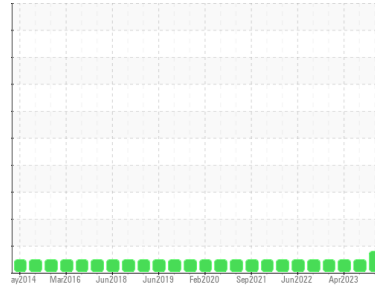




# PROBLEM SUMMARY

## Sample Rating Trend



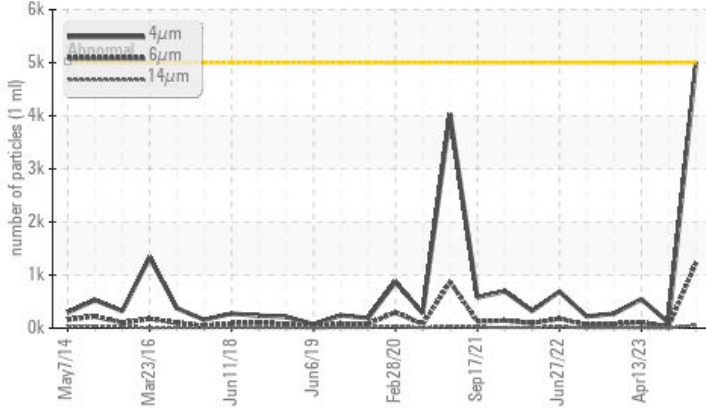
ISO



Machine Id  
**KD-2**  
 Component  
**Hydraulic System**  
 Fluid  
**MOBIL DTE 25 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status		ATTENTION	NORMAL	NORMAL
Particles >4µm	ASTM D7647 >5000	▲ 5009	101	545
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 20/17/13	14/12/9	16/14/10

Customer Id: NRGDOV  
 Sample No.: USP255344  
 Lab Number: 06006386  
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Doug Bogart +1 (800)237-1369 x4016  
[dougb@wearcheckusa.com](mailto:dougb@wearcheckusa.com)

To change component or sample information:  
 Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

### 25 Jul 2023 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 13 Apr 2023 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### 27 Jan 2023 Diag: Doug Bogart

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

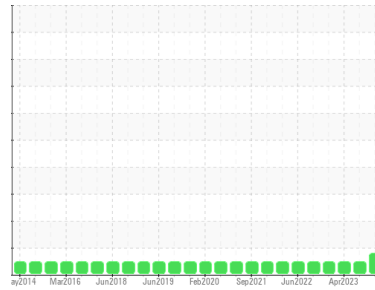
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id  
**KD-2**  
 Component  
**Hydraulic System**  
 Fluid  
**MOBIL DTE 25 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of silt (particulates < 6 microns in size) present in the oil.

### Fluid Condition

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
Sample Number	Client Info	<b>USP255344</b>	USP255484	USP249799
Sample Date	Client Info	<b>09 Nov 2023</b>	25 Jul 2023	13 Apr 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ATTENTION</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	<b>0</b>	2	<1
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Lead	ppm	ASTM D5185m >20	<b>9</b>	11	9
Copper	ppm	ASTM D5185m >20	<b>5</b>	6	5
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	<b>0</b>	2	2
Calcium	ppm	ASTM D5185m	<b>141</b>	148	159
Phosphorus	ppm	ASTM D5185m	<b>471</b>	562	477
Zinc	ppm	ASTM D5185m	<b>633</b>	677	692
Sulfur	ppm	ASTM D5185m	<b>6341</b>	6733	7573

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<b>0</b>	<1	0
Sodium	ppm	ASTM D5185m	<b>2</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	<1
Water	%	ASTM D6304 >0.05	<b>0.009</b>	0.012	0.006
ppm Water	ppm	ASTM D6304 >500	<b>90.6</b>	129.1	63.9

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>▲ 5009</b>	101	545
Particles >6µm	ASTM D7647 >1300	<b>1231</b>	29	110
Particles >14µm	ASTM D7647 >160	<b>55</b>	2	5
Particles >21µm	ASTM D7647 >40	<b>12</b>	1	1
Particles >38µm	ASTM D7647 >10	<b>0</b>	0	0
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>▲ 20/17/13</b>	14/12/9	16/14/10

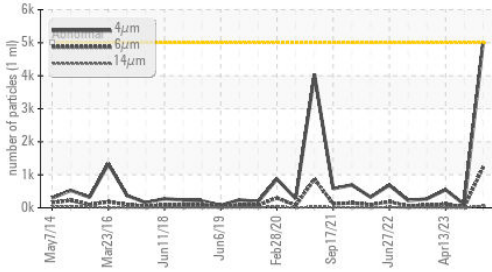
## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>0.70</b>	0.765	0.80

