

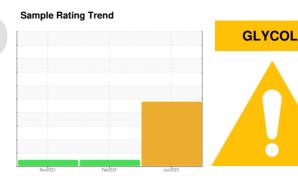
# **OIL ANALYSIS REPORT**



# **DUMP TRUCKS** [DUMP TRUCKS] 132

**Diesel Engine** 

**DIESEL ENGINE OIL SAE 10W30 (--- GAL)** 



# **DIAGNOSIS**

### Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

All component wear rates are normal.

## Contamination

Test for glycol is positive. There is a moderate concentration of glycol present in the oil.

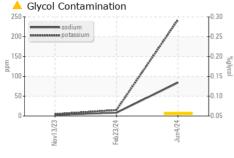
## Fluid Condition

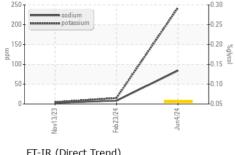
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sample Number   Client Info   SBP0006777   SBP0005830   SBP0005634   Sample Date   Client Info   O4 Jun 2024   23 Feb 2024   13 Nov 2023   Machine Age   mls   Client Info   25000   22000   0   Clind Info   25000   22000   0   Client Info   Changed   Cha	SAMPLE INFORMA	ATION	method	limit/base	current	history1	history2
Sample Date         Client Info         04 Jun 2024         23 Feb 2024         13 Nov 2023           Machine Age         mis         Client Info         307364         282259         22000           Oil Age         mis         Client Info         25000         22000         0           Oil Changed         Client Info         Changed         Changed         Changed         Changed           Sample Status         Client Info         Changed         NCRMAL         NORMAL         NORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0         <1.0         0.2           Water         WC Method         >0.2         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1         4         4         17           Chromium         ppm         ASTM D5185m         >20         <1         2         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	Sample Number		Client Info		SBP0006777	,	,
Machine Age         mls         Client Info         307364         282259         22000           Oil Age         mls         Client Info         25000         22000         0           Oil Changed         Client Info         Changed         Changed         Changed         Changed         Changed         NORMAL           Sample Status         WC Method         >3.0         <1.0							
Oil Age         mls         Client Info         25000         22000         0           Oil Changed Sample Status         Client Info         Changed Changed Changed Changed Changed NORMAL NORMAL         NORMAL NORMAL NORMAL           CONTAMINATION         method         limit/base current         history1         history2           Fuel         WC Method         >3.0         <1.0		mls					
Oil Changed Sample Status         Client Info         Changed ABNORMAL NORMAL NORMAL NORMAL         Changed NORMAL NORMAL NORMAL NORMAL         Changed ABNORMAL NORMAL NORMAL NORMAL         Changed ABNORMAL NORMAL NORMAL NORMAL         CONTAMINATION         method         Ilimit/base current         bistory1         history2           Fuel         WC Method         >0.2         NEG         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >120         41         43         17           Chromium         ppm         ASTM D5185m         >20         <1	3-						
ABNORMAL   NORMAL   NORMAL   CONTAMINATION   method   limit/base   current   history1   history2	-	11110					
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0	-		Olione iiilo				
Fuel   WC Method   Sa.0   Ca.0   Ca.0   NEG   NEG   NEG	-		method	limit/base			
Water         WC Method         >0.2         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >120         41         43         17           Chromium         ppm         ASTM D5185m         >20         <1         1         <1           Nickel         ppm         ASTM D5185m         >2         <1         2         <1           Silver         ppm         ASTM D5185m         >2         <1         2         0           Aluminum         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >2         0         0         0           Lead         ppm         ASTM D5185m         >40         1         2         <1         <5           Lead         ppm         ASTM D5185m         >15         2         2         2         <1         <0           Copper         ppm         ASTM D5185m         <1         <1         <1         0           Caladium         ppm         ASTM D5185m         250							
Iron							
Iron	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >20         <1         1         <1           Nickel         ppm         ASTM D5185m         >5         1         2         <1	Iron	nnm	ASTM D5185m	>120	41		
Nickel	_						
Titanium         ppm         ASTM D5185m         >2         <1         2         0           Silver         ppm         ASTM D5185m         >2         0         0         0           Aluminum         ppm         ASTM D5185m         >20         5         6         2           Lead         ppm         ASTM D5185m         >40         1         2         <1           Copper         ppm         ASTM D5185m         >330         9         11         5           Tin         ppm         ASTM D5185m         >15         2         2         <1           Vanadium         ppm         ASTM D5185m         <1         <1         0         0           Cadmium         ppm         ASTM D5185m         <1         <1         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         <50         0         6         3           Barium         ppm         ASTM D5185m         100         71         90         59           Manganesium         ppm         ASTM D5185m         <1         1         0							
Silver							
Aluminum         ppm         ASTM D5185m         >20         5         6         2           Lead         ppm         ASTM D5185m         >40         1         2         <1           Copper         ppm         ASTM D5185m         >330         9         11         5           Tin         ppm         ASTM D5185m         >15         2         2         <1           Vanadium         ppm         ASTM D5185m         >15         2         2         <1           Cadmium         ppm         ASTM D5185m         <1         <1         <1         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         250         0         6         3           Barium         ppm         ASTM D5185m         100         0         0         0           Molybdenum         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         3000         1172							
