

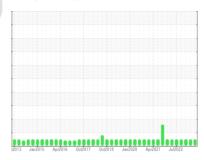
OIL ANALYSIS REPORT

Area **8**

8-2-310-B FM #2 Separator Bearings Lube

Reservoir Bearing Lube

MOBIL DTE OIL EXTRA HEAVY (40 LTR)



Sample Rating Trend



Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

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.

SAMPLE INFORMATION method limit/base current history1 history2	2013 Jan2015 Apr2016 Oct2017 Oct2018 Jan2020 Apr2021 Jul2022							
Sample Date Client Info 29 Nov 2023 11 Sep 2023 17 May 2023 Machine Age hrs Client Info 0	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Machine Age hrs Client Info 0 0 0 0 Oil Changed hrs Client Info 0 0 0 0 Sample Status Client Info N/A N/A N/A N/A Wash NoRMAL NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Water PQ ASTM D6188(m) >1.2 0 0 0 <1	Sample Number		Client Info		WC0869919	WC0842756	WC0818190	
Oil Age hrs Client Info N/A N/A N/A N/A Oil Changed Client Info N/A N/A N/A N/A Sample Status NoRMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D81881 0 0 0 0 Iron ppm ASTM D81885(m) >12.0 3 4 8 Chromium ppm ASTM D81885(m) >20 <1	Sample Date		Client Info		29 Nov 2023	11 Sep 2023	17 May 2023	
Oil Changed Sample Status Client Info N/A NORMAL N/A NORMAL	Machine Age	hrs	Client Info		0	0	0	
Sample Status	Oil Age	hrs	Client Info		0	0	0	
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D8184* 0 0 0 0 Iron ppm ASTM D8185(m) >1 0 0 Chromium ppm ASTM D8185(m) >5 0 0 0 Nickel ppm ASTM D8185(m) >20 <1 0 0 Silver ppm ASTM D8185(m) >20 <1 0 0 Aluminum ppm ASTM D8185(m) >4 <1 1 2 Lead ppm ASTM D8185(m) >30 <1 0 0 Copper ppm ASTM D8185(m) >10 0 0 0 Antimony ppm ASTM D8185(m) >10 0 0 0	Oil Changed		Client Info		N/A	N/A	N/A	
Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D8184* 0 0 0 0 Iron ppm ASTM D5185(m) >120 3 4 8 Chromium ppm ASTM D5185(m) >5 0 0 0 Nickel ppm ASTM D5185(m) >20 <1	-				NORMAL	NORMAL	NORMAL	
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184* 0 0 0 0 Iron ppm ASTM D5185(m) >120 3 4 8 Chromium ppm ASTM D5185(m) >5 0 0 0 Nickel ppm ASTM D5185(m) >20 <1 0 0 Tittanium ppm ASTM D5185(m) 0 0 <1 0 Silver ppm ASTM D5185(m) <1 0 0 <1 Aluminum ppm ASTM D5185(m) >4 <1 1 2 Lead ppm ASTM D5185(m) >30 <1 0 0 Copper ppm ASTM D5185(m) >10 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 <th>CONTAMINATIO</th> <th>N</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINATIO	N	method	limit/base	current	history1	history2	
PQ	Water		WC Method	>0.2	NEG	NEG	NEG	
Iron	WEAR METALS		method	limit/base	current	history1	history2	
Chromium ppm ASTM D5185(m) >5 0 0 0 Nickel ppm ASTM D5185(m) >20 <1 0 0 Titanium ppm ASTM D5185(m) 0 0 <1 Silver ppm ASTM D5185(m) >4 <1 0 0 Aluminum ppm ASTM D5185(m) >4 <1 1 2 Lead ppm ASTM D5185(m) >30 <1 0 0 Copper ppm ASTM D5185(m) >10 0 0 0 Tin ppm ASTM D5185(m) >10 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0<	PQ		ASTM D8184*		0	0	0	
Nickel	Iron	ppm	ASTM D5185(m)	>120	3	4	8	
Titanium	Chromium	ppm	ASTM D5185(m)	>5	0	0	0	
Silver	Nickel	ppm	ASTM D5185(m)	>20	<1	0	0	
Silver	Titanium	ppm	ASTM D5185(m)		0	0	<1	
Lead	Silver	ppm	ASTM D5185(m)		<1	0	0	
Copper ppm ASTM D5185(m) >17 <1 <1 0 Tin ppm ASTM D5185(m) >10 0 0 0 Antimony ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 <1	Aluminum	ppm	ASTM D5185(m)	>4	<1	1	2	
Tin ppm ASTM D5185(m) >10 0 0 0 Antimony ppm ASTM D5185(m) 0 0 <1 Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 2 <1 <1 Barium ppm ASTM D5185(m) 2 <1 <1 Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 0 0 0 0 Magnesium ppm ASTM D5185(m) 0 0 0 0 Magnesium ppm ASTM D5185(m) 16 29 40 Phosphorus ppm ASTM D5185(m) 10 29 25 Zinc ppm ASTM D5185(m) 3974 3886	Lead	ppm	ASTM D5185(m)	>30	<1	0	0	
