

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

WESTERN STAR 4900 H0-03

Front Differential

MOBIL 75W90 (--- LTR)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

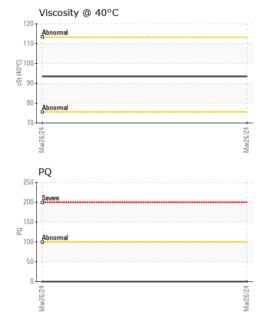
Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION method limit/base current history1 history2					Mar2024		
Sample Number							
Sample Date Client Info 26 Mar 2024 Machine Age yrs Client Info 0	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age yrs Client Info 0	Sample Number		Client Info		WC0901128		
Oil Age	Sample Date		Client Info		26 Mar 2024		
Contamped Citient Info N/A	Machine Age	yrs	Client Info		0		
Sample Status	Oil Age	yrs	Client Info		1		
CONTAMINATION method limit/base current history1 history2 Water WC Method >.2 NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D5185(m) 500 60 Iron ppm ASTM D5185(m) >500 60 Chromium ppm ASTM D5185(m) >10 0 Nickel ppm ASTM D5185(m) 10 0 Titanium ppm ASTM D5185(m) 25 0 Aluminum ppm ASTM D5185(m) >25 0 Lead ppm ASTM D5185(m) >10 45 Lead ppm ASTM D5185(m) >10 41 Tin ppm ASTM D5185(m) >10 41 <td>Oil Changed</td> <td></td> <td>Client Info</td> <td></td> <td>N/A</td> <td></td> <td></td>	Oil Changed		Client Info		N/A		
Water WC Method >2 NEG WEAR METALS method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 PQ ASTM D8185(m) >500 60 Iron ppm ASTM D5185(m) >10 0 Chromium ppm ASTM D5185(m) >10 0 Titanium ppm ASTM D5185(m) 225 0 Aluminum ppm ASTM D5185(m) >25 0 Aluminum ppm ASTM D5185(m) >25 0 Copper ppm ASTM D5185(m) >10 45 Tin ppm ASTM D5185(m) >5 0 Antimony ppm ASTM D5185(m) 0	Sample Status				NORMAL		
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184* 0 Iron ppm ASTM D5185(m) >500 60 Chromium ppm ASTM D5185(m) >10 0 Nickel ppm ASTM D5185(m) >10 0 Titanium ppm ASTM D5185(m) >0 Silver ppm ASTM D5185(m) >25 0 Aluminum ppm ASTM D5185(m) >25 <1	CONTAMINATIO	N	method	limit/base	current	history1	history2
PQ	Water		WC Method	>.2	NEG		
Iron	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185(m) > 10 0 Nickel ppm ASTM D5185(m) > 10 0 Titanium ppm ASTM D5185(m) 0 Silver ppm ASTM D5185(m) > 25 0 Aluminum ppm ASTM D5185(m) > 25 0 Lead ppm ASTM D5185(m) > 25 <1	PQ		ASTM D8184*		0		
Nickel	Iron	ppm	ASTM D5185(m)	>500	60		
Titanium	Chromium	ppm	ASTM D5185(m)	>10	0		
Silver	Nickel	ppm	ASTM D5185(m)	>10	0		
Aluminum	Titanium	ppm	ASTM D5185(m)		0		
Lead	Silver	ppm	ASTM D5185(m)		0		
Copper ppm ASTM D5185(m) >100 45 Tin ppm ASTM D5185(m) >10 <1	Aluminum	ppm	ASTM D5185(m)	>25	0		
Tin ppm ASTM D5185(m) >10 <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 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) <1	Lead	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 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 1 Magnese ppm ASTM D5185(m) 1 Magnesium ppm ASTM D5185(m) 9 Calcium ppm ASTM D5185(m) 1198 Phosphorus ppm ASTM D5185(m) 19213 Sulfur ppm ASTM D5185(m) <1	Copper	ppm	ASTM D5185(m)	>100	45		
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) 282 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 1 Magnesium ppm ASTM D5185(m) 9 Magnesium ppm ASTM D5185(m) 46 Phosphorus ppm ASTM D5185(m) 1198 Zinc ppm ASTM D5185(m) 19213 Sulfur ppm ASTM D5185(m) <1	Tin	ppm	ASTM D5185(m)	>10	<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) 282 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) <1	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 282 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) <1	Beryllium	ppm	ASTM D5185(m)		0		
