

# **OIL ANALYSIS REPORT**

Sample Rating Trend



# Area Cranes 15050-HTC 50

Diesel Engine Fluid MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

## Wear

All component wear rates are normal.

### Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

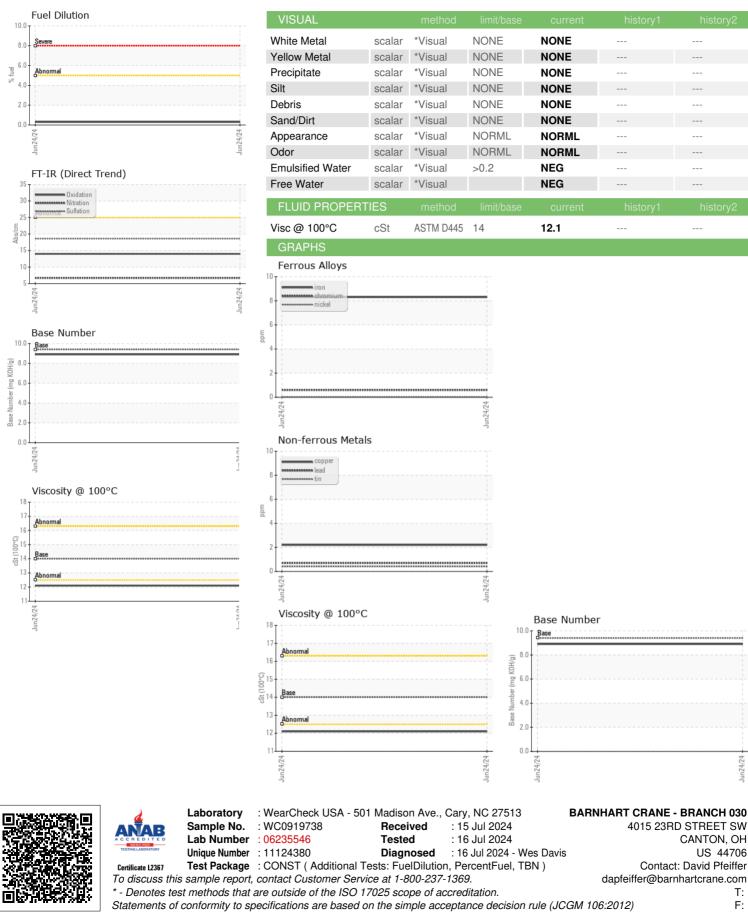
### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number       Client Info       24 Jun 2024           Sample Date       Client Info       7499           Oil Age       hrs       Client Info       0           Oil Age       hrs       Client Info       0           Oil Changed        Client Info       0           ContrAMINATION       Client Info       NCRMAL            CONTAMINATION       WC Method       >0.2       NEG           GontrAMINATION       WC Method       >0.2       NEG           Water       WC Method       >0.2       NEG           Water       WC Method       >0.2       NEG           Normium       ppm       ASTM D5185       >20       <1           Nickel       ppm       ASTM D5185       >33       <1           Aluminum       ppm       ASTM D5185       >330       21           Aluminum       ppm       ASTM D5185       >330	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         7499             Oil Age         hrs         Client Info         0             Oil Changed         Client Info         Changed             Sample Status         Imit/base         current         History1         History2           Water         WC Method         >0.2         NEG             WATM METALS         method         Imit/base         current         History1         History2           Iron         ppm         ASTM D5185m         >40         0             Silver         ppm         ASTM D5185m         >41              Copper         ppm         ASTM D5185m         >41              Cadmium         ppm         ASTM D5185m         0	Sample Number		Client Info		WC0919738		
Oil Age         Inrs         Client Info         0             Oil Changed         Client Info         Changed             Sample Status         NORMAL              CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             Mater         WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             Kikel         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >3         <1             Aluminum         ppm         ASTM D5185m         >3         <1             Aluminum         ppm         ASTM D5185m         >3         <1             Lead         ppm         ASTM D5185m         >30	Sample Date		Client Info		24 Jun 2024		
Oil Changed Sample Status         Client Info         Changed NORMAL             CONTAMINATION         method         limit/base         current         History1         History2           Water         WC Method         >0.2         NEG             Glycol         WC Method         >0.2         NEG             WEAR METALS         method         limit/base         current         History1         History2           Iron         ppm         ASTM D5185m         >100         8             Othornium         ppm         ASTM D5185m         >40         0             Nickel         ppm         ASTM D5185m         >40         -11             Auminum         ppm         ASTM D5185m         >20         4             Auminum         ppm         ASTM D5185m         >330         2             Auminum         ppm         ASTM D5185m         >15         -1             Auminum         ppm         ASTM D5185m         0         -1 <t< th=""><th>Machine Age</th><th>hrs</th><th>Client Info</th><th></th><th>7499</th><th></th><th></th></t<>	Machine Age	hrs	Client Info		7499		
Sample Status         Imit base         current         Inistory1         Inistory2           CONTAMINATION         method         limit/base         current         history1         inistory2           Water         WC Method         >0.2         NEG             Glycol         WC Method         NEG             WEAR METALS         method         imit/base         current         history1         history2           Iron         ppm         ASTM D5165m         >100         8             Nickel         ppm         ASTM D5165m         >20         <1             Silver         ppm         ASTM D5165m         >3         <1             Copper         ppm         ASTM D5165m         >30         2             Cadmium         ppm         ASTM D5165m         >30         2             Cadmium         ppm         ASTM D5165m         0         <1             Cadmium         ppm         ASTM D5165m         0         G0             <	Oil Age	hrs	Client Info		0		
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG             Wear         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5165m         >100         8             Nickel         ppm         ASTM D5165m         >4         0             Silver         ppm         ASTM D5165m         >3         <1             Aluminum         ppm         ASTM D5165m         >20         4             Copper         ppm         ASTM D5165m         >20         4             Aluminum         ppm         ASTM D5165m         >20         4             Aluminum         ppm         ASTM D5165m         >20         4             Aluminum         ppm         ASTM D5165m         >15         <1 </th <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Changed</th> <th></th> <th></th>	Oil Changed		Client Info		Changed		