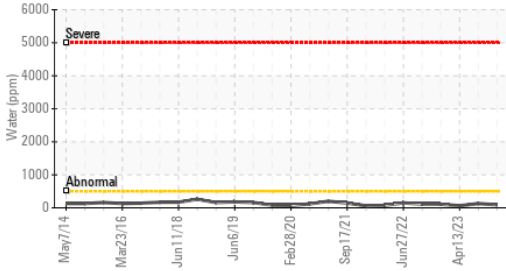


# OIL ANALYSIS REPORT

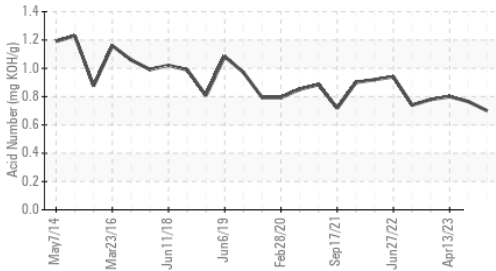
## ▲ Particle Trend



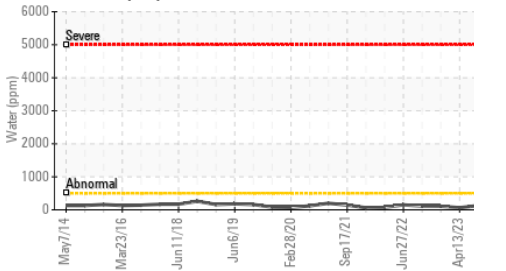
## Water (KF)



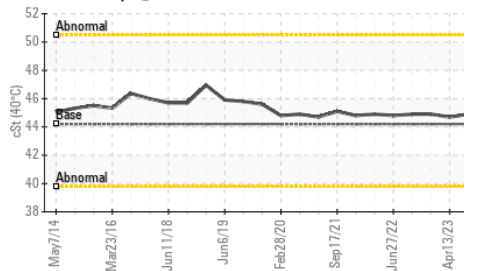
## Acid Number



## Water (KF)



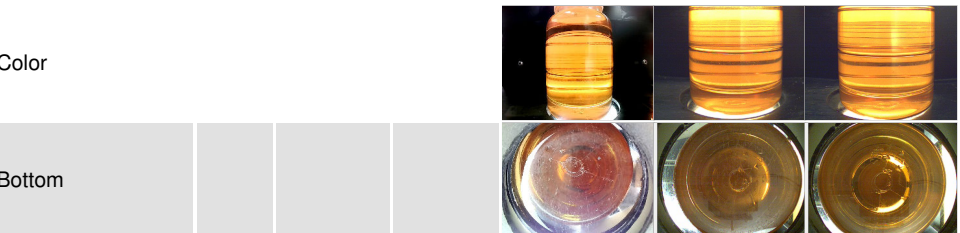
## Viscosity @ 40°C



VISUAL	method	limit/base	current	history1	history2
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
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

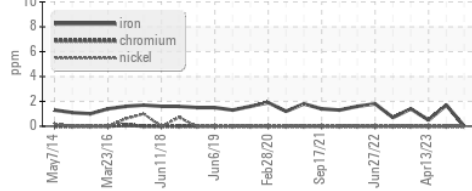
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	44.2	46.8	44.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
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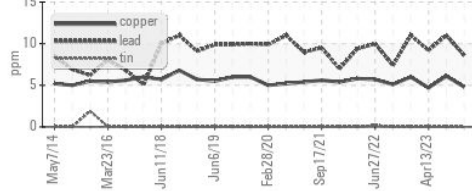


## GRAPHS

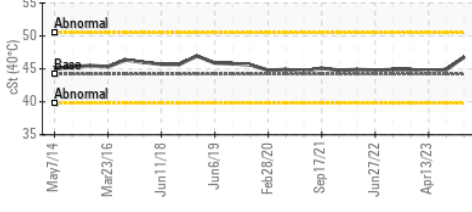
### Ferrous Alloys



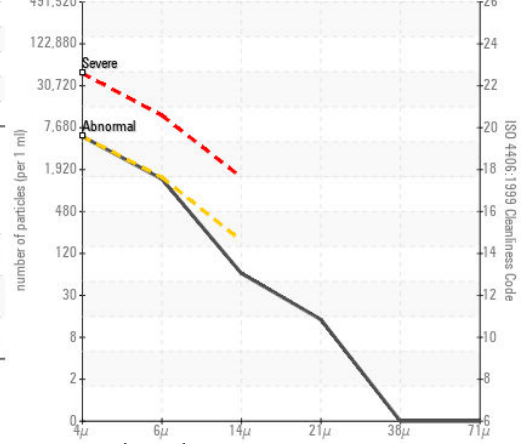
### Non-ferrous Metals



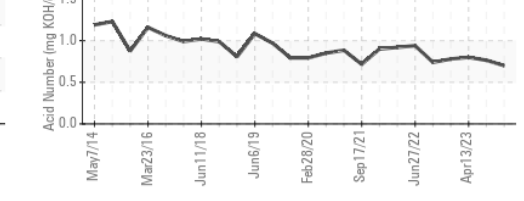
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : USP255344 **Received** : 13 Nov 2023  
**Lab Number** : 06006386 **Diagnosed** : 14 Nov 2023  
**Unique Number** : 10740148 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2

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 Contact: ERNIE JUST  
 ernie.just@clearwayenergy.com  
 T: (302)678-4353  
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)