

## **OIL ANALYSIS REPORT**

### Sample Rating Trend

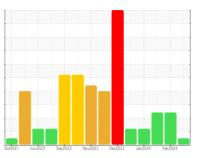
# **NORMAL**



# **EDLTAY TAYM02BE (S/N 1256574)**

Component Landfill Biogas Engine

CHEVRON HDAX 6500 LFG GAS ENGINE OIL (180 GAL)





#### 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

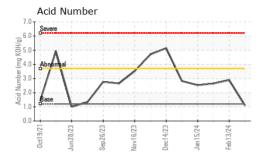
### **Fluid Condition**

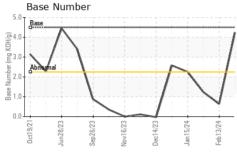
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

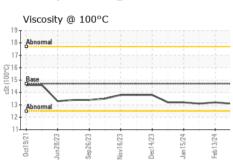
Client Info   WC0901656   WC0901619   WC0901658   Sample Date   Client Info   21 Feb 2024   13 Feb 2024   06 Feb 2024   06 Feb 2024   06 Feb 2024   07 Feb 2024   07 Feb 2024   08 Feb 2025   08 Feb	,	,	0ct2021 Ju	in2023 Sep2023 Nov	2023 Dec2023 Jan2024	Feb 2024	
Sample Date	SAMPLE INFORM	MOITAN	method	limit/base	current	history1	history2
Machine Age hrs Client Info	Sample Number		Client Info		WC0901656	WC0901619	WC0901576
Dil Age	Sample Date		Client Info		21 Feb 2024	13 Feb 2024	06 Feb 2024
Cilic Trianged   Cilient Info   N/A   N/A   N/A   N/A   N/A   NORMAL   ABNORMAL   ABN	Machine Age	hrs	Client Info		350986	65985	5926
NORMAL   ABNORMAL   ABNORMAL   CONTAMINATION   method   limit/base   current   history1   history1   history2	Oil Age	hrs	Client Info		63635	65985	63635
NORMAL   ABNORMAL   ABNORMAL   CONTAMINATION   method   limit/base   current   history1   history1   history2	Oil Changed		Client Info		N/A	N/A	N/A
Fuel	Sample Status				NORMAL	ABNORMAL	ABNORMAL
Water Glycol         WC Method         >.2         NEG         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history1           Iron         ppm         ASTM D5185m         >20         <1	CONTAMINATION	J	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>.2	NEG	NEG	NEG
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >5         0         1         1           Nickel         ppm         ASTM D5185m         >2         <1         0         0           Titanium         ppm         ASTM D5185m         >2         <1         0         0           Silver         ppm         ASTM D5185m         >5         0         0         0           Aluminum         ppm         ASTM D5185m         >5         0         0         0           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >5         1         4         4           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         0         1         1         1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>20	<1	15	14
Nickel	Chromium	ppm	ASTM D5185m	>5	0	1	1
Titanium	Nickel				<1	0	0
Silver				_			
Aluminum         ppm         ASTM D5185m         >15         1         2         2           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >15         <1				>5	_		
Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >15         <1         2         2           Tin         ppm         ASTM D5185m         >5         1         4         4           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1							
Copper         ppm         ASTM D5185m         >15         <1         2         2           Tin         ppm         ASTM D5185m         >5         1         4         4           Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         0         <1							
Tin ppm ASTM D5185m >5 1 4 4 4 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0  ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 0 Manganesium ppm ASTM D5185m 8 3 3 3 Calcium ppm ASTM D5185m 1741 1674 1668 Phosphorus ppm ASTM D5185m 2555 228 224 Zinc ppm ASTM D5185m 316 314 305 Sulfur ppm ASTM D5185m 2551 3979 3831  CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m ≥20 4 7 7 Potassium ppm ASTM D5185m ≥20 4 8 8  INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 >2 0 0 0 0 Nitration Abs/:mm "ASTM D7415 >30 17.5 29.8 27.2  FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/:mm "ASTM D7414 >25 8.2 11.7 11.1 Acid Number (AN) mg KOHg ASTM D8045 1.2 1.10 △ 2.89 △ 2.64							
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         <1         <1           Manganese         ppm         ASTM D5185m         <1         <1         <1         <1           Magnesium         ppm         ASTM D5185m         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	• •						
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         <1				>5			
ADDITIVES method limit/base current history1 history2  Boron ppm ASTM D5185m 0 0 0 0  Molybdenum ppm ASTM D5185m 0 0 0 0  Molybdenum ppm ASTM D5185m 0 0 0 0  Magnesium ppm ASTM D5185m 0 0 0 1 0  Magnesium ppm ASTM D5185m 8 3 3  Calcium ppm ASTM D5185m 1741 1674 1668  Phosphorus ppm ASTM D5185m 2555 228 224  Zinc ppm ASTM D5185m 316 314 305  Sulfur ppm ASTM D5185m 2551 3979 3831  CONTAMINANTS method limit/base current history1 history2  Silicon ppm ASTM D5185m >200 4 7 7  Potassium ppm ASTM D5185m >20 4 7  Potassium ppm ASTM D5185m >20 10 8 8  INFRA-RED method limit/base current history1 history3  Soot % % 'ASTM D7844 >2 0 0 0 0  Nitration Abs/cm 'ASTM D7624 >20 4.8 4.8 4.8 4.8  Sulfation Abs/.1mm 'ASTM D7415 >30 17.5 29.8 27.2  FLUID DEGRADATION method limit/base current history1 history3  Coxidation Abs/.1mm 'ASTM D7415 >30 17.5 29.8 27.2  FLUID DEGRADATION method limit/base current history1 history3  Acid Number (AN) mg KOHg ASTM D8045 1.2 1.10  2.89  2.64					-		
Boron		ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         <1         <1           Manganese         ppm         ASTM D5185m         <1         <1         <1           Magnesium         ppm         ASTM D5185m         8         3         3           Calcium         ppm         ASTM D5185m         1741         1674         1668           Phosphorus         ppm         ASTM D5185m         255         228         224           Zinc         ppm         ASTM D5185m         316         314         305           Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM	Boron	ppm	ASTM D5185m		0	0	0
