

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

# 20-140 (S/N 5KJJAED10KPKK7039)

Diesel Engine Fluid NOT GIVEN (--- GAL)

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

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

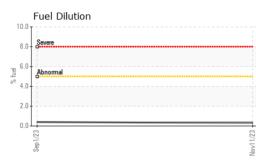
#### Fluid Condition

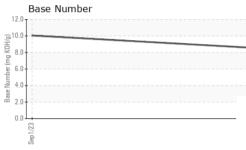
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

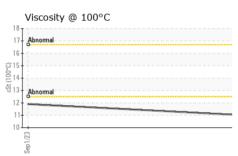
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.2         NEG         NEG            Glycol         WC Method         Imit/base         current         history1         history2           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m<>100         8         9            Chromium         ppm         ASTM D5185m<>20         1         1            Silver         ppm         ASTM D5185m<>3         0         0            Aluminum         ppm         ASTM D5185m<>20         4         6            Silver         ppm         ASTM D5185m<>20         4         6            Copper         ppm         ASTM D5185m<>30         2         2            Tin         ppm         ASTM D5185m         6         3            Adminum         ppm         ASTM D5185m         6         3            Adminum         ppm         ASTM D5185m         63         63 </th <th></th> <th></th> <th></th> <th>Sep2023</th> <th>Nov2023</th> <th></th> <th></th>				Sep2023	Nov2023		
Sample Date         Client Info         11 Nov 2023         01 Sep 2023            Machine Age         mis         Client Info         283255         271499            Oil Age         mis         Client Info         10000         271499            Sample Status         Client Info         10000         271499            Sample Status         Client Info         NVA         NA            CONTAMINATION         method         Imit/base         current         history1         history2           Water         WC Method         >0.2         NEG         NEG            Otromium         ppm         ASTM D5185n         >20         1         1            Nickel         ppm         ASTM D5185n         >20         1         1            Nickel         ppm         ASTM D5185n         >20         4         6            Nickel         ppm         ASTM D5185n         >20         4         6            Nickel         ppm         ASTM D5185n         >20         4         6            Romium         ppm         ASTM D	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date         Client Info         11 Nov 2023         01 Sep 2023            Machine Age         mis         Client Info         283255         271499            Oil Age         mis         Client Info         10000         271499            Sample Status         Client Info         NVA         NA            Sample Status         Client Info         NVA         NA            CONTAMINATION         method         imit/base         current         history1         history2           Water         WC Method         >0.2         NEG         NEG            WEAR METALS         method         imit/base         current         history1         history2           Iron         ppm         ASTM 05185m         >20         1         1            VEAR METALS         method         \$100         \$1              Iron         ppm         ASTM 05185m         >20         1         1            Nickel         ppm         ASTM 05185m         >40         0             Aumium         ppm         ASTM 0	Sample Number		Client Info		PCA0104620	PCA0104624	
Machine Age         mls         Client Info         283255         271499            Oil Age         mis         Client Info         10000         271499            Sample Status         Imit/base         current         Nistory1            CONTAMINATION         method         Imit/base         current         history1            Water         WC Method         >0.2         NEG         NEG            Weter         WC Method         >0.2         NEG          NEG            Nickel         ppm         ASTM D5185m         >10         0             Nickel         ppm         ASTM D5185m         >40         0         0            Lead         ppm         ASTM D5185m         >30         0             Asanum         ppm         ASTM D5185m </th <th></th> <th></th> <th></th> <th></th> <th>11 Nov 2023</th> <th>01 Sep 2023</th> <th></th>					11 Nov 2023	01 Sep 2023	
Oil Age         mis         Client Info         10000         271499            Oil Changed         Client Info         N/A         N/A         N/A            Sample Status         N         Imil/base         current         history1         history2           Water         WC Method         >0.2         NEG          Mistory2           Water         WC Method         >0.2         NEG         NEG            WEAR METALS         method         imil/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8         9            Chromium         ppm         ASTM D5185m         >20         1         1            Silver         ppm         ASTM D5185m         >20         4         6            Aluminum         ppm         ASTM D5185m         >20         4         6            Copper         ppm         ASTM D5185m         >30         0             Aluminum         ppm         ASTM D5185m         S30         2         2		mls					
Oli Changed         Client Info         N/A         N/A         N/A            Sample Status         Imil/base         current         NoRMAL         NoRMAL            CONTAMINATION         method         imil/base         current         history1         history2           Water         WC Method         >0.2         NEG         NEG            WeAR METALS         method         imil/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8         9            Nickel         ppm         ASTM D5185m         >20         1         1            Nickel         ppm         ASTM D5185m         >20         4         6            Bainum         ppm         ASTM D5185m         >20         4         6            Lead         ppm         ASTM D5185m         >20         4         6            Copper         ppm         ASTM D5185m         S30         2             Cadmium         ppm         ASTM D5185m         0         0	0					271499	
Sample Status         NORMAL         NORMAL         NORMAL            CONTAMINATION         method         imit/base         current         history1         history2           Water         WC Method         >0.2         NEG         NEG            Glycol         WC Method         NEG         NEG            WEAR METALS         method         imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8         9            Nickel         ppm         ASTM D5185m         >4         1         0            Silver         ppm         ASTM D5185m         >3         0         0            Copper         ppm         ASTM D5185m         >30         2         2            Vanadium         ppm         ASTM D5185m         >41         0         0            Cadmium         ppm         ASTM D5185m         0         0             ADDITIVES         method         imit/base         current         history1         history2           Manganese	0						