Water         WC Method         >0.2         NEG             Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8             Nickel         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >3         <1             Aluminum         ppm         ASTM D5185m         >20         4             Copper         ppm         ASTM D5185m         >30         2             Vanadium         ppm         ASTM D5185m         >15         <1             Vanadium         ppm         ASTM D5185m         0         <1             ADDITIVES         method         imit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         60	Sample Status				NORMAL		
Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         0             Aluminum         ppm         ASTM D5185m         >4         0             Lead         ppm         ASTM D5185m         >20         4             Copper         ppm         ASTM D5185m         >20         4             Vanadium         ppm         ASTM D5185m         >20         4             Cadmium         ppm         ASTM D5185m         >20         4             Vanadium         ppm         ASTM D5185m         0         <1             Cadmium         ppm         ASTM D5185m         0         <1 <td< th=""><th>CONTAMINATION</th><th>٧</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	CONTAMINATION	٧	method	limit/base	current	history1	history2
Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         0             Aluminum         ppm         ASTM D5185m         >4         0             Lead         ppm         ASTM D5185m         >20         4             Copper         ppm         ASTM D5185m         >20         4             Cadmium         ppm         ASTM D5185m         >20         4             Cadmium         ppm         ASTM D5185m         >40         <1             ADDITIVES         method         limit/base         current         history1         history2           Barium         ppm         ASTM D5185m         0         <1 <t< th=""><th>Water</th><th></th><th>WC Method</th><th>&gt;0.2</th><th>NEG</th><th></th><th></th></t<>	Water		WC Method	>0.2	NEG		
Iron         ppm         ASTM D5185m         >100         8             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         0             Silver         ppm         ASTM D5185m         >3         <1             Aluminum         ppm         ASTM D5185m         >3         <1             Lead         ppm         ASTM D5185m         >3         <1             Copper         ppm         ASTM D5185m         >15         <1             Vanadium         ppm         ASTM D5185m         >15         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         41             Malybdenum         ppm         ASTM D5185m         0         60             Magnanese         ppm         ASTM D5185m	Glycol						
Iron         ppm         ASTM D5185m         >100         8             Chromium         ppm         ASTM D5185m         >20         <1             Nickel         ppm         ASTM D5185m         >4         0             Silver         ppm         ASTM D5185m         >3         <1             Aluminum         ppm         ASTM D5185m         >3         <1             Lead         ppm         ASTM D5185m         >3         <1             Copper         ppm         ASTM D5185m         >40         <1             Vanadium         ppm         ASTM D5185m         >15         <1             Vanadium         ppm         ASTM D5185m         0         <1             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         60             Magnasese         ppm         ASTM D5185m	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         >20         <1		nnm	ASTM D5185m	>100	0		
Nickel         ppm         ASTM D5185m         >4         0             Titanium         ppm         ASTM D5185m         >3         <1	-				-		
Titanium         ppm         ASTM D5185m         <1             Silver         ppm         ASTM D5185m         >3         <1							
Silver         ppm         ASTM D5185m         >3         <1             Aluminum         ppm         ASTM D5185m         >20         4             Lead         ppm         ASTM D5185m         >40         <1				~7	-		
Aluminum         ppm         ASTM D5185m         >20         4             Lead         ppm         ASTM D5185m         >40         <1				23			
Lead         ppm         ASTM D5185m         >40         <1             Copper         ppm         ASTM D5185m         >330         2             Tin         ppm         ASTM D5185m         >15         <1							
Copper         ppm         ASTM D5185m         >330         2             Tin         ppm         ASTM D5185m         >15         <1					-		
Tin         ppm         ASTM D5185m         >15         <1							
Vanadium         ppm         ASTM D5185m         <1							