Lead         ppm         ASTM D5185m         >40         1         2         <1           Copper         ppm         ASTM D5185m         >330         9         11         5           Tin         ppm         ASTM D5185m         >15         2         2         <1           Vanadium         ppm         ASTM D5185m         <1         <1         <0           Cadmium         ppm         ASTM D5185m         <1         <1         <0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         250         0         6         3           Barium         ppm         ASTM D5185m         100         0         0         0           Molybdenum         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         100         71         90         59           Manganesium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         300         1172         1809         991 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Copper         ppm         ASTM D5185m         >330         9         11         5           Tin         ppm         ASTM D5185m         >15         2         2         <1							
Tin							
Vanadium         ppm         ASTM D5185m         <1         <1         0           Cadmium         ppm         ASTM D5185m         <1         <1         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         250         0         6         3           Barium         ppm         ASTM D5185m         10         0         0         0           Molybdenum         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         100         71         90         59           Manganesium         ppm         ASTM D5185m         450         10007         1435         911           Calcium         ppm         ASTM D5185m         450         10007         1435         911           Calcium         ppm         ASTM D5185m         450         10007         1435         911           Zinc         ppm         ASTM D5185m         1150         1004         1552         993           Zinc         ppm         ASTM D5185m         4250         3306         5020							
Cadmium         ppm         ASTM D5185m         <1         <1         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         250         0         6         3           Barium         ppm         ASTM D5185m         10         0         0         0           Molybdenum         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         100         71         90         59           Magnesium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         >25				>15			
ADDITIVES							
Boron         ppm         ASTM D5185m         250         0         6         3           Barium         ppm         ASTM D5185m         10         0         0         0           Molybdenum         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         100         71         90         59           Magnesium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m	Cadmium	ррпі	NO LINCOLCO INIL CW		<1	< 1	U
Barium         ppm         ASTM D5185m         10         0         0         0           Molybdenum         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         1007         1435         911           Calcium         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         1150         1004         1552         993           Zinc         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >20         243         15         5           Glycol         %         *ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         100         71         90         59           Manganese         ppm         ASTM D5185m         < 1         1         0           Magnesium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         1150         1004         1552         993           Zinc         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >20         243         15         5           Glycol         %         *ASTM D585m	Boron	ppm	ASTM D5185m	250	0	6	3
Manganese         ppm         ASTM D5185m         <1         1         0           Magnesium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         1150         1004         1552         993           Zinc         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >25         84         8         3           Potassium         ppm         ASTM D5185m         >20         243         15         5           Glycol         *ASTM D5185m         >20         243         15         5           Glycol         *ASTM D5185m         >20         243         15							
Magnesium         ppm         ASTM D5185m         450         1007         1435         911           Calcium         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         1150         1004         1552         993           Zinc         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >25         84         8         3           Potassium         ppm         ASTM D5185m         >20         243         15         5           Glycol         %         *ASTM D5185m         >20         243         15         5           Glycol         %         *ASTM D2982          0.06         NEG         NEG           INFRA-RED         method         limit/base	Barium	ppm	ASTM D5185m	10	0	0	0
Calcium         ppm         ASTM D5185m         3000         1172         1809         991           Phosphorus         ppm         ASTM D5185m         1150         1004         1552         993           Zinc         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >20         443         15         5           Glycol         %         *ASTM D5185m         >20         4243         15         5           Glycol         %         *ASTM D2982         40.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7415					-		
Phosphorus         ppm         ASTM D5185m         1150         1004         1552         993           Zinc         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >20         4243         15         5           Glycol         %         *ASTM D5185m         >20         4243         15         5           Glycol         %         *ASTM D2982         40.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30<	Molybdenum	ppm	ASTM D5185m		71	90	59