Water         WC Method         >0.2         NEG         NEG            Glycol         WC Method         Imit/base         current         NEG            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8         9            Chromium         ppm         ASTM D5185m         >20         1         1            Nickel         ppm         ASTM D5185m         >3         0         0            Aluminum         ppm         ASTM D5185m         >40         0         0            Silver         ppm         ASTM D5185m         >30         2         2            Aluminum         ppm         ASTM D5185m         >40         0         0            Copper         ppm         ASTM D5185m         >15         <1	Sample Status						
Water         WC Method         >0.2         NEG         NEG            Glycol         WC Method         Imit/base         current         NEG            WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8         9            Chromium         ppm         ASTM D5185m         >20         1         1            Nickel         ppm         ASTM D5185m         >3         0         0            Aluminum         ppm         ASTM D5185m         >40         0         0            Silver         ppm         ASTM D5185m         >30         2         2            Aluminum         ppm         ASTM D5185m         >40         0         0            Copper         ppm         ASTM D5185m         >15         <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Glycol         WC Method         NEG         NEG         NEG			WC Method	>0.2	NEG		
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         8         9            Chromium         ppm         ASTM D5185m         >20         1         1            Nickel         ppm         ASTM D5185m         >20         1         1            Titanium         ppm         ASTM D5185m         >20         4         6            Aluminum         ppm         ASTM D5185m         >3         0         0            Lead         ppm         ASTM D5185m         >30         2         2            Copper         ppm         ASTM D5185m         >30         2         2            Cadmium         ppm         ASTM D5185m         0         0            ADDTIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         63         63 </th <th></th> <th></th> <th></th> <th>20.L</th> <th></th> <th></th> <th></th>				20.L			
Iron         ppm         ASTM D5185m         >100         8         9            Chromium         ppm         ASTM D5185m         >20         1         1            Nickel         ppm         ASTM D5185m         >4         <1         0            Titanium         ppm         ASTM D5185m         >3         0         0            Silver         ppm         ASTM D5185m         >3         0         0            Aluminum         ppm         ASTM D5185m         >3         0         0            Lead         ppm         ASTM D5185m         >3         0         0            Copper         ppm         ASTM D5185m         >330         2         2            Vanadium         ppm         ASTM D5185m         >330         2         0            Cadmium         ppm         ASTM D5185m         >15         <1         <1            ADDITVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         63         63	,	0		12 . 24 /1			
Drive         ASTM D5185m         >20         1         1		5					history2
Nickel         ppm         ASTM D5185m         >4         <1	Iron				-		
Titanium         ppm         ASTM D5185m         <1	Chromium	ppm			-		
Silver         ppm         ASTM D5185m         >3         0         0            Aluminum         ppm         ASTM D5185m         >20         4         6            Lead         ppm         ASTM D5185m         >20         4         6            Copper         ppm         ASTM D5185m         >40         0         0            Vanadium         ppm         ASTM D5185m         >15         <1	Nickel	ppm	ASTM D5185m	>4	<1	0	
Aluminum         ppm         ASTM D5185m         >20         4         6            Lead         ppm         ASTM D5185m         >40         0         0            Copper         ppm         ASTM D5185m         >330         2         2            Tin         ppm         ASTM D5185m         >15         <1         <1            Cadmium         ppm         ASTM D5185m         >15         <1         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         6         3            Maganese         ppm         ASTM D5185m         63         63            Maganese         ppm         ASTM D5185m         63         63            Maganese         ppm         ASTM D5185m         1165         1169            Calcium         ppm         ASTM D5185m         1067         1032            Sulfur         ppm         ASTM D5185m         2573         3459            Sulfur         ppm	Titanium	ppm	ASTM D5185m		<1	<1	
Lead         ppm         ASTM D5185m         >40         0         0            Copper         ppm         ASTM D5185m         >330         2         2            Tin         ppm         ASTM D5185m         >15         <1         <1            Vanadium         ppm         ASTM D5185m         >15         <1         <1            Cadmium         ppm         ASTM D5185m         0         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         6         3            Magnese         ppm         ASTM D5185m         63         63            Magnesium         ppm         ASTM D5185m         1165         1169            Sulfur         ppm         ASTM D5185m         1067         1032            Sulfur         ppm         ASTM D5185m         1219         1277            Sulfur         ppm         ASTM D5185m         25         6         6            Sodium	Silver	ppm	ASTM D5185m	>3	0	0	
Copper         ppm         ASTM D5185m         >330         2         2            Tin         ppm         ASTM D5185m         >15         <1         <1            Vanadium         ppm         ASTM D5185m         0         0            Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         6         3            Barium         ppm         ASTM D5185m         63         63            Maganese         ppm         ASTM D5185m         63         63            Magnesium         ppm         ASTM D5185m         1165         1169            Calcium         ppm         ASTM D5185m         1067         1032            Sulfur         ppm         ASTM D5185m         2573         3459            Sulfur         ppm         ASTM D5185m         >25         6         6            Solium         ppm         ASTM D5185m         >20 <th>Aluminum</th> <th>ppm</th> <th>ASTM D5185m</th> <th>&gt;20</th> <th>4</th> <th>6</th> <th></th>	Aluminum	ppm	ASTM D5185m	>20	4	6	
