

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

CAL003 (S/N P001 37844)

Hydraulic System Fluid MOBIL DTE 10 EXCEL 32 (400 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the component(unconfirmed).

Fluid Condition

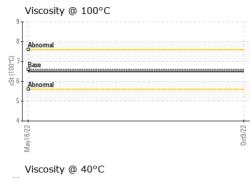
The condition of the oil is acceptable for the time in service.

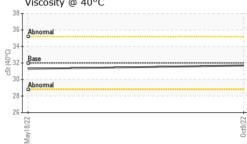
Sample Number Client Info PC0011789 PC0052746 Sample Date Client Info 09 Oct 2022 18 May 2022 Machine Age hrs Client Info 0 0 Oil Age hrs Client Info 0 0 Oil Changed Client Info N/A Not Changd Sample Status Client Info N/A Not Changd CONTAMINATION method limit/base current history1 hist Water WC Method >0.05 NEG NEG WEAR METALS method limit/base current history1 hist Iron ppm ASTM 05185(m) >20 <1						
Sample Number Client Info PC0011789 PC0052746 Sample Date Client Info 09 Oct 2022 18 May 2022 Machine Age hrs Client Info 0 0 Oil Age hrs Client Info 0 0 Oil Changed Client Info N/A Not Changd Sample Status Imit/base current history1 hist Sample Status Imit/base current history1 hist Water WC Method >0.05 NEG NEG WeAR METALS method imit/base current history1 hist Iron ppm ASTM D5185(m) >10 0 Nickel ppm ASTM D5185(m) >10 0 Silver ppm ASTM D5185(m) >20 <1 Gropper ppm ASTM D5185(m) 20 <1	w/2022 0::Z022	Oct2022	May2022			
Sample Date Client Info 09 Oct 2022 18 May 2022 Machine Age hrs Client Info 0 0 Oil Age hrs Client Info 0 0 Oil Age hrs Client Info N/A Not Changd Oil Changed Client Info N/A Not Changd Sample Status Image NORMAL NORMAL CONTAMINATION method limit/base current history1 hist Water WC Method >0.05 NEG NEG Weter WC Method >0.05 NEG NEG Water WC Method >0.05 NEG NEG Koter WC Method >0.05 NEG Nes Iron ppm ASTM D5185(m) >10 0 Nickel ppm ASTM D5185(m) >10 0 </th <th>limit/base current history1 history2</th> <th>current</th> <th>limit/base</th> <th>method</th> <th>MATION</th> <th>SAMPLE INFORI</th>	limit/base current history1 history2	current	limit/base	method	MATION	SAMPLE INFORI
Sample Date Client Info 09 Oct 2022 18 May 2022 Machine Age hrs Client Info 0 0 Oil Age hrs Client Info 0 0 Oil Changed Client Info N/A Not Changd Sample Status Imit/base current history1 hist CONTAMINATION method limit/base current history1 hist Water WC Method >0.05 NEG NEG WEAR METALS method limit/base current history1 hist Iron ppm ASTM D5185(m) >20 <1	PC0011789 PC0052746	PC0011789		Client Info		Sample Number
Machine Age hrs Client Info 0 0 Oil Age hrs Client Info N/A Not Changd Sample Status Image Client Info N/A Not Changd Sample Status Image Client Info N/A Not Changd CONTAMINATION method Imit/base current history1 hist Water WC Method >0.05 NEG NEG WEAR METALS method limit/base current history1 hist Iron ppm ASTM D5185(m) >20 <1	09 Oct 2022 18 May 2022	09 Oct 2022		Client Info		
Oil AgehrsClient Info00Oil ChangedClient InfoN/ANot ChangdSample StatusNORMALNORMALNORMALCONTAMINATIONmethodlimit/basecurrenthistory1histWaterWC Method>0.05NEGNEGWEAR METALSmethodlimit/basecurrenthistory1histIronppmASTM D5185(m)>20<1		0		Client Info	hrs	
Oil ChangedClient InfoN/ANot ChangdSample StatusImage: Client InfoNORMALNORMALCONTAMINATIONmethodlimit/basecurrenthistory1histWaterWC Method>0.05NEGNEGWEAR METALSmethodlimit/basecurrenthistory1histIronppmASTM D5185(m)>20<1<1ChromiumppmASTM D5185(m)>1000NickelppmASTM D5185(m)>10o10SilverppmASTM D5185(m)>1000AluminumppmASTM D5185(m)>1000LeadppmASTM D5185(m)>20<1<1CopperppmASTM D5185(m)>20<1<1AntimonyppmASTM D5185(m)>20<1<1AbtimonyppmASTM D5185(m)>00AbtimonyppmASTM D5185(m)00AbtimonyppmASTM D5185(m)00	0 0	0		Client Info	hrs	0
Sample Status NORMAL NORMAL CONTAMINATION method limit/base current history1 hist Water WC Method >0.05 NEG NEG WEAR METALS method limit/base current history1 hist Iron ppm ASTM D5185(m) >20 <1	N/A Not Changd	N/A		Client Info		-
Water WC Method >0.05 NEG NEG WEAR METALS method limit/base current history1 hist Iron ppm ASTM D5185(m) >20 <1	NORMAL NORMAL	NORMAL				-
WEAR METALS method limit/base current history1 hist Iron ppm ASTM D5185(m) >20 <1	limit/base current history1 history2	current	limit/base	method	ION	CONTAMINAT
Iron ppm ASTM D5185(m) >20 <1 <1 Chromium ppm ASTM D5185(m) >10 0 0 Nickel ppm ASTM D5185(m) >10 <1	0.05 NEG NEG	NEG	>0.05	WC Method		Water