Zinc         ppm         ASTM D5185m         1350         1299         1918         1200           Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         >20         443         15         5           Glycol         %         *ASTM D5185m         >20         4243         15         5           Glycol         %         *ASTM D2982         40.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         lim	Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	100	71 <1	90	59
Sulfur         ppm         ASTM D5185m         4250         3306         5020         3174           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         84         8         3           Potassium         ppm         ASTM D5185m         >20         243         15         5           Glycol         %         *ASTM D2982         A 0.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25 <t< td=""><td>Molybdenum Manganese Magnesium</td><td>ppm ppm ppm</td><td>ASTM D5185m ASTM D5185m ASTM D5185m</td><td>100</td><td>71 &lt;1 1007</td><td>90 1 1435</td><td>59 0 911</td></t<>	Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	100	71 <1 1007	90 1 1435	59 0 911
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         84         8         3           Potassium         ppm         ASTM D5185m         >20         243         15         5           Glycol         %         *ASTM D2982         ▲ 0.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000	71 <1 1007 1172	90 1 1435 1809	59 0 911 991
Silicon         ppm         ASTM D5185m         >25         11         13         5           Sodium         ppm         ASTM D5185m         84         8         3           Potassium         ppm         ASTM D5185m         >20         243         15         5           Glycol         %         *ASTM D2982         △ 0.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150	71 <1 1007 1172 1004	90 1 1435 1809 1552	59 0 911 991 993
Sodium         ppm         ASTM D5185m         ■ 84         8         3           Potassium         ppm         ASTM D5185m         >20         ▲ 243         15         5           Glycol         %         *ASTM D2982         ▲ 0.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150 1350	71 <1 1007 1172 1004 1299	90 1 1435 1809 1552 1918	59 0 911 991 993 1200
Potassium         ppm         ASTM D5185m         >20         ▲ 243         15         5           Glycol         %         *ASTM D2982         ▲ 0.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150 1350 4250	71 <1 1007 1172 1004 1299 3306	90 1 1435 1809 1552 1918 5020	59 0 911 991 993 1200 3174
Glycol         %         *ASTM D2982         ▲ 0.06         NEG         NEG           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	100 450 3000 1150 1350 4250 limit/base	71 <1 1007 1172 1004 1299 3306 current	90 1 1435 1809 1552 1918 5020 history1	59 0 911 991 993 1200 3174 history2
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	100 450 3000 1150 1350 4250 limit/base	71 <1 1007 1172 1004 1299 3306  current 11	90 1 1435 1809 1552 1918 5020 history1	59 0 911 991 993 1200 3174 history2
Soot %         %         *ASTM D7844 >4         0.4         0.4         0.4           Nitration         Abs/cm         *ASTM D7624 >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415 >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414 >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >25	71 <1 1007 1172 1004 1299 3306  current 11 84	90 1 1435 1809 1552 1918 5020 history1 13	59 0 911 991 993 1200 3174 history2 5 3
Nitration         Abs/cm         *ASTM D7624         >20         9.2         9.0         8.9           Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >25	71 <1 1007 1172 1004 1299 3306  current 11 84 4 243	90 1 1435 1809 1552 1918 5020 history1 13 8	59 0 911 991 993 1200 3174 history2 5 3 5
Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	100 450 3000 1150 1350 4250 limit/base >25 >20	71 <1 1007 1172 1004 1299 3306  current 11 84 4 243 0.06	90 1 1435 1809 1552 1918 5020 history1 13 8 15 NEG	59 0 911 991 993 1200 3174 history2 5 3 5 NEG
Sulfation         Abs/.1mm         *ASTM D7415         >30         20.7         20.5         19.7           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         17.0         17.3         15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m	100  450 3000 1150 1350 4250  limit/base >25 >20	71 <1 1007 1172 1004 1299 3306	90 1 1435 1809 1552 1918 5020 history1 13 8 15 NEG history1	59 0 911 991 993 1200 3174 history2 5 3 5 NEG history2
Oxidation Abs/.1mm *ASTM D7414 >25 <b>17.0</b> 17.3 15.7	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7844	100  450 3000 1150 1350 4250  limit/base >25 >20  limit/base >4	71 <1 1007 1172 1004 1299 3306	90 1 1435 1809 1552 1918 5020 history1 13 8 15 NEG history1 0.4	59 0 911 991 993 1200 3174 history2 5 3 5 NEG history2 0.4
	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D7844 *ASTM D7844	100  450 3000 1150 1350 4250  limit/base >25 >20  limit/base >4 >20	71 <1 1007 1172 1004 1299 3306  current 11 84 243 0.06  current 0.4 9.2	90 1 1435 1809 1552 1918 5020 history1 13 8 15 NEG history1 0.4 9.0	59 0 911 991 993 1200 3174 history2 5 3 5 NEG history2 0.4 8.9
	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982  method *ASTM D7844 *ASTM D7624 *ASTM D7415	100  450 3000 1150 1350 4250  limit/base >25 >20  limit/base >4 >20 >30	71 <1 1007 1172 1004 1299 3306	90 1 1435 1809 1552 1918 5020 history1 13 8 15 NEG history1 0.4 9.0 20.5	59 0 911 991 993 1200 3174 history2 5 3 5 NEG history2 0.4 8.9 19.7
	Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation FLUID DEGRADAT	ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982 *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415 *Method	100  450 3000 1150 1350 4250  limit/base >25 >20  limit/base >4 >20 >30  limit/base	71 <1 1007 1172 1004 1299 3306  current 11 84 243 0.06  current 0.4 9.2 20.7  current	90 1 1435 1809 1552 1918 5020 history1 13 8 15 NEG history1 0.4 9.0 20.5 history1	59 0 911 991 993 1200 3174 history2 5 3 5 NEG history2 0.4 8.9 19.7 history2