Tin         ppm         ASTM D5185m         >15         <1	Lead	ppm	ASTM D5185m	>40	0	0	
Vanadium         ppm         ASTM D5185m         <1	Copper	ppm	ASTM D5185m	>330	2	2	
Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         6         3            Barium         ppm         ASTM D5185m         63         63            Manganese         ppm         ASTM D5185m         633         633            Magnesium         ppm         ASTM D5185m         633         633            Magnesium         ppm         ASTM D5185m         633         633            Magnesium         ppm         ASTM D5185m         899         903            Calcium         ppm         ASTM D5185m         1165         1169            Stilfur         ppm         ASTM D5185m         1067         1032            Sulfur         ppm         ASTM D5185m         2573         3459            Solicon         ppm         ASTM D5185m         >225         6         6            Solicon         ppm         ASTM D5185m         >20	Tin	ppm	ASTM D5185m	>15	<1	<1	
ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m63BariumppmASTM D5185m00MolybdenumppmASTM D5185m6363ManganeseppmASTM D5185m6363MagnesiumppmASTM D5185m899903CalciumppmASTM D5185m11651169PhosphorusppmASTM D5185m10671032ZincppmASTM D5185m25733459SulfurppmASTM D5185m25733459SulfurppmASTM D5185m2266SodiumppmASTM D5185m>2023INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.30.3INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7624>207.16.9SulfationAbs/nm*ASTM D7415>3018.518.2FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/itmn*ASTM D7414>2514.214.0	Vanadium	ppm	ASTM D5185m		<1	0	
Boron         ppm         ASTM D5185m         6         3            Barium         ppm         ASTM D5185m         0         0            Molybdenum         ppm         ASTM D5185m         63         63            Manganese         ppm         ASTM D5185m         <1         <1            Magnesium         ppm         ASTM D5185m         899         903            Calcium         ppm         ASTM D5185m         1165         1169            Calcium         ppm         ASTM D5185m         1067         1032            Vinc         ppm         ASTM D5185m         1219         1277            Sulfur         ppm         ASTM D5185m         2573         3459            Sulfur         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >20         2         3            Sodium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D5185m         >20	Cadmium	ppm	ASTM D5185m		0	0	
Barium         ppm         ASTM D5185m         0         0            Molybdenum         ppm         ASTM D5185m         63         63            Manganese         ppm         ASTM D5185m         899         903            Magnesium         ppm         ASTM D5185m         899         903            Calcium         ppm         ASTM D5185m         1165         1169            Calcium         ppm         ASTM D5185m         1067         1032            Zinc         ppm         ASTM D5185m         1219         1277            Sulfur         ppm         ASTM D5185m         2573         3459            Sulfur         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >20         2         3            Sodium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D5185m         >20         2         3            Soot %         %         *ASTM D5185m	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         63         63            Manganese         ppm         ASTM D5185m         &1         <1            Magnesium         ppm         ASTM D5185m         &99         903            Calcium         ppm         ASTM D5185m         1165         1169            Calcium         ppm         ASTM D5185m         1067         1032            Phosphorus         ppm         ASTM D5185m         1067         1032            Zinc         ppm         ASTM D5185m         1219         1277            Sulfur         ppm         ASTM D5185m         2573         3459            Sulfur         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D5185m         >20         2         3            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7824							
Manganese         ppm         ASTM D5185m         <1	Boron	ppm	ASTM D5185m		6	3	
Magnesium         ppm         ASTM D5185m         899         903            Calcium         ppm         ASTM D5185m         1165         1169            Phosphorus         ppm         ASTM D5185m         1067         1032            Zinc         ppm         ASTM D5185m         1219         1277            Sulfur         ppm         ASTM D5185m         2573         3459            Sulfur         ppm         ASTM D5185m         2573         3459            Sulfur         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D5185m         >20         2         3            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Sulfation				_			
Calcium         ppm         ASTM D5185m         1165         1169            Phosphorus         ppm         ASTM D5185m         1067         1032            Zinc         ppm         ASTM D5185m         1219         1277            Sulfur         ppm         ASTM D5185m         2573         3459            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D5324         >5         0.3         0.4            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Sulfation         Abs/.1mm         *ASTM D7624         >20         7.1         6.9 <t< th=""><th>Boron</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>0</th><th>0</th><th></th></t<>	Boron	ppm	ASTM D5185m		0	0	
Phosphorus         ppm         ASTM D5185m         1067         1032            Zinc         ppm         ASTM D5185m         1219         1277            Sulfur         ppm         ASTM D5185m         2573         3459            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >20         2         3            Potassium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D5324         >5         0.3         0.4            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Sulfation         Abs/.mm         *ASTM D7624         >20         7.1         6.9	Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m		0 63	0 63	
