

OIL ANALYSIS REPORT

Sample Rating Trend

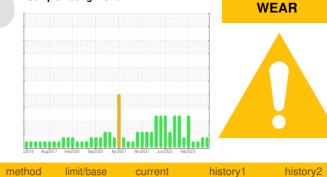


NEW FLYER 1102

Component **Diesel Engine**

SAFETY-KLEEN PERFORMANCE PLUS XHD-7 15W40 (--- GAL)

SAMPLE INFORMATION



DIAGNOSIS

Recommendation

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

A Wear

Copper ppm levels are abnormal. Bearing wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sample Number Client Info WC0830127 WC0791505 WC0811428 Sample Date Client Info 0 08 Aug 2023 28 Jun 2023 10 May 2013 Machine Age kms Client Info 0 0 0 Oll Changed kms Client Info N/A N/A N/A Sample Status Client Info N/A N/A N/A N/A Sample Status method limit/base current history1 history2 Fuel WC Method S3.0 <1.0 <1.0 <1.0 Glycol WC Method S5.0 <17 2.7 18 Chromium ppm ASIM DB18500 >2.6 <1 <1 <1 Nickel ppm ASIM DB18500 >2.6 <1 <1 <1 <1 Autimum ppm ASIM DB18500 >2.6 <6 <2 <0 <1< <1< <1 <1 <1 <1 <1< <1< <1<	SAMPLE INFURI		method	iimit/base	current	nistory i	nistoryz	
Machine AgekmsClient Info8212030803733Oil AgeKmsClient Info0000Sample StatusIClient InfoN/ANANASample StatusIImit/basecurrenthistory1history2FuelWC Method>3.0<1.0<1.0<1.0<1.0GlycolWC Method>3.0<1.0<1.0<1.0<1.0GlycolWC Method>5.5172.718ChromiumppmASTM Diskim>75172.718ChromiumppmASTM Diskim>2.2<1<1<1NickelppmASTM Diskim>2.2<1<1<1NickelppmASTM Diskim>2.2<1<1<1<1NickelppmASTM Diskim>2.5<6<62<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<	Sample Number		Client Info		WC0830127	WC0791505	WC0811428	
Olt Age Kms Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Imitibase current history1 history1 history2 Fuel WC Method S3.0 <1.0 <1.0 <1.0 <1.0 Glycol WC Method S3.0 <1.0 <1.0 <1.0 <1.0 WEAR METALS method limitbase current history1 history2 Iron ppm ASTM05165(m) >75 17 27 18 Chromium ppm ASTM05165(m) >2 <1 <1 <1 Silver ppm ASTM05165(m) >2 6 6 2 Copper pm ASTM05165(m) >2 6 6 2 Copper pm ASTM05165(m) >2 6 6 2 Copper N/A A 1 1 1 1 1 1 1	Sample Date		Client Info		08 Aug 2023	28 Jun 2023	10 May 2023	
Oil Changed Client Info N/A N/A N/A N/A Sample Status Image of the status Image of the status Image of the status N/A <	Machine Age	kms	Client Info		821203	0	803733	
Sample Status method Imit/base current ABNORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Glycol WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Glycol WC Method So.0 <1.0 <1.0 <1.0 <1.0 Glycol WC Method >5.0 17 2.7 18 Chromium ppm ASTM05156m >5 <1 1 <1 <1 Nickel ppm ASTM05156m >2 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1>	Oil Age	kms	Client Info		0	0	0	
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Glycol WC Method >3.0 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >75 17 27 18 Chromium ppm ASTM D5185(m) >4 0 0 0 Titanium ppm ASTM D5185(m) >2 <1 <1 <1 <1 Silver ppm ASTM D5185(m) >2 6 6 2 Copper ppm ASTM D5185(m) >4 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 1	Oil Changed		Client Info		N/A	N/A	N/A	
FuelWC Method>3.0<1.0	Sample Status				ABNORMAL	ABNORMAL	NORMAL	
FuelWC Method>3.0<1.0	CONTAMINATION	N	method	limit/base	current	history1	history2	
Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5165(m) >75 17 27 18 Chromium ppm ASTM D5165(m) >4 0 0 0 Titanium ppm ASTM D5165(m) >2 <1 <1 <1 Silver ppm ASTM D5165(m) >2 0 <1 0 Aluminum ppm ASTM D5165(m) >2 0 <1 0 Aluminum ppm ASTM D5165(m) >2 0 <1 0 Copper ppm ASTM D5165(m) >4 <1 <1 <1 Vanadium ppm ASTM D5165(m) 0 0 0 0 Cadmium ppm ASTM D5165(m) 0 0 0 0 Vanadium ppm ASTM D5165(m) 51 60 60								
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >75 17 27 18 Chromium ppm ASTM D5185(m) >5 <1 1 <1 Nickel ppm ASTM D5185(m) >2 <1 <1 <1 Silver ppm ASTM D5185(m) >2 0 <1 0 Aluminum ppm ASTM D5185(m) >2 0 <1 0 Aluminum ppm ASTM D5185(m) >2 6 6 2 Copper ppm ASTM D5185(m) >100 170 194 4 Tin ppm ASTM D5185(m) 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 18 1 2 1 Boron ppm ASTM D5185(m) 51 6 6				>3.0				
