

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id **MARLEY COOLING TOWER 2** Component

Gearbox Fluic GEAR OIL ISO 150 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

				Aug2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0077131		
Sample Date		Client Info		20 Aug 2023		
Machine Age	yrs	Client Info		0		
Oil Age	yrs	Client Info		1		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
WEAR METAL	S	method	limit/base	current	history1	history2
PQ		ASTM D8184*		0		
Iron	ppm	ASTM D5185(m)	>200	<1		
Chromium	ppm	ASTM D5185(m)	>10	0		
Nickel	ppm	ASTM D5185(m)	>10	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>25	<1		
Lead	ppm	ASTM D5185(m)	>50	2		
Copper	ppm	ASTM D5185(m)	>200	11		
Tin	ppm	ASTM D5185(m)	>10	0		
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		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	50	<1		
Barium	ppm	ASTM D5185(m)	15	0		
Molybdenum	ppm	ASTM D5185(m)	15	0		
Manganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)	50	<1		
Calcium	ppm	ASTM D5185(m)	50	5		
Phosphorus	ppm	ASTM D5185(m)	350	698		
Zinc	ppm	ASTM D5185(m)	100	44		
Sulfur	ppm	ASTM D5185(m)	12500	1141		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	4		
Sodium	ppm	ASTM D5185(m)		<1		
Potassium	ppm	ASTM D5185(m)	>20	<1		
Water	%	ASTM D6304*	>0.2	0.005		
ppm Water	ppm	ASTM D6304*	>2000	54.6		
FLUID DEGRAI		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.85	0.18		

