

OIL ANALYSIS REPORT

Sample Rating Trend





Area KEMP QUARRIES / BCS - GRAVETTE [65545] 7266 Component

Diesel Engine

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

Sample Number Client Info PCA0086400 PCA0062443 PCA0062443 PCA0062443 PCA0082432 Sample Date ins Client Info 16174 15867 3913 Machine Age hrs Client Info 16174 15867 3913 Oil Age ins Client Info Changed NA Sample Status Image Client Info Changed NA CONTAMINATION method limit/base current history history Fuel WC Method S <1.0	SUPER15W40 (-	GAL)	Sep2012	Dec2013	Aug2018 Sep2022	Aug2023	
Sample Date Client Info 22 Aug 2023 22 Sep 2022 20 Aug 2011 Machine Age hrs Client Info 16174 15867 3913 Oil Age hrs Client Info 16174 15867 3913 Oil Changed Client Info Changed NCA ABNORMAL ABNORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >5 <1.0 <1.0 <1.0 <1.0 Glycol WC Method >5 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 1.0 <1.0 <1.0 <th>SAMPLE INFOR</th> <th>RMATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 16174 15867 3913 Oil Age hrs Client Info 16174 15867 500 Oil Changed Client Info Changed Changed N/A Sample Status Imit/base current history1 History1 Fuel WC Method >5 <1.0	Sample Number		Client Info		PCA0086400	PCA0062443	PCA3942205
Oil Age hrs Client Info 16174 15867 500 Oil Changed Client Info NORMAL NORMAL ABNORMAL Sample Status method limit/base current history1 history2 Fuel WC Method >5 <1.0	Sample Date		Client Info		22 Aug 2023	22 Sep 2022	20 Aug 2018
Oil Changed Sample Status Client Info Changed NORMAL N/A ABNORMAL CONTAMINATION method limit/base current history1 History2 Fuel WC Method >5 <1.0	Machine Age	hrs	Client Info		16174	15867	3913
Sample Status Imath of the start NORMAL NORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Oil Age	hrs	Client Info		16174	15867	500
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >5 <1.0	Oil Changed		Client Info		Changed	Changed	N/A
Fuel WC Method >5 <1.0 <1.0 <1.0 Glycol WC Method NEG NEG NEG 0.0 WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >20 1 16 52 Chromium ppm ASTM D5185m >20 1 1 8 Nickel ppm ASTM D5185m >2 61 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Vanadium ppm ASTM D5185m >15 <1 3 143 Vanadium ppm ASTM D5185m 15 <1 <1 0 Vanadium ppm ASTM D5185m 0 0 0 0 0 Cadmium ppm ASTM D5185m 0 70 70 51 <td>Sample Status</td> <td></td> <td></td> <td></td> <th>NORMAL</th> <td>NORMAL</td> <td>ABNORMAL</td>	Sample Status				NORMAL	NORMAL	ABNORMAL
Glycol WC Method NEG NEG 0.0 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 1 1 8 Nickel ppm ASTM D5185m >20 1 1 8 Nickel ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >2 1 3 8 Lead ppm ASTM D5185m >2 1 3 143 Tin ppm ASTM D5185m >15 <1	CONTAMINAT	ΓION	method	limit/base	current	history1	history2
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Nickel ppm ASTM D5185m >2 <1 0 2 Titanium ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >25 <1	Iron	ppm	ASTM D5185m	>100	11	16	52
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Calcium ppm ASTM D5185m 1252 1235 1961 Phosphorus ppm ASTM D5185m 11151 1144 945 Zinc ppm ASTM D5185m 1400 1385 1122 Sulfur ppm ASTM D5185m 3943 3855 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 ▲ 16 Sodium ppm ASTM D5185m >25 4 3 ▲ 16 Sodium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 6.8 8.4 Sulfation Abs/.mm<*ASTM D7414	Manganese	ppm	ASTM D5185m		<1	<1	
Phosphorus ppm ASTM D5185m 1151 1144 945 Zinc ppm ASTM D5185m 1400 1385 1122 Sulfur ppm ASTM D5185m 3943 3855 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 16 Sodium ppm ASTM D5185m >25 4 3 16 Sodium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.34 Nitration Abs/cm *ASTM D7624 >20 6.8 8.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >3 18.0 20.1 <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>1102</th> <td>1059</td> <td>615</td>	Magnesium	ppm	ASTM D5185m	0	1102	1059	615
Phosphorus ppm ASTM D5185m 1151 1144 945 Zinc ppm ASTM D5185m 1400 1385 1122 Sulfur ppm ASTM D5185m 3943 3855 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 3 16 Sodium ppm ASTM D5185m >25 4 3 16 Sodium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 6.8 8.4 Soot % % *ASTM D7624 >20 6.8 8.4 Sulfation Abs/cm *ASTM D7415 >30 18.0 20.1 FLUID DEGRADATION method limit/base current history1 <th< td=""><td>Calcium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>1252</th><td>1235</td><td>1961</td></th<>	Calcium	ppm	ASTM D5185m		1252	1235	1961
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Silicon ppm ASTM D5185m >25 4 3 ▲ 16 Sodium ppm ASTM D5185m 22 0 2 2 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >3 0.1 0.1 0.34 Nitration Abs/cm *ASTM D7624 >20 6.8 8.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7614 >20 6.8 8.4 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7614 >25 14.6 16.9 6	Sulfur		ASTM D5185m		3943	3855	
Sodium ppm ASTM D5185m 2 0 2 Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.34 Nitration Abs/cm *ASTM D7624 >20 6.8 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.0 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.6 16.9 6	CONTAMINAN	NTS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 2 5 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.34 Nitration Abs/cm *ASTM D7624 >20 6.8 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.0 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.6 16.9 6	Silicon	ppm	ASTM D5185m	>25	4	3	1 6
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.1 0.34 Nitration Abs/cm *ASTM D7624 >20 6.8 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.0 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.6 16.9 6	Sodium	ppm	ASTM D5185m		2	0	2
Soot % % *ASTM D7844 >3 0.1 0.1 0.34 Nitration Abs/cm *ASTM D7624 >20 6.8 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.0 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.6 16.9 6	Potassium	ppm	ASTM D5185m	>20	0	2	5
Nitration Abs/cm *ASTM D7624 >20 6.8 8.4 Sulfation Abs/.1mm *ASTM D7415 >30 18.0 20.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.6 16.9 6	INFRA-RED		method	limit/base	current	history1	history2
SulfationAbs/.1mm*ASTM D7415>3018.020.1FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2514.616.96	Soot %	%	*ASTM D7844	>3	0.1	0.1	0.34
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.6 16.9 6	Nitration	Abs/cm	*ASTM D7624	>20	6.8	8.4	
Oxidation Abs/.1mm *ASTM D7414 >25 14.6 16.9 6	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	20.1	
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.4 9.2 10.3	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	16.9	6
	Base Number (BN)	mg KOH/q	ASTM D2896	9.4	9.2	10.3	