Manganese         ppm         ASTM D5185m         <1         <1         <1           Magnesium         ppm         ASTM D5185m         8         3         3           Calcium         ppm         ASTM D5185m         1741         1674         1668           Phosphorus         ppm         ASTM D5185m         255         228         224           Zinc         ppm         ASTM D5185m         316         314         305           Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>0</th> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185m		0	0	0
Magnesium         ppm         ASTM D5185m         8         3         3           Calcium         ppm         ASTM D5185m         1741         1674         1668           Phosphorus         ppm         ASTM D5185m         255         228         224           Zinc         ppm         ASTM D5185m         316         314         305           Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         4         7         7           Soot %	Molybdenum	ppm	ASTM D5185m		0	<1	<1
Calcium         ppm         ASTM D5185m         1741         1674         1668           Phosphorus         ppm         ASTM D5185m         255         228         224           Zinc         ppm         ASTM D5185m         316         314         305           Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history3           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >2         0         0         0           Nitration         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2 <t< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>&lt;1</th><td>&lt;1</td><td>&lt;1</td></t<>	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus         ppm         ASTM D5185m         255         228         224           Zinc         ppm         ASTM D5185m         316         314         305           Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history3           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1 <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>8</th> <td>3</td> <td>3</td>	Magnesium	ppm	ASTM D5185m		8	3	3
Phosphorus         ppm         ASTM D5185m         255         228         224           Zinc         ppm         ASTM D5185m         316         314         305           Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history1           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1 <td>Calcium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th>1741</th> <td>1674</td> <td>1668</td>	Calcium	ppm	ASTM D5185m		1741	1674	1668
Zinc         ppm         ASTM D5185m         316         314         305           Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25 <t< td=""><td>Phosphorus</td><td></td><td>ASTM D5185m</td><td></td><th>255</th><td>228</td><td>224</td></t<>	Phosphorus		ASTM D5185m		255	228	224
Sulfur         ppm         ASTM D5185m         2551         3979         3831           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045	•		ASTM D5185m		316		305
Silicon         ppm         ASTM D5185m         >200         4         30         30           Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         2.89         2.64	Sulfur						
Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         2.89         2.64	CONTAMINANTS		method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         >20         4         7         7           Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history1           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         2.89         2.64	Silicon	ppm	ASTM D5185m	>200	4	30	30
Potassium         ppm         ASTM D5185m         >20         10         8         8           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         2.89         2.64	Sodium		ASTM D5185m	>20	4	7	7
Soot %         %         *ASTM D7844         >2         0         0         0           Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         2.89         2.64	Potassium		ASTM D5185m	>20	10	8	8
Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION method limit/base current history1         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         △ 2.89         △ 2.64	INFRA-RED		method	limit/base	current	history1	history2
Nitration         Abs/cm         *ASTM D7624         >20         4.8         4.8         4.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION method limit/base current history1         history1         history1           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         △ 2.89         △ 2.64	Soot %	%	*ASTM D7844	>2	0	0	0
Sulfation         Abs/.1mm         *ASTM D7415         >30         17.5         29.8         27.2           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         2.89         △ 2.64	Nitration						
Oxidation         Abs/.1mm         *ASTM D7414         >25         8.2         11.7         11.1           Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         \$\triangle\$ 2.89         \$\triangle\$ 2.64	Sulfation						
Acid Number (AN)         mg KOH/g         ASTM D8045         1.2         1.10         ▲ 2.89         ▲ 2.64	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
. ,	Oxidation	Abs/.1mm	*ASTM D7414	>25	8.2	11.7	11.1
. ,	Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	1.10	<u>^</u> 2.89	<b>△</b> 2.64
	, ,						