Iron ppm ASTM D5185(m) >75 17 27 18 Chromium ppm ASTM D5185(m) >5 <1 1 <1 Nickel ppm ASTM D5185(m) >2 <1 <1 <1 Silver ppm ASTM D5185(m) >2 0 <1 0 Aluminum ppm ASTM D5185(m) >15 1 1 2 Lead ppm ASTM D5185(m) >100 170 194 4 Tin ppm ASTM D5185(m) >4 <1 <1 <1 Vanadium ppm ASTM D5185(m) 0 0 <10 <10 Vanadium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 Boron ppm ASTM D5185(m) 18 1 2 1 Barium ppm ASTM D5185(m) 51 60	Glycol		WC Method		NEG	NEG	NEG	
Chromium ppm ASTM D5185m >5 <1	WEAR METALS		method	limit/base	current	history1	history2	
Nickel ppm ASTM D5165(m) >4 0 0 0 Titanium ppm ASTM D5165(m) >2 <1 <1 <1 Silver ppm ASTM D5165(m) >2 0 <1 0 Aluminum ppm ASTM D5165(m) >25 6 6 2 Copper ppm ASTM D5165(m) >100 170 194 4 Tin ppm ASTM D5165(m) >400 0 <1 <1 Antimony ppm ASTM D5165(m) 0 0 0 <1 Vanadium ppm ASTM D5165(m) 0 0 0 0 Cadmium ppm ASTM D5165(m) 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5165(m) 51 60 60 0 Magnesium ppm ASTM D5165(m) 51 60	Iron	ppm	ASTM D5185(m)	>75	17	27	18	
Titanium ppm ASTM D5185(m) >2 <1	Chromium	ppm	ASTM D5185(m)	>5	<1	1	<1	
Silver ppm ASTM D5185(m) >2 0 <1	Nickel	ppm	ASTM D5185(m)	>4	0	0	0	
Silver ppm ASTM D5185(m) >2 0 <1	Titanium		ASTM D5185(m)	>2	<1	<1	<1	
Atuminum ppm ASTM D5185(m) >15 1 1 2 Lead ppm ASTM D5185(m) >25 6 6 2 Copper ppm ASTM D5185(m) >40 170 1944 4 Tin ppm ASTM D5185(m) >4 <1 <1 <1 Antimony ppm ASTM D5185(m) >4 <1 <1 <1 Vanadium ppm ASTM D5185(m) >4 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 0 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185(m) 51 60 0 0 Magnese ppm ASTM D5185(m) 51 60 0 1034 1103 Phosphorus ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM	Silver	ppm	ASTM D5185(m)	>2	0	<1	0	
Copper ppm ASTM D5185(m) >100 ▲ 170 ▲ 194 4 Tin ppm ASTM D5185(m) >4 <1 <1 <1 Antimony ppm ASTM D5185(m) >4 <1 <1 <1 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 18 1 2 Barium ppm ASTM D5185(m) 0 0 0 Magnese ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 783 1070 1093 Zinc	Aluminum	ppm	ASTM D5185(m)	>15	1	1	2	
Copper ppm ASTM D5185(m) >100 ▲ 170 ▲ 194 4 Tin ppm ASTM D5185(m) >4 <1 <1 <1 Antimony ppm ASTM D5185(m) >4 <1 <1 <1 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 ADDITIVES method Imit/base current history1 history2 Boron ppm ASTM D5185(m) 18 1 2 Barium ppm ASTM D5185(m) 60 60 Magnese ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 783 1070 1093 Zinc ppm	Lead	ppm			6	6	2	
Tin ppm ASTM D5185(m) >4 <1	Copper	ppm	ASTM D5185(m)	>100	<u> </u>	1 94	4	
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 18 1 2 Barium ppm ASTM D5185(m) 51 60 0 Molybdenum ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 26 5 6 6 Lithium ppm ASTM D5185(m) 21 213	Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1	
Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 18 1 2 Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 51 60 60 Magnese ppm ASTM D5185(m) \$36 981 973 Calcium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) <5 5 6 Soldium ppm ASTM D5185(m) >20 <1 <1	Antimony	ppm	ASTM D5185(m)		0	0	<1	
Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 18 1 2 Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) <11 <1 <1 Magnesium ppm ASTM D5185(m) <336 981 973 Calcium ppm ASTM D5185(m) <783 10070 1093 Zinc ppm ASTM D5185(m) <783 1070 1093 Sulfur ppm ASTM D5185(m) <11854 2480 2686 Lithium ppm ASTM D5185(m) <1854 2480 2686 Sulfur ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >20	Vanadium	ppm	ASTM D5185(m)		0	0	0	
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 18 1 2 Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) 51 60 60 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) <<1 <1 <1 Sulfur ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >20 <t< th=""><th>Beryllium</th><th>ppm</th><th>ASTM D5185(m)</th><th></th><th>0</th><th>0</th><th>0</th></t<>	Beryllium	ppm	ASTM D5185(m)		0	0	0	
Boron ppm ASTM D5185(m) 18 1 2 Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 51 60 60 Manganese ppm ASTM D5185(m) <1 <1 <1 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current	Cadmium	ppm	ASTM D5185(m)		0	0	0	
Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 51 60 60 Manganese ppm ASTM D5185(m) <1 <1 <1 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) 1854 2480 2686 Silicon ppm ASTM D5185(m) <1 <1 <1 Sodium ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base cu	ADDITIVES		method	limit/base	current	history1	history2	
