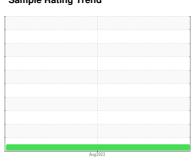


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



NO UNIT WC0788038

Component

Gearbox

SHELL OMALA 220 (3 LTR)

Recommendation

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

Light concentration of visible metal present. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Client Info Changed Changed Client Info Changed Changed Client Info Changed Ch							
Sample Number Client Info WC0788038 Sample Date Client Info 22 Aug 2023 Sample Date Client Info 0 Client Info 0 Client Info O Client Info O Changed Client Info O Changed Client Info O Changed Client Info Client Info Changed Client Info Changed Client Info Client I			L		Aug2023		
Client Info	SAMPLE INFORM	//ATION	method	limit/base	current	history1	history2
Machine Age	Sample Number		Client Info		WC0788038		
Oil Changed	Sample Date		Client Info		22 Aug 2023		
Client Info Changed Client Info NORMAL Company Company	Machine Age	mths	Client Info		0		
NORMAL	Oil Age	mths	Client Info		7		
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184* 0 Iron ppm ASTM D5185(m) >200 3 Chromium ppm ASTM D5185(m) >15 0 Nickel ppm ASTM D5185(m) 0 Titanium ppm ASTM D5185(m) 0 Aluminum ppm ASTM D5185(m) >25 <1	Oil Changed		Client Info		Changed		
PQ	Sample Status				NORMAL		
ASTM D5185(m) >200 3	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185(m) >15 0	PQ		ASTM D8184*		0		
Nickel	Iron	ppm	ASTM D5185(m)	>200	3		
Titanium	Chromium	ppm	ASTM D5185(m)	>15	0		
Silver	Nickel	ppm	ASTM D5185(m)	>15	<1		
Alluminum	Titanium	ppm	ASTM D5185(m)		0		
Lead	Silver	ppm	ASTM D5185(m)		0		
Copper ppm ASTM D5185(m) >200 16 Tin ppm ASTM D5185(m) >25 1 Antimony ppm ASTM D5185(m) >5 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0.0 16 Barium ppm ASTM D5185(m) 0.0 16 Molybdenum ppm ASTM D5185(m) 0 1 Magnesium ppm ASTM D5185(m) 0 6 <	Aluminum	ppm	ASTM D5185(m)	>25	<1		
Tin	Lead	ppm	ASTM D5185(m)	>100	<1		
Antimony	Copper	ppm	ASTM D5185(m)	>200	16		
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) 0.0 16 Barium ppm ASTM D5185(m) 0.0 16 Molybdenum ppm ASTM D5185(m) 0 1 Magnesium ppm ASTM D5185(m) 0 6 Magnesium ppm ASTM D5185(m) 0 50 Phosphorus ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) <1	Tin	ppm	ASTM D5185(m)	>25	1		
Beryllium	Antimony	ppm	ASTM D5185(m)	>5	0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 4.4 11 Barium ppm ASTM D5185(m) 0.0 16 Molybdenum ppm ASTM D5185(m) 0 1 Manganese ppm ASTM D5185(m) 0 6 Magnesium ppm ASTM D5185(m) 0 50 Calcium ppm ASTM D5185(m) 215 131 Phosphorus ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) >50 1 CONTAMINANTS method limit/base <t< td=""><td>Vanadium</td><td>ppm</td><td>ASTM D5185(m)</td><td></td><td>0</td><td></td><td></td></t<>	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES	Beryllium	ppm	ASTM D5185(m)				
Boron ppm ASTM D5185(m) 4.4 11	Cadmium	ppm	ASTM D5185(m)		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 0 1 Manganese ppm ASTM D5185(m) 0 6 Magnesium ppm ASTM D5185(m) 0 6 Calcium ppm ASTM D5185(m) 0 50 Phosphorus ppm ASTM D5185(m) 215 131 Zinc ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) <1	Boron	ppm	ASTM D5185(m)	4.4	11		
Manganese ppm ASTM D5185(m) <1 Magnesium ppm ASTM D5185(m) 0 6 Calcium ppm ASTM D5185(m) 0 50 Phosphorus ppm ASTM D5185(m) 215 131 Zinc ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) <1	Barium	ppm	ASTM D5185(m)	0.0	16		
Magnesium ppm ASTM D5185(m) 0 6 Calcium ppm ASTM D5185(m) 0 50 Phosphorus ppm ASTM D5185(m) 215 131 Zinc ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) < 1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 1 Sodium ppm ASTM D5185(m) >20 <1 Potassium ppm ASTM D5185(m) >20 <1	Molybdenum	ppm	ASTM D5185(m)	0	1		
Calcium ppm ASTM D5185(m) 0 50 Phosphorus ppm ASTM D5185(m) 215 131 Zinc ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)		<1		
Phosphorus ppm ASTM D5185(m) 215 131 Zinc ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 1 Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	Magnesium	ppm	ASTM D5185(m)	0	6		
Zinc ppm ASTM D5185(m) 0 23 Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 1 Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	Calcium	ppm	ASTM D5185(m)	0	50		
Sulfur ppm ASTM D5185(m) 7039 11107 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 1 Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	Phosphorus	ppm	ASTM D5185(m)	215	131		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 1 Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	Zinc	ppm	ASTM D5185(m)	0	23		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 1 Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	Sulfur	ppm	ASTM D5185(m)	7039	11107		
Silicon ppm ASTM D5185(m) >50 1 Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	Lithium	ppm	ASTM D5185(m)		<1		
Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	CONTAMINANTS	;	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185(m) 1 Potassium ppm ASTM D5185(m) >20 <1	Silicon	ppm	ASTM D5185(m)	>50	1		
Potassium ppm ASTM D5185(m) >20 <1	Sodium		ASTM D5185(m)		1		
FLUID DEGRADATION method limit/base current history1 history2	Potassium		ASTM D5185(m)	>20	<1		
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2