Antimony ppm ASTM D5185(m) 0 0 <1 Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 <1 <1 Barium ppm ASTM D5185(m) <1 0 0 Molybdenum ppm ASTM D5185(m) 0 0 0 Magnaese ppm ASTM D5185(m) <1 <1 1 1 Calcium ppm ASTM D5185(m) 16 29 40 Phosphorus ppm ASTM D5185(m) 10 29 25 Zinc ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1 <1 <1<	Copper	ppm	ASTM D5185(m)	>17	<1	<1	0	
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 <1			ASTM D5185(m)	>10	0	0	0	
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 <1	Antimony	ppm	ASTM D5185(m)		0	0	<1	
Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 <1	Vanadium		ASTM D5185(m)		0	0	0	
Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 2 <1	Beryllium	ppm	ASTM D5185(m)		0	0	0	
Boron ppm ASTM D5185(m) 2 <1	•		ASTM D5185(m)		0	0	0	
Barium ppm ASTM D5185(m) <1	ADDITIVES		method	limit/base	current	history1	history2	
Molybdenum ppm ASTM D5185(m) 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 Magnesium ppm ASTM D5185(m) <1 <1 1 Calcium ppm ASTM D5185(m) 16 29 40 Phosphorus ppm ASTM D5185(m) 10 29 25 Zinc ppm ASTM D5185(m) 8 13 18 Sulfur ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) >20 <1 2 1 FLUID DEGRADATION method limit/base current history1 history2	Boron	ppm	ASTM D5185(m)		2	<1	<1	
Molybdenum ppm ASTM D5185(m) 0 0 0 Manganese ppm ASTM D5185(m) 0 0 0 Magnesium ppm ASTM D5185(m) <1 <1 1 Calcium ppm ASTM D5185(m) 16 29 40 Phosphorus ppm ASTM D5185(m) 10 29 25 Zinc ppm ASTM D5185(m) 8 13 18 Sulfur ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) >20 <1 2 1 FLUID DEGRADATION method limit/base current history1 history2	Barium	ppm	ASTM D5185(m)		<1	0	0	
Manganese ppm ASTM D5185(m) 0 0 0 Magnesium ppm ASTM D5185(m) <1	Molybdenum				0	0	0	
Magnesium ppm ASTM D5185(m) <1 <1 1 Calcium ppm ASTM D5185(m) 16 29 40 Phosphorus ppm ASTM D5185(m) 10 29 25 Zinc ppm ASTM D5185(m) 8 13 18 Sulfur ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) >20 <1 <1 0 Potassium ppm ASTM D5185(m) >20 <1 2 1	Manganese				0	0	0	
Calcium ppm ASTM D5185(m) 16 29 40 Phosphorus ppm ASTM D5185(m) 10 29 25 Zinc ppm ASTM D5185(m) 8 13 18 Sulfur ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1	•		, ,		<1	<1	1	
Phosphorus ppm ASTM D5185(m) 10 29 25 Zinc ppm ASTM D5185(m) 8 13 18 Sulfur ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) <1 <1 0 Potassium ppm ASTM D5185(m) >20 <1 2 1 FLUID DEGRADATION method limit/base current history1 history2							40	
Zinc ppm ASTM D5185(m) 8 13 18 Sulfur ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) <1 <1 0 Potassium ppm ASTM D5185(m) >20 <1 2 1 FLUID DEGRADATION method limit/base current history1 history2			, ,					
Sulfur ppm ASTM D5185(m) 3974 3886 4236 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) <1	•							
Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) <1			. ,		-			
Silicon ppm ASTM D5185(m) >25 4 6 9 Sodium ppm ASTM D5185(m) <1								
Sodium ppm ASTM D5185(m) <1	CONTAMINANTS	3	method	limit/base	current	history1	history2	
Sodium ppm ASTM D5185(m) <1 <1 0 Potassium ppm ASTM D5185(m) >20 <1 2 1 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185(m)	>25	4	6	9	
Potassium ppm ASTM D5185(m) >20 <1 2 1 FLUID DEGRADATION method limit/base current history1 history2	Sodium		. ,					
			, ,	>20				
Acid Number (AN) mg KOH/g ASTM D974* 0.05 0.05 0.05	FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2	
	Acid Number (AN)	mg KOH/g	ASTM D974*		0.05	0.05	0.05	



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 : 02602038

: WC0869919

Received Diagnosed

: 08 Dec 2023

: 11 Dec 2023

: Kevin Marson

: 5695123 Diagnostician Test Package : IND 2 (Additional Tests: TAN Man)

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.

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