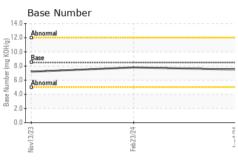


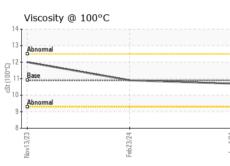
# **OIL ANALYSIS REPORT**

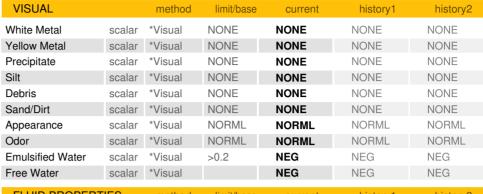




	N	<u>=</u>	7	
35 т	FT-IR (Direct	Trend)		
30 -	Oxidation Nitration			
25 <b>-</b>	Automai			-
Abs/cm	W- 22222- 222- 2222- 2222- 2222- 2222- 2222- 2222- 2222- 2222- 2222- 222			
15 -				
10-	***************************************			
51	3/23	1/24		un4/24
	Nov13/23	Feb23/24		Jun4

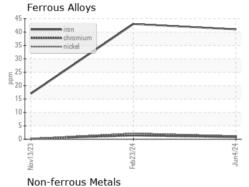


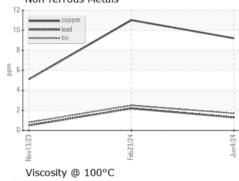


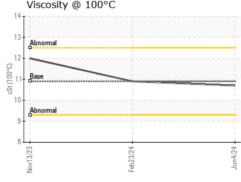


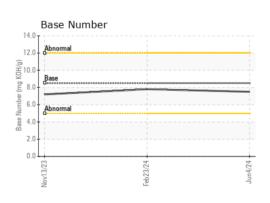
FLUID PROPER	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	10.9	10.7	10.9	12.0

### **GRAPHS**













Certificate 12367

Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06207305

: SBP0006777 Unique Number : 11074766

Received **Tested** 

: 11 Jun 2024 : 17 Jun 2024 Diagnosed

: 17 Jun 2024 - Wes Davis

Test Package : FLEET ( Additional Tests: Glycol ) 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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