Barium ppm ASTM D5185(m) 0 0 0 Molybdenum ppm ASTM D5185(m) 51 60 60 Manganese ppm ASTM D5185(m) <1 <1 <1 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) <1 <1 <1 Sulfur ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D5185(m)	Boron	ppm	ASTM D5185(m)		18	1	2	
Molybdenum ppm ASTM D5185(m) 51 60 60 Manganese ppm ASTM D5185(m) <1 <1 <1 Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >20 <1 <1 0 Potassium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7	Barium		ASTM D5185(m)		0	0	0	
Magnesium ppm ASTM D5185(m) 836 981 973 Calcium ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) < <td><td< th=""><th>Molybdenum</th><th>ppm</th><th>ASTM D5185(m)</th><th></th><th>51</th><th>60</th><th>60</th></td<></td>	<td< th=""><th>Molybdenum</th><th>ppm</th><th>ASTM D5185(m)</th><th></th><th>51</th><th>60</th><th>60</th></td<>	Molybdenum	ppm	ASTM D5185(m)		51	60	60
Calcium ppm ASTM D5185(m) 1180 1034 1103 Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) < <td><1</td> <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfatio	<1	Manganese	ppm	ASTM D5185(m)		<1	<1	<1
Phosphorus ppm ASTM D5185(m) 783 1070 1093 Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7414* >20 10.5 8.7 7.1 Sulfation Abs/.1mm ASTM D7415* 30 23.2 21.9	Magnesium	ppm	ASTM D5185(m)		836	981	973	
Zinc ppm ASTM D5185(m) 899 1213 1217 Sulfur ppm ASTM D5185(m) 1854 2480 2686 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfation Abs/tmm ASTM D7415* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2	Calcium	ppm	ASTM D5185(m)		1180	1034	1103	
SulfurppmASTM D5185(m)185424802686LithiumppmASTM D5185(m)<1	Phosphorus	ppm	ASTM D5185(m)		783	1070	1093	
LithiumppmASTM D5185(m)<1	Zinc	ppm	ASTM D5185(m)		899	1213	1217	
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>25556SodiumppmASTM D5185(m)446PotassiumppmASTM D5185(m)>20<1<10INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%ASTM D7844*>60.60.70.3NitrationAbs/cmASTM D7844*>2010.58.77.1SulfationAbs/limitASTM D7415*>3023.221.920.0FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/limitASTM D7414*>2521.218.315.2	Sulfur	ppm	ASTM D5185(m)		1854	2480	2686	
Silicon ppm ASTM D5185(m) >25 5 5 6 Sodium ppm ASTM D5185(m) 4 4 6 Potassium ppm ASTM D5185(m) >20 <1 4 6 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfation Abs/rm ASTM D7415* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2	Lithium	ppm	ASTM D5185(m)		<1	<1	<1	
Sodium ppm ASTM D5185(m) 4 4 6 Potassium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfation Abs/.1mm ASTM D7415* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2	CONTAMINANTS	6	method	limit/base	current	history1	history2	
Sodium ppm ASTM D5185(m) 4 4 6 Potassium ppm ASTM D5185(m) >20 <1 <1 0 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfation Abs/.1mm ASTM D7415* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2	Silicon	ppm	ASTM D5185(m)	>25	5	5	6	
Potassium ppm ASTM D5185(m) >20 <1								
Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfation Abs/.1mm ASTM D7415* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2	Potassium			>20	<1	<1		
Soot % % ASTM D7844* >6 0.6 0.7 0.3 Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfation Abs/.1mm ASTM D7415* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2	INFRA-RED		method	limit/base	current	historv1	historv2	
Nitration Abs/cm ASTM D7624* >20 10.5 8.7 7.1 Sulfation Abs/.1mm ASTM D7624* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2		%						
Sulfation Abs/.1mm ASTM D7415* >30 23.2 21.9 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2								
FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mmASTM D7414*>2521.218.315.2								
Oxidation Abs/.1mm ASTM D7414* >25 21.2 18.3 15.2								
	FLUID DEGRADA	TION	method	limit/base				
:40:59) Rev: 1 Contact/Location: Jeff Parr - HAMHAM	Oxidation	Abs/.1mm	ASTM D7414*	>25	21.2	18.3	15.2	
	:40:59) Rev: 1				Contac	t/Location: Jeff	Parr - HAMHAM	