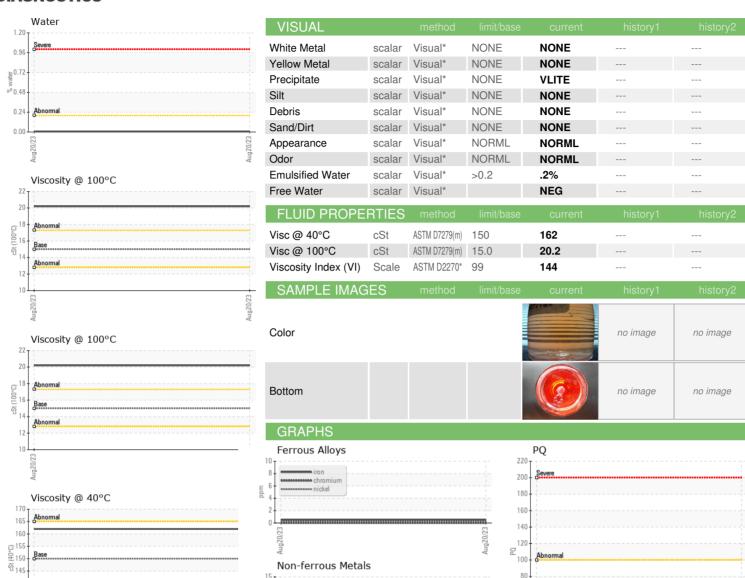


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		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
fellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	VLITE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Ddor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.2	.2%		
Free Water	scalar	Visual*		NEG		
		method	limit/base	current	history1	history2
					Thistory I	THStoryz
		. ,				
		. ,				
/iscosity Index (VI)	Scale	ASTM D2270*	99	144		
SAMPLE IMAG	ES	method	limit/base	current	history1	history2
					na imaga	na imaga
Joior					no image	no image
Bottom					no image	no image
				D O		
Ferrous Alloys			220-	PQ		
iron			200-	Severe		
nickel			180-			
			160 -			
L <u></u>			140.			
g20/2			2/028 120-			
			NY 04 100-	Abnormal		
	;					
copper						
tin						
			20-			
120/23			120/23	0/23		200
			Aug	Augž		
Viscosity @ 40°C			_	Acid Number		
Abnormal			PHO 2.00	Abnormal		
Base			E 1.50			
Abnormal				Abnormal		
0/23			0/23	0/23		500
Aug20/23			Aug20/23	Aug20/23		56/UC221
	Pebris ppearance podor mulsified Water ree Water FLUID PROPEN Fisc @ 40°C isc @ 100°C isc @ 100°C isc @ 100°C isc @ 100°C isc @ 100°C SAMPLE IMAG Color Colo	vebris scalar sand/Dirt scalar ppearance scalar podor scalar mulsified Water scalar ree Water scalar FLUID PROPERTIES risc @ 40°C cSt risc @ 100°C cSt risc @ 100°C cSt scolor SAMPLE IMAGES color Scolor cottom	bebris scalar Visual* gand/Dirt scalar Visual* ppearance scalar Visual* bdor scalar Visual* mulsified Water scalar Visual* ree Water scalar Visual* FLUID PROPERTIES method fisc @ 40°C cSt ASTM D7279(m) isc @ 100°C cSt ASTM D7279(m) isc @ 100°C cSt ASTM D2270* SAMPLE IMAGES method color scalar visual* color scalar scalar color scalar scalar color scalar scalar scolor scalar scalar scolor scalar scalar scolor scalar scalar scolor scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scolor scalar <td< th=""><th>bebris scalar Visual* NONE aand/Dirt scalar Visual* NONE pppearance scalar Visual* NORML odor scalar Visual* NORML imulsified Water scalar Visual* NORML imulsified Water scalar Visual* >0.2 ree Water scalar Visual* >0.2 FLUID PROPERTIES method limit/base isc @ 40°C cSt ASTMD7279(m) 15.0 iscosity Index (VI) Scale ASTM D2270* 99 SAMPLE IMAGES method limit/base color </th><th>vebris scalar Visual* NONE NONE and/Dirt scalar Visual* NONE NONE and/Dirt scalar Visual* NONE NONE appearance scalar Visual* NORML NORML appearance scalar Visual* NORML NORML and/Dirt scalar Visual* NORML NORML anuslified Water scalar Visual* NORML NORML ferewater scalar Visual* Norme 150 162 scolor scale ASTM D7279(m) 150 162 20.2 scolor scale Scale ASTM D7279(m) 150 162 scolor scale anthod imit/base current scolor scale scale scale scale antide scale scale scale scale antide scale scale scale scale scale scale scale</th><th>bebris scalar Visual* NONE aand/Dirt scalar Visual* NONE appearance scalar Visual* NORML NORML odor scalar Visual* NORML NORML imulsified Water scalar Visual* NORML NORML isco @ 100°C cSt ASTM D2270° 99 144 SAMPLE IMAGES method imit/base current history1 iscolor image image no image ootom image image image isodor image image image </th></td<>	bebris scalar Visual* NONE aand/Dirt scalar Visual* NONE pppearance scalar Visual* NORML odor scalar Visual* NORML imulsified Water scalar Visual* NORML imulsified Water scalar Visual* >0.2 ree Water scalar Visual* >0.2 FLUID PROPERTIES method limit/base isc @ 40°C cSt ASTMD7279(m) 15.0 iscosity Index (VI) Scale ASTM D2270* 99 SAMPLE IMAGES method limit/base color	vebris scalar Visual* NONE NONE and/Dirt scalar Visual* NONE NONE and/Dirt scalar Visual* NONE NONE appearance scalar Visual* NORML NORML appearance scalar Visual* NORML NORML and/Dirt scalar Visual* NORML NORML anuslified Water scalar Visual* NORML NORML ferewater scalar Visual* Norme 150 162 scolor scale ASTM D7279(m) 150 162 20.2 scolor scale Scale ASTM D7279(m) 150 162 scolor scale anthod imit/base current scolor scale scale scale scale antide scale scale scale scale antide scale scale scale scale scale scale scale	bebris scalar Visual* NONE aand/Dirt scalar Visual* NONE appearance scalar Visual* NORML NORML odor scalar Visual* NORML NORML imulsified Water scalar Visual* NORML NORML isco @ 100°C cSt ASTM D2270° 99 144 SAMPLE IMAGES method imit/base current history1 iscolor image image no image ootom image image image isodor image image image

Contact/Location: Terry Summerfield - ARCWIN