 2 <1 <1 current NONE NONE	history1 history1	history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) METHOD METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Visual* Visual*	>20 limit/base NONE NONE NONE	<1 12 7 20 281 <1 current 2 <1 <1 current NONE NONE NONE	history1 history1	history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Visual* Visual* Visual*	>20 limit/base NONE NONE NONE NONE	<1 12 7 20 281 <1 current 2 <1 <1 current NONE NONE NONE MODER	history1 history1	history2 history2
Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) METHOD ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) Visual* Visual* Visual* Visual* Visual*	>20 limit/base NONE NONE NONE NONE	<1 12 7 20 281 <1 current 2 <1 <1 current NONE NONE NONE NONE NONE NONE VUITE	history1 history1	history2 history2



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Unique Number : 5631997

Sample No. Lab Number

: E30000169 : 02578937

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

: 28 Aug 2023 : 30 Aug 2023

Diagnostician : Tatiana Sorkina Test Package : TEST (Additional Tests: Bottom, ICP)

Cobourg, ON CA K9A 5H5 Contact: Tatiana Sorkina tsorkina@e360s.ca T: (800)263-3939 F: (905)373-4950

640 Victoria Street

Environmental 360 Solutions Ltd.

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.

Contact/Location: Tatiana Sorkina - CHECOB