DIAGNOOIO

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Changed fluid and filters . Engine has fuel / oil leak top galley)

Fluid

Wear

All component wear rates are normal.

Contamination

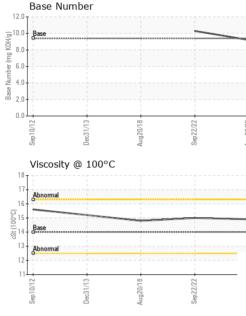
There is no indication of any contamination in the oil.

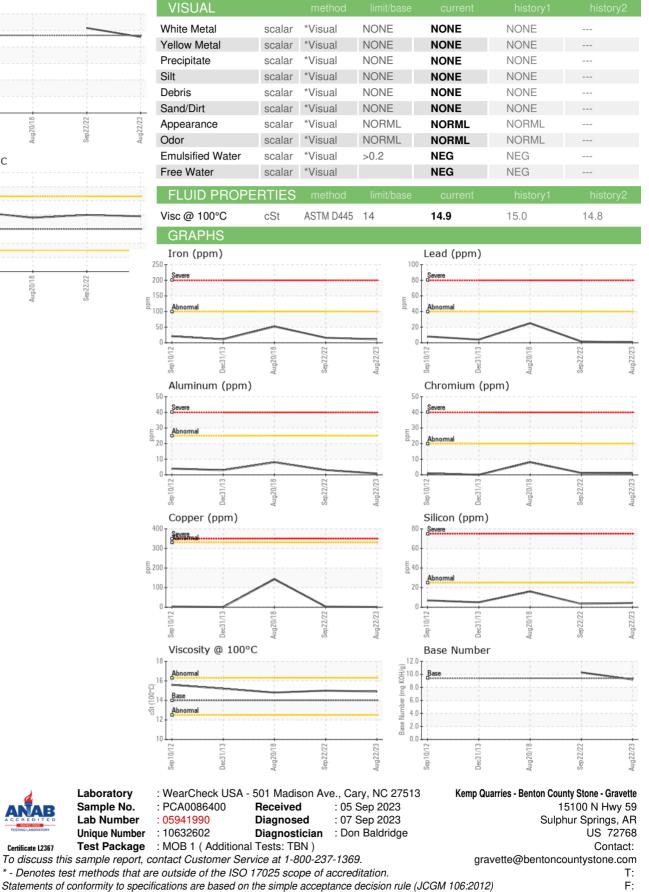
Fluid Condition

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



OIL ANALYSIS REPORT





Certificate L2367