Boron ppm ASTM D5185(m) 282 Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) <1	Cadmium	ppm	ASTM D5185(m)		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) <1	Boron	ppm	ASTM D5185(m)		282		
Molybdenum ppm ASTM D5185(m) <1 Manganese ppm ASTM D5185(m) 1 Magnesium ppm ASTM D5185(m) 9 Calcium ppm ASTM D5185(m) 46 Phosphorus ppm ASTM D5185(m) 1198 Zinc ppm ASTM D5185(m) 31 Sulfur ppm ASTM D5185(m) 19213 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >75 15 Sodium ppm ASTM D5185(m) 1	Barium		. ,		0		
Manganese ppm ASTM D5185(m) 1 Magnesium ppm ASTM D5185(m) 9 Calcium ppm ASTM D5185(m) 46 Phosphorus ppm ASTM D5185(m) 1198 Zinc ppm ASTM D5185(m) 31 Sulfur ppm ASTM D5185(m) 19213 Lithium ppm ASTM D5185(m) <1	Molybdenum		, ,		<1		
Magnesium ppm ASTM D5185(m) 9 Calcium ppm ASTM D5185(m) 46 Phosphorus ppm ASTM D5185(m) 1198 Zinc ppm ASTM D5185(m) 31 Sulfur ppm ASTM D5185(m) 19213 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >75 15 Sodium ppm ASTM D5185(m) 1	•		ASTM D5185(m)		1		
Calcium ppm ASTM D5185(m) 46 Phosphorus ppm ASTM D5185(m) 1198 Zinc ppm ASTM D5185(m) 31 Sulfur ppm ASTM D5185(m) 19213 Lithium ppm ASTM D5185(m) <1	Magnesium				9		
Phosphorus ppm ASTM D5185(m) 1198 Zinc ppm ASTM D5185(m) 31 Sulfur ppm ASTM D5185(m) 19213 Lithium ppm ASTM D5185(m) <1	-		. ,		46		
Zinc ppm ASTM D5185(m) 31 Sulfur ppm ASTM D5185(m) 19213 Lithium ppm ASTM D5185(m) <1	Phosphorus		ASTM D5185(m)		1198		
Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >75 15 Sodium ppm ASTM D5185(m) 1	•		ASTM D5185(m)		31		
Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >75 15 Sodium ppm ASTM D5185(m) 1	Sulfur		ASTM D5185(m)		19213		
Silicon ppm ASTM D5185(m) >75 15 Sodium ppm ASTM D5185(m) 1	Lithium		ASTM D5185(m)		<1		
Sodium ppm ASTM D5185(m) 1	CONTAMINANTS	6	method	limit/base	current	history1	history2
	Silicon	ppm	ASTM D5185(m)	>75	15		
	Sodium		ASTM D5185(m)		1		
	Potassium		ASTM D5185(m)	>20	<1		



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>.2	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPERT	TES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)		93.5		
SAMPLE IMAGES	S	method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image
GRAPHS						
Ferrous Alloys			220	PQ		
40 iron iron nickel	***************************************	300003000000000000000000000000000000000	200 180 160 140 200 140 200 120 120 120	D - Severe		
Non-ferrous Metal	s		100	O + Abrionnai		-
copper				0 +		
40 - managanana lead			60	0 +		
20 - 20 - 20 - 20 - 20 - 20 - 20 - 20 -			41	0 +		
10-			20	0 +		
0						
Mar26,24			Mar26/24	Mar26/24 -		Mar26/24 .
≥ Viscosity @ 40°C			<	ž		Ma
120 Abnormal						
110						
90						
Abnormal						
70 1			724			
Mar26,24			Mar26/24			





Sample No. : WC0901128 Lab Number : 02630701 Unique Number : 5763833

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

: 23 Apr 2024

: 23 Apr 2024 - Wes Davis

: 22 Apr 2024

Test Package : FLEET (Additional Tests: PQ) 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.

GOLIATH ENERGY GROUP

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