Chromium ppm ASTM D5185(m) >10 0 0 Nickel ppm ASTM D5185(m) >10 <1	limit/base current history1 history2	current	limit/base	method	S	WEAR METAL
Nickel ppm ASTM D5185(m) >10 <1 0 Titanium ppm ASTM D5185(m) 0 0 0 Silver ppm ASTM D5185(m) 0 0 0 Aluminum ppm ASTM D5185(m) >10 0 0 Lead ppm ASTM D5185(m) >20 0 <1	20 <1 <1	<1	>20	ASTM D5185(m)	ppm	Iron
Titanium ppm ASTM D5185(m) 0 0 Silver ppm ASTM D5185(m) 0 0 Aluminum ppm ASTM D5185(m) >10 0 0 Aluminum ppm ASTM D5185(m) >10 0 0 Lead ppm ASTM D5185(m) >20 <1	10 0	0	>10	ASTM D5185(m)	ppm	Chromium
Silver ppm ASTM D5185(m) 0 0 Aluminum ppm ASTM D5185(m) >10 0 0 Lead ppm ASTM D5185(m) >20 0 <1	10 <1 0	<1	>10	ASTM D5185(m)	ppm	Nickel
Aluminum ppm ASTM D5185(m) >10 0 0 Aluminum ppm ASTM D5185(m) >20 0 <1	0	0		ASTM D5185(m)	ppm	Titanium
Lead ppm ASTM D5185(m) >20 0 <1 Copper ppm ASTM D5185(m) >20 <1 <1 Tin ppm ASTM D5185(m) >10 0 0 Antimony ppm ASTM D5185(m) >10 0 0 Antimony ppm ASTM D5185(m) 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) 0 0 Molybdenum ppm ASTM D5185(m) 0 0 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m)	0 0	0		ASTM D5185(m)	ppm	Silver
Copper ppm ASTM D5185(m) >20 <1 <1 Tin ppm ASTM D5185(m) >10 0 0 Antimony ppm ASTM D5185(m) >10 0 0 Antimony ppm ASTM D5185(m) 0 0 Vanadium ppm ASTM D5185(m) 0 0 Beryllium ppm ASTM D5185(m) 0 0 Cadmium ppm ASTM D5185(m) 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) 0 0 Molybdenum ppm ASTM D5185(m) 0 0 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m)	10 0	0	>10	ASTM D5185(m)	ppm	Aluminum
Tin ppm ASTM D5185(m) >10 0 0 Antimony ppm ASTM D5185(m) 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 Cadmium ppm ASTM D5185(m) 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) <1	20 0 <1	0	>20	ASTM D5185(m)	ppm	Lead
Antimony ppm ASTM D5185(m) 0 0 Vanadium ppm ASTM D5185(m) 0 0 Beryllium ppm ASTM D5185(m) 0 0 Cadmium ppm ASTM D5185(m) 0 0 Cadmium ppm ASTM D5185(m) 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) <1	20 <1 <1	<1	>20	ASTM D5185(m)	ppm	Copper
Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 0 Cadmium ppm ASTM D5185(m) 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) <1 <1 Barium ppm ASTM D5185(m) 0 0 Molybdenum ppm ASTM D5185(m) 0 0 Maganese ppm ASTM D5185(m) 0 0	10 0	0	>10	ASTM D5185(m)	ppm	Tin
Beryllium ppm ASTM D5185(m) 0 0 Cadmium ppm ASTM D5185(m) 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) <1	0	0		ASTM D5185(m)	ppm	Antimony
Cadmium ppm ASTM D5185(m) 0 0 ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) <1 <1 Barium ppm ASTM D5185(m) 0 0 Molybdenum ppm ASTM D5185(m) 0 0 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 0	0 0	0		ASTM D5185(m)	ppm	Vanadium
ADDITIVES method limit/base current history1 hist Boron ppm ASTM D5185(m) <1	0	0		ASTM D5185(m)	ppm	Beryllium
Boron ppm ASTM D5185(m) <1 <1 Barium ppm ASTM D5185(m) 0 0 Molybdenum ppm ASTM D5185(m) 0 0 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 0 0	0 0	0		ASTM D5185(m)	ppm	Cadmium
Barium ppm ASTM D5185(m) 0 Molybdenum ppm ASTM D5185(m) 0 0 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 0 0	limit/base current history1 history2	current	limit/base	method		ADDITIVES
Molybdenum ppm ASTM D5185(m) 0 Manganese ppm ASTM D5185(m) 0 0 Magnesium ppm ASTM D5185(m) 0 0	<1 <1	<1		ASTM D5185(m)	ppm	Boron
Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) <1	0	0		ASTM D5185(m)	ppm	Barium
Magnesium ppm ASTM D5185(m) <1	0 0	0		ASTM D5185(m)	ppm	Molybdenum
	0	0		ASTM D5185(m)	ppm	Manganese
Calcium ppm ASTM D5185(m) 120 115 109	<1 <1	<1		ASTM D5185(m)	ppm	Magnesium
	20 115 109	115	120	ASTM D5185(m)	ppm	Calcium
Phosphorus ppm ASTM D5185(m) 475 480 426		480	475	ASTM D5185(m)	ppm	
Zinc ppm ASTM D5185(m) 6 6		6		1		Zinc
Sulfur ppm ASTM D5185(m) 1275 1340 1309			1275		ppm	
Lithium ppm ASTM D5185(m) <1 <1	<1 <1	<1		ASTM D5185(m)	ppm	Lithium
CONTAMINANTS method limit/base current history1 hist	limit/base current history1 history2	current	limit/base	method	TS	CONTAMINAN
Silicon ppm ASTM D5185(m) >15 0 0	15 0 0	0	>15	ASTM D5185(m)	ppm	Silicon
Sodium ppm ASTM D5185(m) 2				ASTM D5185(m)	ppm	Sodium
Potassium ppm ASTM D5185(m) >20 <1 0	20 <1 0	<1	>20	ASTM D5185(m)	ppm	Potassium