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         9             Barium         ppm         ASTM D5185m         0         <1             Molybdenum         ppm         ASTM D5185m         0         60             Maganese         ppm         ASTM D5185m         0         840             Magnesium         ppm         ASTM D5185m         0         840             Magnesium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Sulfur         ppm         ASTM D5185m         1190              Sulfur         ppm         ASTM D5185m         2955              Sulfur         ppm         ASTM D5185m         20         2				>15			
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         9             Barium         ppm         ASTM D5185m         0         <1             Molybdenum         ppm         ASTM D5185m         0         60             Magnesium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Zinc         ppm         ASTM D5185m         949              Sulfur         ppm         ASTM D5185m         2955              Solicon         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20							
Boron         ppm         ASTM D5185m         0         9             Barium         ppm         ASTM D5185m         0         <1             Molybdenum         ppm         ASTM D5185m         0         60             Manganese         ppm         ASTM D5185m         0         840             Magnesium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Phosphorus         ppm         ASTM D5185m         1255              Sulfur         ppm         ASTM D5185m         949              Sulfur         ppm         ASTM D5185m         2955              Sulfur         ppm         ASTM D5185m         >25         3             Sulfur         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20		ррпп			U		
Barium         ppm         ASTM D5185m         0         <1							
Molybdenum         ppm         ASTM D5185m         0         60             Manganese         ppm         ASTM D5185m         0         840             Magnesium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Phosphorus         ppm         ASTM D5185m         0         840             Zinc         ppm         ASTM D5185m         949              Sulfur         ppm         ASTM D5185m         2955              Sulfur         ppm         ASTM D5185m         2955              Sulfur         ppm         ASTM D5185m         >20         2             Sodium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Soot %         %         *ASTM D5185						history1	history2
Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Phosphorus         ppm         ASTM D5185m         949              Zinc         ppm         ASTM D5185m         949              Sulfur         ppm         ASTM D5185m         949              Sulfur         ppm         ASTM D5185m         2955              Sulfur         ppm         ASTM D5185m         2955              Sodium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Soot %         %         *ASTM D7844         >3         0.3 <th>Boron</th> <th></th> <th>ASTM D5185m</th> <th>0</th> <th></th> <th></th> <th></th>	Boron		ASTM D5185m	0			
Magnesium         ppm         ASTM D5185m         0         840             Calcium         ppm         ASTM D5185m         0         840             Phosphorus         ppm         ASTM D5185m         949             Zinc         ppm         ASTM D5185m         949             Sulfur         ppm         ASTM D5185m         2955             Sulfur         ppm         ASTM D5185m         2955             Sulfur         ppm         ASTM D5185m         >25         3             Solicon         ppm         ASTM D5185m         >20         2             Sodium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         0.3	Boron Barium		ASTM D5185m ASTM D5185m	0	9 <1		
Calcium         ppm         ASTM D5185m         1255             Phosphorus         ppm         ASTM D5185m         949             Zinc         ppm         ASTM D5185m         949             Sulfur         ppm         ASTM D5185m         1190             Sulfur         ppm         ASTM D5185m         2955             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3             Sodium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Soot %         %         *ASTM D7844         >3         0.3             Nitration	Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	9 <1 60		
Phosphorus         ppm         ASTM D5185m         949             Zinc         ppm         ASTM D5185m         1190             Sulfur         ppm         ASTM D5185m         2955             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3             Sodium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         2             Soot %         %         ASTM D7844         >3         0.3             Soot %         %         *ASTM D7624         >20         6.7	Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	9 <1 60 0		