ZincppmASTM D5185m12191277SulfurppmASTM D5185m25733459CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>2566SodiumppmASTM D5185m>2023PotassiumppmASTM D5185m>2023Fuel%ASTM D5185m>2023INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.30.3SulfationAbs/cm*ASTM D7624>207.16.9SulfationAbs/.1mm*ASTM D7415>3018.518.2FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2514.214.0	Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 63 <1	0 63 <1	
SulfurppmASTM D5185m25733459CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>2566SodiumppmASTM D5185m>2023PotassiumppmASTM D5185m>2023Fuel%ASTM D5185m>2023INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.30.3NitrationAbs/cm*ASTM D7624>207.16.9SulfationAbs/Imm*ASTM D7624>3018.518.2FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/Imm*ASTM D7414>2514.214.0	Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 63 <1 899	0 63 <1 903	 
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m<>2566SodiumppmASTM D5185m34PotassiumppmASTM D5185m>2023Fuel%ASTM D5185m>2023INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.30.3NitrationAbs/cm*ASTM D7624>207.16.9SulfationAbs/Imm*ASTM D7615>3018.518.2FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/Imm*ASTM D7414>2514.214.0	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 63 <1 899 1165	0 63 <1 903 1169	  
Silicon         ppm         ASTM D5185m         >25         6         6            Sodium         ppm         ASTM D5185m         >20         3         4            Potassium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D5185m         >20         2         3            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Soot %         %         *ASTM D7844         >3         0.3         0.3            Suifation         Abs/cm         *ASTM D7624         >20         7.1         6.9            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 63 <1 899 1165 1067	0 63 <1 903 1169 1032	  
Sodium         ppm         ASTM D5185m         3         4            Potassium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D3524         >5         0.3         0.4            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         7.1         6.9            Sulfation         Abs/.1mm         *ASTM D7615         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	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 ASTM D5185m		0 63 <1 899 1165 1067 1219	0 63 <1 903 1169 1032 1277	  
Sodium         ppm         ASTM D5185m         3         4            Potassium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D3524         >5         0.3         0.4            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         7.1         6.9            Sulfation         Abs/.1mm         *ASTM D7415         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         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 ASTM D5185m	limit/base	0 63 <1 899 1165 1067 1219 2573	0 63 <1 903 1169 1032 1277 3459	
Potassium         ppm         ASTM D5185m         >20         2         3            Fuel         %         ASTM D3524         >5         0.3         0.4            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         7.1         6.9            Sulfation         Abs/.1mm         *ASTM D7415         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 63 <1 899 1165 1067 1219 2573 current	0 63 <1 903 1169 1032 1277 3459 history1	     history2
Fuel         %         ASTM D3524         >5         0.3         0.4            INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         7.1         6.9            Sulfation         Abs/.1mm         *ASTM D7415         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m		0 63 <1 899 1165 1067 1219 2573 current 6	0 63 <1 903 1169 1032 1277 3459 history1 6	    history2
Soot %         %         *ASTM D7844         >3         0.3         0.3            Nitration         Abs/cm         *ASTM D7624         >20         7.1         6.9            Sulfation         Abs/.1mm         *ASTM D7415         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	>25	0 63 <1 899 1165 1067 1219 2573 current 6 3	0 63 <1 903 1169 1032 1277 3459 history1 6 4	     history2
Nitration         Abs/cm         *ASTM D7624         >20         7.1         6.9            Sulfation         Abs/.1mm         *ASTM D7415         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >20	0 63 <1 899 1165 1067 1219 2573 <u>current</u> 6 3 2	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3	    history2
Nitration         Abs/cm         *ASTM D7624         >20         7.1         6.9            Sulfation         Abs/.1mm         *ASTM D7415         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >20 >5	0 63 <1 899 1165 1067 1219 2573 current 6 3 2 0.3	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3 0.4	     history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         18.5         18.2            FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         14.2         14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185m ASTM D5185m	>25 >20 >5 limit/base	0 63 <1 899 1165 1067 1219 2573 current 6 3 2 0.3 current	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3 0.4 history1	    history2     history2
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     14.2     14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185m ASTM D5185m	>25 >20 >5 limit/base >3	0 63 <1 899 1165 1067 1219 2573 <u>current</u> 6 3 2 0.3 2 0.3	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3 0.4 3 0.4 history1 0.3	    history2    history2 history2
Oxidation Abs/.1mm *ASTM D7414 >25 14.2 14.0	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844	>25 >20 >5 limit/base >3 >20	0 63 <1 899 1165 1067 1219 2573 current 6 3 2 0.3 2 0.3 current 0.3 7.1	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3 0.4 history1 0.3 6.9	      history2    history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>25 >20 >5 limit/base >3 >20 >30	0 63 <1 899 1165 1067 1219 2573 current 6 3 2 0.3 2 0.3 current 0.3 7.1 18.5	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3 0.4 history1 0.3 6.9 18.2	    history2    history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 <b>method</b> *ASTM D7844 *ASTM D7624 *ASTM D7615	>25 >20 >5 limit/base >3 >20 >30 limit/base	0 63 <1 899 1165 1067 1219 2573 <i>current</i> 6 3 2 0.3 <i>current</i> 0.3 7.1 18.5 <i>current</i>	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3 0.4 history1 0.3 6.9 18.2 history1	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li></ul>
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524 ASTM D3524 ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	>25 >20 >5 limit/base >3 >20 >30 limit/base	0 63 <1 899 1165 1067 1219 2573 <i>current</i> 6 3 2 0.3 <i>current</i> 0.3 7.1 18.5 <i>current</i> 14.2	0 63 <1 903 1169 1032 1277 3459 history1 6 4 3 0.4 history1 0.3 6.9 18.2 history1 14.0	    history2   history2  history2  history2