## **OIL ANALYSIS REPORT**



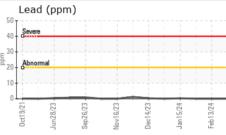


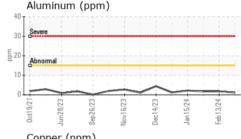


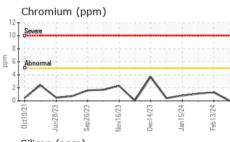
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
1100 Mator	oodidi	VIOGGI		0	1420	1120

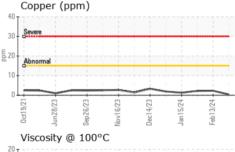
FLUID FNOFER	TIES	method			HISTORY	HISTORYZ
Visc @ 100°C	cSt	ASTM D445	14.7	13.1	13.2	13.1

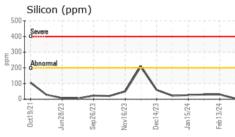
Iro	n (ppm	)				
40 Sev	ere			Α.		
30 Abr	^		<u>-</u>	$/ \setminus$		
201	ómbl		1	/		$\rightarrow$
10			1			
0ct19/21-	Jun28/23	Sep26/23 -	Nov16/23	Jec14/23	Jan 15/24	Feb13/24
	iminum			Dec	Jan	Feb

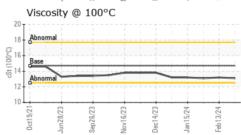


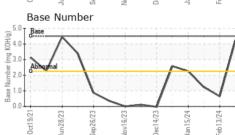














Certificate L2367

Laboratory Sample No. Lab Number : 06098627 Unique Number : 10896857

Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

: WC0901656

Received **Tested** Diagnosed

: 23 Feb 2024

: 26 Feb 2024 : 26 Feb 2024 - Sean Felton

**EDL NA Recips-Taylor County** TAYLOR COUNTY POWER STATION, COUNTY ROAD 33 & STEWART ROAD

MAUK, GA US 31058

Contact: STEVEN BABB steven.babb@edlenergy.com T:

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)

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