Report Id: HAMHAM [WCAMIS] 02575635 (Generated: 08/14/2023 14)

Page 1 of 2



OIL ANALYSIS REPORT

method

method

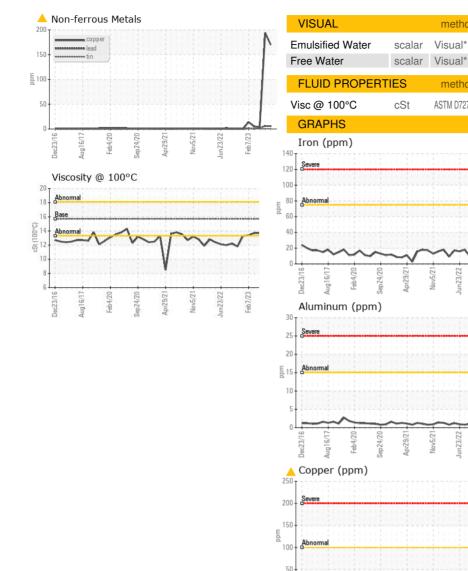
limit/base

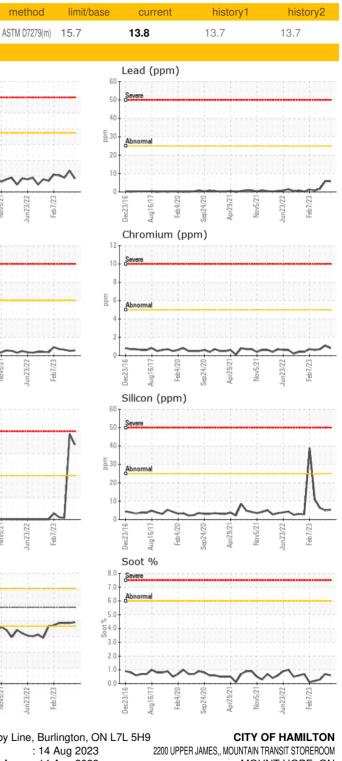
>0.2

current

NEG

NEG





history1

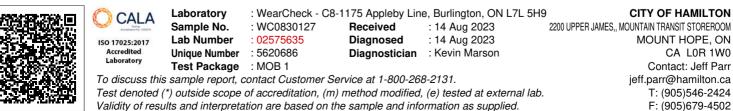
NEG

NEG

history2

NEG

NEG



Jov5/21

Validity of results and interpretation are based on the sample and information as supplied.

Feb4/20 en24/20

Viscosity @ 100°C

Aug16/17.

Dec23/

-ah4/20

ler73

20

18

16

St (100°C)

0r29/7

CC/2Cu

Feb7/23

Feb7/23

Report Id: HAMHAM [WCAMIS] 02575635 (Generated: 08/14/2023 14:40:59) Rev: 1

Contact/Location: Jeff Parr - HAMHAM