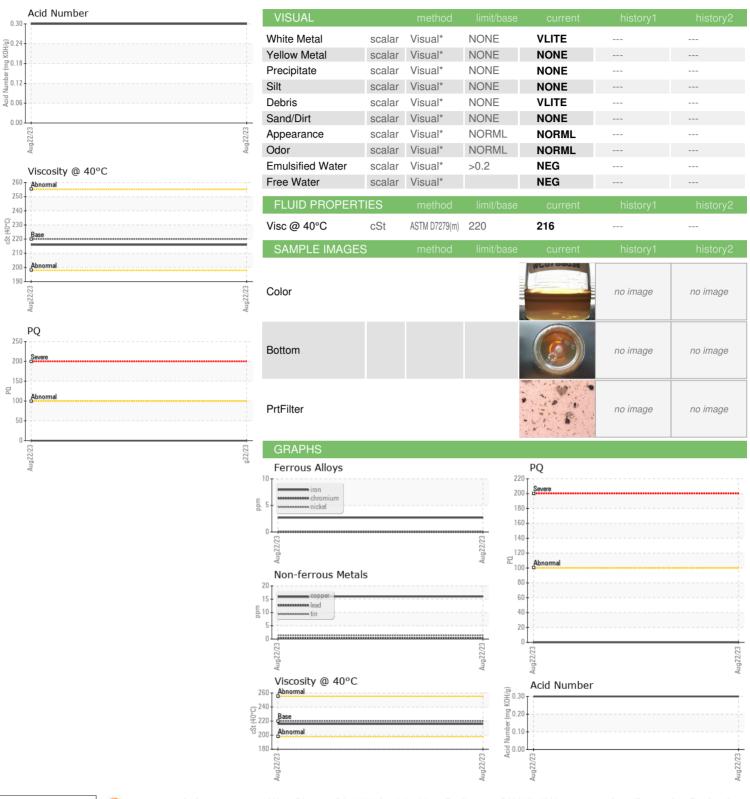
0.30

Acid Number (AN)

mg KOH/g ASTM D974*



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 : WC0788038

: 5630885

: 02577825

Received Diagnosed

: 23 Aug 2023 : 28 Aug 2023

Diagnostician : Kevin Marson Test Package : IND 2 (Additional Tests: BottomAnalysis, FILTERPATCH, TAN MAN) **Ivex Protective Packaging** 930 Britannia Rd E Mississauga, ON CA L4W 5M7 Contact: Terry Earle

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Terry.Earle@ivexpackaging.com T: (905)795-8887

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.

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