

# **OIL ANALYSIS REPORT**

#### Area KEMP QUARRIES / MUSKOGEE SAND Machine Id OHT086 Component

Rear Differential

MOBIL MOBILTRANS HD 50 (--- GAL)

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

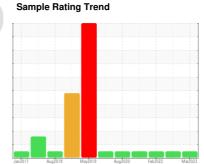
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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





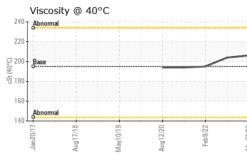
NORMAL

		Jan2017	Aug2018 May2019	Aug2020 Feb2022	Mar2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0087143	PCA0062253	PCA0061800
Sample Date		Client Info		23 Mar 2023	23 Jun 2022	09 Feb 2022
Machine Age	hrs	Client Info		19795	19380	19025
Oil Age	hrs	Client Info		770	355	2210
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	17	4	37
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	2	0
Aluminum	ppm	ASTM D5185m	>25	1	<1	4
Lead	ppm	ASTM D5185m	>25	<1	1	0
Copper	ppm	ASTM D5185m	>100	2	1	3
Tin	ppm	ASTM D5185m	>10	0	<1	0
Antimony	ppm	ASTM D5185m	>5			0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		3	4	2
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		<1	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		10	7	11
Calcium	ppm	ASTM D5185m		3018	1199	3125
Phosphorus	ppm	ASTM D5185m		1017	613	1104
Zinc	ppm	ASTM D5185m		1231	620	1177
Sulfur	ppm	ASTM D5185m		5476	3205	4525
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	18	14	37
Sodium	ppm	ASTM D5185m		0	4	2
Potassium	ppm	ASTM D5185m	>20	2	8	1
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	MODER	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG



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FLUID PROPERTIES method limit/base



		Visc @ 4	0°C	cSt	ASTM D445	5 195		206	204	195
			LE IMA		method	limit/b	ase	current	history1	history2
									,	
		Color						no image	no image	no image
20	22									
Aug12/20	Feb9/22 Mar23/23									
		Bottom						no image	no image	no image
		GRAP	HS							
		Iron (p						Lead (ppm)		
		2000 Severe					120 100	Severe		
	E	1300 - 4					80- E aa	•		
		1000 - Abnormal					ط 60 - 40 -			
						-	20-	Abnormal		
		Jan 20/17	Aug17/18 -	May10/19	Feb 9/22	Mar23/23	01	Jan 20/17	May10/19	Feb9/22 -
		-			, P	Mar				Fel
		120	um (ppm)	)			<sup>30</sup>	Chromium (p	pm)	
		100 - Severe				-	25 - 20 -	Severe		
		E 60-					<u>ة</u> 15-			
		40 20					10-	Abnormal		
		0		6	2	53	0	8	6	12
		Jan 20/17	Aug17/18	May10/19 Aug12/20	Feb 9/22	Mar23/23		Jan 20/17 Aug 17/18	May10/19 Aug12/20	Feb 9/22
		Copper					250 <del>-</del>	Silicon (ppm)		
		200 Severe					200-	Severe		
		Abnormal					150- E			
		100-0					100	Abnormal		
		50		~			50-		$\sim$	$\sim$
		Jan 20/17	Aug17/18 -	May10/19 -	Feb 9/22 -	Mar23/23 -	0-	Jan 20/17 - Aug 17/18 -	May10/19 -	Feb 9/22 -
			₩ 9 @ 40°C		Ľ.	Ma		Additives	Ma	LL.
		240 Abnormal	, c				3500 3000	calcium		$\sim$
	ē	220 - Base					2500-	zinc	3	
		3 200 - <b>Base</b>					튼 2000 - 1500 -			$\lambda/$
		160 - Abnormal					1000-		Propagation of the local division of the loc	V
		140	//18	0/19	Feb9/22 +	3/23	500		2/20	Feb9/22
		Jan 20/17	Aug17/18	May10/19 Aua12/20	Feb	Mar23/23		Jan20/17 Aug17/18	May10/19 Aug12/20	Feb(
	Laboratory			501 Madi	son Ave., C	ary, NC 2	7513	Ken	p Quarries -	Muskogee Sa
AB	Sample No. Lab Number	: PCA008 <sup>-</sup> : 0590086		Receive Diagnos		Jul 2023 Jul 2023			3	395 W 50th S Porter, 0
025 DRATORY	Unique Number	: 1056221		Diagnos		es Davis				US 744
e L2367	Test Package s sample report,		tomor Sor	vice at 1-8	200-237-134	30		m	uskogee@mu	Conta