OIL ANALYSIS REPORT

VISUAL





White Metal	scalar	Visual*	NONE	NONE	NONE	
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
Precipitate	scalar	Visual*	NONE	NONE	NONE	
Silt	scalar	Visual*	NONE	NONE	NONE	
Debris	scalar	Visual*	NONE	NONE	NONE	
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
	scalar	Visual*	NORML	NORML	NORML	
Appearance						
Odor	scalar	Visual*	NORML	NORML	NORML	
Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	
Free Water	scalar	Visual*		NEG	NEG	
FLUID PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	32	31.7	31.3	
Visc @ 100°C	cSt	ASTM D7279(m)	6.6	6.5	6.5	
Viscosity Index (VI)	Scale	ASTM D2270*	164	164	167	
SAMPLE IMAG		method	limit/base		history1	history?
SAIVIF LE IIVIAG	LO	methou	iiiiii/base	current		history2
Color						no image
Bottom					\bigcirc	no image
GRAPHS						
Iron (ppm)				Lead (ppm)		
¹⁰⁰			1	°T,		
50 - Severe			udd	Severe Abnormal		
			5			2
May18/22			0ct3/22	May18/22		0ct3/22
Aluminum (ppm)				Chromium (p	pm)	
⁴⁰				*°T:		
20 Severe Abnormal			udd	20 - O Abnormal		
			12			24
May 18/2			0ct9/22	May 18/22		Oct9/22
Copper (ppm)				Silicon (ppm)		
100 T						
50 - Abnormal			udd	50 - Abnormal		
0			22			22
May18/22			0ct3/22	May18/2		0ct3/22
Viscosity @ 40°C				Additives		
⁴⁰ T Abovernal			10			
Pase 30 - Storeman			<u>6</u> 5	calcium		
20					*****	
May 18/22			0ct9/22	ay 18/22		0ct9/22
M			<u> </u>	May		5
: 02532366	Recieved Diagnose Diagnost	d : 10 . ed : 10 . ician : Wes	ington, ON I Jan 2023 Jan 2023 s Davis	1	Choice Internation 315 Topsail Rd, t: Calvert Engine	P.O. Box 8190 St. John`s, NL CA A1B 3N4



Accredited Laboratory Test Package : MOB 1 (Additional Tests: KV100, VI) 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.

CALA

ISO 17025:2017

Laboratory

Sample No. Lab Number

Unique Number