Zinc         ppm         ASTM D5185m         1190             Sulfur         ppm         ASTM D5185m         2955             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         3             Sodium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >20         3             Soot %         %         *ASTM D7844         >3         0.3             Soot %         %         *ASTM D7624         >20         6.7	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	9 <1 60 0 840		 
SulfurppmASTM D5185m2955CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>253SodiumppmASTM D5185m0PotassiumppmASTM D5185m>202Fuel%ASTM D3524>50.3INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.3NitrationAbs/cm*ASTM D7844>206.7SulfationAbs/.1mm*ASTM D7415>3018.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2514.0	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	9 <1 60 0 840 1255		
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>253SodiumppmASTM D5185m0PotassiumppmASTM D5185m>202Fuel%ASTM D3524>50.3INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.3NitrationAbs/cm*ASTM D7624>206.7SulfationAbs/.1mm*ASTM D7415>3018.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2514.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	9 <1 60 0 840 1255 949	  	
Silicon         ppm         ASTM D5185m         >25         3             Sodium         ppm         ASTM D5185m         0              Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D3524         >5         0.3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.7             Sulfation         Abs/.1mm         *ASTM D7624         >20         6.7             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	9 <1 60 0 840 1255 949 1190	    	
Sodium         ppm         ASTM D5185m         0             Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D3524         >5         0.3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.7             Sulfation         Abs/.1mm         *ASTM D7615         >30         18.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7614         >25         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0	9 <1 60 0 840 1255 949 1190	    	
Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D3524         >5         0.3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.7             Sulfation         Abs/rm         *ASTM D7415         >30         18.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.0	Boron Barium 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 ASTM D5185m	0 0 0 0 Iimit/base	9 <1 60 0 840 1255 949 1190 2955 current		
Fuel         %         ASTM D3524         >5         0.3             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.7             Sulfation         Abs/.1mm         *ASTM D7415         >30         18.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.0	Boron Barium 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 <b>method</b>	0 0 0 0 Iimit/base	9 <1 60 0 840 1255 949 1190 2955 current		
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.7             Sulfation         Abs/.1mm         *ASTM D7615         >30         18.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 0 0 0 Iimit/base	9 <1 60 0 840 1255 949 1190 2955 current 3	     history1 	    history2
Soot %         %         *ASTM D7844         >3         0.3             Nitration         Abs/cm         *ASTM D7624         >20         6.7             Sulfation         Abs/.1mm         *ASTM D7415         >30         18.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 <1 60 0 840 1255 949 1190 2955 <u>current</u> 3 0 2	     history1	     history2
Nitration         Abs/cm         *ASTM D7624         >20         6.7             Sulfation         Abs/.1mm         *ASTM D7415         >30         18.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 <1 60 0 840 1255 949 1190 2955 <u>current</u> 3 0 2	     history1	     history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         18.6             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 <u>limit/base</u> >25 >20 >5	9 <1 60 0 840 1255 949 1190 2955 current 3 0 2 2 0.3	     history1  	     history2  
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 <1 60 0 840 1255 949 1190 2955 current 3 0 2 0.3 current	     history1    history1	     history2  history2    history2
Oxidation Abs/.1mm *ASTM D7414 >25 14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 <1 60 0 840 1255 949 1190 2955 current 3 0 2 0.3 current 0.3	     history1    history1   	     history2     history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 <1 60 0 840 1255 949 1190 2955 current 3 0 2 0.3 current 0.3 6.7	      history1    history1	     history2    history2   
Base Number (BN)         mg KOH/g         ASTM D2896         9.4         8.9	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 <1 60 0 840 1255 949 1190 2955 <i>current</i> 3 0 2 0.3 <i>current</i> 0.3 6.7 18.6	      history1   history1  history1	      history2   history2  history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Solicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 <1 60 0 840 1255 949 1190 2955 Current 3 0 2 0.3 Current 0.3 6.7 18.6	       history1  history1  history1	       history2  history2  history2  history2



# **OIL ANALYSIS REPORT**



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