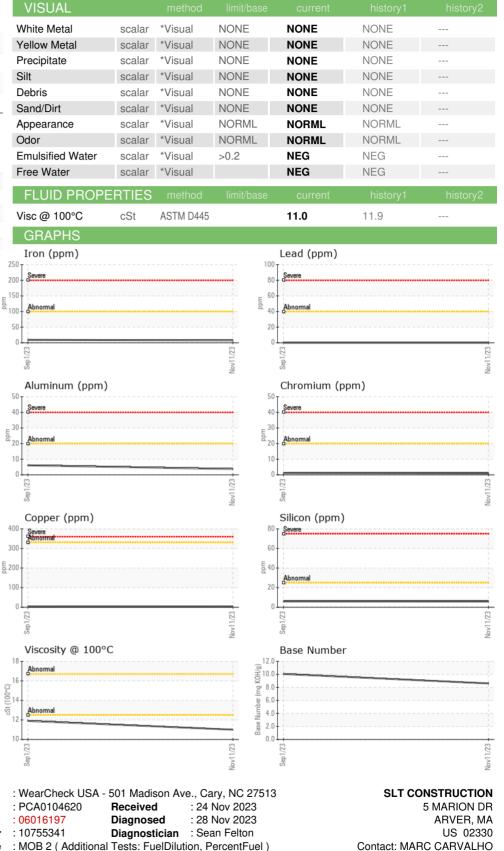


# **OIL ANALYSIS REPORT**









Unique Number Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel) Certificate L2367 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)

Laboratory

Sample No.

Lab Number

marcc@sltconstruction.net

T:

F: