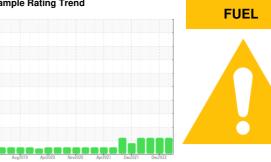


# **OIL ANALYSIS REPORT**

## Sample Rating Trend



PETERBILT J-14

Component

**Diesel Engine** 

**CHEVRON DELO 400 LE 15W40 (38 QTS)** 

## **DIAGNOSIS**

#### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

#### Wear

All component wear rates are normal.

#### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

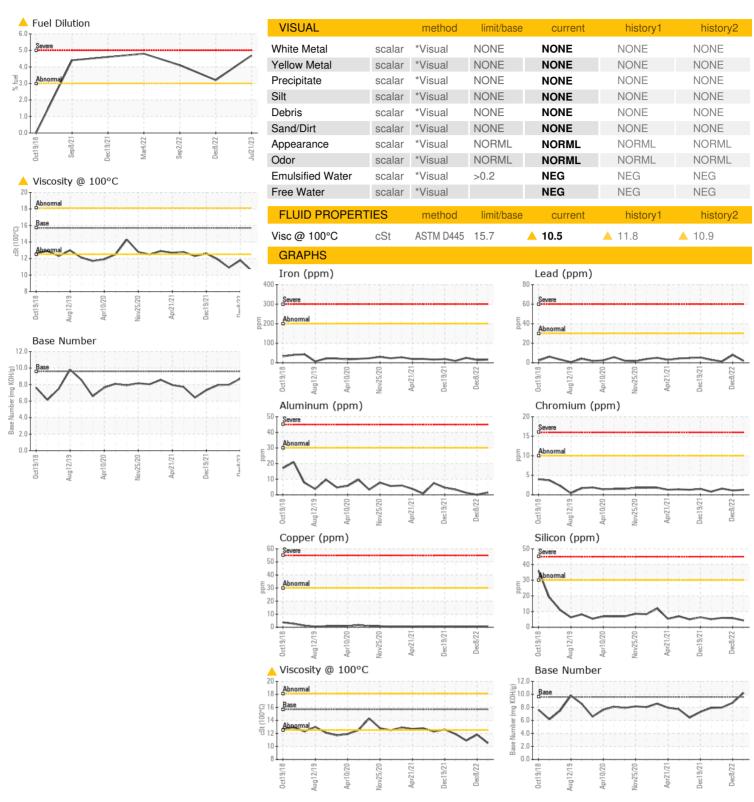
#### ▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION         method         limit/base         current         history1         history2           Sample Number         Client Info         WC0819757         WC0758070         WC0723496           Sample Date         Client Info         21 Jul 2023         80 Dec 2022         20 Sep 2022           Machine Age         mls         Client Info         7000         7500         7500           Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         BRORMAL         ATTENTION         ABNORMAL         ATTENTION         ABNORMAL           CONTAMINATION         method         Imilibase         current         history1         history2           Giycol         WC Method         NEG         NEG         NEG         NEG           WEAR METALS         method         limil/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         16         14         25           Chromium         ppm         ASTM D5185m         >10         1         1         2           Nickel         ppm         ASTM D5185m         >20         1         1         1         1<			ct2018 Au	1g2019 Apr2020 No	v2020 Apr2021 Dec2021	DecZUZZ	
Sample Date         Client Info         21 Jul 2023         08 Dec 2022         02 Sep 2022           Machine Age         mis         Client Info         309985         294672         285598           Oil Age         mis         Client Info         7000         7500         7500           Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         Client Info         N/A         N/A         N/A         N/A         N/A           CONTAMINATION         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5188m         >200         16         14         25           Chromium         ppm         ASTM D5188m         >20         16         14         25           Chromium         ppm         ASTM D5188m         >10         1         1         2           Nickel         ppm         ASTM D5188m         >2         1         <1         1           Aluminum         ppm         ASTM D5188m         >2         1         <1         <1           Aluminum         ppm         ASTM D5188m         >30         <1         <1	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         mls         Client Info         309985         294672         285598           Oil Age         mls         Client Info         7000         7500         7500           Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         Local Control Info         NEG         NEG         NEG         NEG           CONTAMINATION         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >20         0         0         0           Ilickel         ppm         ASTM D5185m         >20         1         1         2           Silver         ppm         ASTM D5185m         >20         2         8         1           Copper         ppm         ASTM D5185m         30         2         8         1	Sample Number		Client Info		WC0819757	WC0756070	WC0723496
Oil Age         mls         Client Info         7000         7500         7500           Oil Changed         Client Info         N/A         N/A         N/A         N/A           Sample Status         Client Info         N/A         N/A         N/A         N/A           CONTAMINATION         method         limit/base         current         history1         history2           Gilycol         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >10         1         1         2           Nickel         ppm         ASTM D5185m         >2         1         1         1         2           Nickel         ppm         ASTM D5185m         >2         1         1         1         2           Nickel         ppm         ASTM D5185m         >30         1         0         0         0           Alluminum         ppm         ASTM D5185m         >30         1         1 <t< td=""><th>Sample Date</th><td></td><td>Client Info</td><td></td><th>21 Jul 2023</th><td>08 Dec 2022</td><td>02 Sep 2022</td></t<>	Sample Date		Client Info		21 Jul 2023	08 Dec 2022	02 Sep 2022
Oil Changed Sample Status         Client Info         N/A         N/A         N/A         N/A         N/A         SAMORMAL         ABNORMAL         ATTENTION         ABNORMAL           CONTAMINATION         method         limit/base         current         history1         history2           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >20         0         0         1           Nickel         ppm         ASTM D5185m         >20         1         0         1           Lead         ppm         ASTM D5185m         >30         1         0         1           Lead         ppm         ASTM D5185m         >30         >1         1         1         1           Copper         ppm         ASTM D5185m         >30         <1         1         1<	Machine Age	mls	Client Info		309985	294672	285598
Sample Status         ABNORMAL         ATTENTION         ABNORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Glycol         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >20         0         <1	Oil Age	mls	Client Info		7000	7500	7500
CONTAMINATION         method         limit/base         current         history1         history2           Glycol         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         16         14         25           Chromium         ppm         ASTM D5185m         >10         1         1         2           Nickel         ppm         ASTM D5185m         >4         0         <1         0         1           Nickel         ppm         ASTM D5185m         >2         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         <1         <1         <1         <1 <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>N/A</th> <th>N/A</th> <th>N/A</th>	Oil Changed		Client Info		N/A	N/A	N/A
MEGNATION         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >10         1         1         2           Nickel         ppm         ASTM D5185m         >4         0         <1	Sample Status				ABNORMAL	ATTENTION	ABNORMAL
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         16         14         25           Chromium         ppm         ASTM D5185m         >10         1         1         2           Nickel         ppm         ASTM D5185m         >4         0         <1         0           Titanium         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >30         1         0         1           Lead         ppm         ASTM D5185m         >30         2         8         1           Copper         ppm         ASTM D5185m         >30         <1         <1         <1           Vanadium         ppm         ASTM D5185m         >4         <1         1         <1         <1           Vanadium         ppm         ASTM D5185m         >4         <1         1         <1         <1         <1         <1         <1         <1         <1 <td< th=""><th>CONTAMINATIO</th><th>V</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	CONTAMINATIO	V	method	limit/base	current	history1	history2
Iron	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >10         1         1         2           Nickel         ppm         ASTM D5185m         >4         0         <1         0           Titanium         ppm         ASTM D5185m         >2         1         <1         <1           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >30         1         0         1           Lead         ppm         ASTM D5185m         >30         2         8         1           Copper         ppm         ASTM D5185m         >30         <1         <1         <1           Tin         ppm         ASTM D5185m         >4         <1         1         <1         <1           Vanadium         ppm         ASTM D5185m         <4         <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	WEAR METALS		method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >4         0         <1         0           Titanium         ppm         ASTM D5185m         >2         1         <1	Iron	ppm	ASTM D5185m	>200	16	14	25
Titanium         ppm         ASTM D5185m         >2         1         <1         <1           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >30         1         0         1           Lead         ppm         ASTM D5185m         >30         2         8         1           Copper         ppm         ASTM D5185m         >30         <1	Chromium	ppm	ASTM D5185m	>10	1	1	2
Sliver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >30         1         0         1           Lead         ppm         ASTM D5185m         >30         2         8         1           Copper         ppm         ASTM D5185m         >30         <1         <1         <1           Tin         ppm         ASTM D5185m         >4         <1         1         <1           Vanadium         ppm         ASTM D5185m         <1         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           Boron         ppm         ASTM D5185m         51         237         18           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         741         588         658           Calcium         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm	Nickel	ppm	ASTM D5185m	>4	0	<1	0
Aluminum         ppm         ASTM D5185m         >30         1         0         1           Lead         ppm         ASTM D5185m         >30         2         8         1           Copper         ppm         ASTM D5185m         >30         <1	Titanium	ppm	ASTM D5185m	>2	1	<1	<1
Lead         ppm         ASTM D5185m         >30         2         8         1           Copper         ppm         ASTM D5185m         >30         <1         <1         <1           Tin         ppm         ASTM D5185m         >4         <1         1         <1           Vanadium         ppm         ASTM D5185m         -4         <1         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         51         237         18           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         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	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper         ppm         ASTM D5185m         >30         <1         <1         <1           Tin         ppm         ASTM D5185m         >4         <1	Aluminum	ppm	ASTM D5185m			0	1
Tin         ppm         ASTM D5185m         >4         <1         1         <1           Vanadium         ppm         ASTM D5185m         <1         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         51         237         18           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         ppm         ASTM D5185m         <1         <1         <1         <1         <1           Magnesium         ppm         ASTM D5185m         741         588         658         658           Calcium         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         3200         3443         2271         3448           CON		ppm				8	
Vanadium         ppm         ASTM D5185m         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         51         237         18           Barium         ppm         ASTM D5185m         0         0         0         0           Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         ppm         ASTM D5185m         741         588         658           Calcium         ppm         ASTM D5185m         741         588         658           Calcium         ppm         ASTM D5185m         1279         1501         1376           Phosphorus         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm		ppm					
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         51         237         18           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         ppm         ASTM D5185m         741         588         658           Calcium         ppm         ASTM D5185m         1279         1501         1376           Phosphorus         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         1300         1079         793         1063           Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium				>4			
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         51         237         18           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         ppm         ASTM D5185m         741         588         658           Calcium         ppm         ASTM D5185m         1279         1501         1376           Phosphorus         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         1300         1079         793         1063           Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         20         4         6         6           Sodium         ppm         ASTM D5185m         20         4         <1		ppm					
Boron         ppm         ASTM D5185m         51         237         18           Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         ppm         ASTM D5185m         <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0           Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         ppm         ASTM D5185m         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         69         102         52           Manganese         ppm         ASTM D5185m         <1	Boron	ppm	ASTM D5185m		51	237	18
Manganese         ppm         ASTM D5185m         <1         <1         <1           Magnesium         ppm         ASTM D5185m         741         588         658           Calcium         ppm         ASTM D5185m         1279         1501         1376           Phosphorus         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         1300         1079         793         1063           Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         >20         4         <1         3           Fuel         %         ASTM D5185m         >20         4         <1         3           Fuel         %         ASTM D5185m         >20         4         <1         3           INFRA-RED         method         limit/base         current         history1         history2	Barium	ppm	ASTM D5185m		0	0	0
Magnesium         ppm         ASTM D5185m         741         588         658           Calcium         ppm         ASTM D5185m         1279         1501         1376           Phosphorus         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         1300         1079         793         1063           Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         >20         4         <1	•	ppm	ASTM D5185m		69	102	52
Calcium         ppm         ASTM D5185m         1279         1501         1376           Phosphorus         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         1300         1079         793         1063           Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         2         1         <1	Manganese						52
Phosphorus         ppm         ASTM D5185m         1200         905         658         907           Zinc         ppm         ASTM D5185m         1300         1079         793         1063           Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         2         1         <1		ppm				<1	<1
Zinc         ppm         ASTM D5185m         1300         1079         793         1063           Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         2         1         <1	•	ppm	ASTM D5185m		741	<1 588	<1 658
Sulfur         ppm         ASTM D5185m         3200         3443         2271         3448           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         2         1         <1	Calcium	ppm	ASTM D5185m ASTM D5185m		741 1279	<1 588 1501	<1 658 1376
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         2         1         <1	Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		741 1279 905	<1 588 1501 658	<1 658 1376 907
Silicon         ppm         ASTM D5185m         >30         4         6         6           Sodium         ppm         ASTM D5185m         2         1         <1	Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300	741 1279 905 1079	<1 588 1501 658 793	<1 658 1376 907 1063
Sodium         ppm         ASTM D5185m         2         1         <1	Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300	741 1279 905 1079	<1 588 1501 658 793	<1 658 1376 907 1063
Potassium         ppm         ASTM D5185m         >20         4         <1	Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1300 3200	741 1279 905 1079 3443	<1 588 1501 658 793 2271	<1 658 1376 907 1063 3448
Fuel         %         ASTM D3524         >3.0         ▲ 4.7         ▲ 3.2         ▲ 4.1           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9         1.1         1.3           Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.9         8.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.5         24.8         20.9           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.4         17.3         13.2	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	1300 3200 limit/base	741 1279 905 1079 3443 current	<1 588 1501 658 793 2271 history1	<1 658 1376 907 1063 3448 history2
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.9         1.1         1.3           Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.9         8.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.5         24.8         20.9           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.4         17.3         13.2	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	1300 3200 limit/base >30	741 1279 905 1079 3443 current 4	<1 588 1501 658 793 2271 history1 6 1	<1 658 1376 907 1063 3448 history2 6 <1
Soot %         %         *ASTM D7844 >3         0.9         1.1         1.3           Nitration         Abs/cm         *ASTM D7624 >20         7.8         8.9         8.1           Sulfation         Abs/.1mm         *ASTM D7415 >30         19.5         24.8         20.9           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         13.4         17.3         13.2	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 3200 limit/base >30	741 1279 905 1079 3443 current 4 2	<1 588 1501 658 793 2271 history1 6 1 <1	<1 658 1376 907 1063 3448 history2 6 <1 3
Nitration         Abs/cm         *ASTM D7624         >20         7.8         8.9         8.1           Sulfation         Abs/.1mm         *ASTM D7415         >30         19.5         24.8         20.9           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.4         17.3         13.2	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 3200 limit/base >30	741 1279 905 1079 3443 current 4 2	<1 588 1501 658 793 2271 history1 6 1 <1	<1 658 1376 907 1063 3448 history2 6 <1 3
Sulfation         Abs/.1mm         *ASTM D7415         >30         19.5         24.8         20.9           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         13.4         17.3         13.2	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m	1300 3200 limit/base >30 >20 >3.0	741 1279 905 1079 3443	<1 588 1501 658 793 2271 history1 6 1 <1 ▲ 3.2	<1 658 1376 907 1063 3448 history2 6 <1 3 4.1
FLUID DEGRADATION method limit/base current history1 history2  Oxidation Abs/.1mm *ASTM D7414 >25 13.4 17.3 13.2	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524  method  *ASTM D7844	1300 3200 limit/base >30 >20 >3.0 limit/base >3	741 1279 905 1079 3443	<1 588 1501 658 793 2271 history1 6 1 <1	<1 658 1376 907 1063 3448 history2 6 <1 3 ▲ 4.1 history2 1.3
Oxidation Abs/.1mm *ASTM D7414 >25 <b>13.4</b> 17.3 13.2	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524  method  *ASTM D7844	1300 3200 limit/base >30 >20 >3.0 limit/base >3	741 1279 905 1079 3443	<1 588 1501 658 793 2271 history1 6 1 <1	<1 658 1376 907 1063 3448 history2 6 <1 3 ▲ 4.1 history2 1.3
	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844	1300 3200 limit/base >30 >20 >3.0 limit/base >3 >20	741 1279 905 1079 3443	<1 588 1501 658 793 2271 history1 6 1 <1 3.2 history1 1.1 8.9	<1 658 1376 907 1063 3448 history2 6 <1 3 ▲ 4.1 history2 1.3 8.1
Base Number (BN) mg KOH/g ASTM D2896 9.6 10.23 8.71 7.98	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D3524  method  *ASTM D7844  *ASTM D7624  *ASTM D76145	1300 3200 limit/base >30 >20 >3.0 limit/base >3 >20 >30	741 1279 905 1079 3443	<1 588 1501 658 793 2271 history1 6 1 <1 ▲ 3.2 history1 1.1 8.9 24.8	<1 658 1376 907 1063 3448 history2 6 <1 3 4.1 history2 1.3 8.1 20.9
	Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7824  *ASTM D7844  *ASTM D7624 *ASTM D7415  method	1300 3200 limit/base >30 >20 >3.0 limit/base >3 >20 >30 limit/base	741 1279 905 1079 3443	<1 588 1501 658 793 2271 history1 6 1 <1 3.2 history1 1.1 8.9 24.8 history1	<1 658 1376 907 1063 3448 history2 6 <1 3 ▲ 4.1 history2 1.3 8.1 20.9 history2



## OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number **Unique Number** 

: WC0819757 : 05926837 : 10606784

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Aug 2023 Diagnosed : 18 Aug 2023

Diagnostician : Wes Davis Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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.

**ALLEGHENY DISPOSAL LLC** 

PO BOX 4 GREEN BANK, WV US 24944

Contact: SERVICE MANAGER meckmechanic@frontier.com

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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)