

(YA134221)

Natural Gas Engine

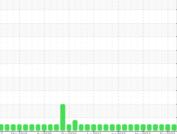
PETRO CANADA DURON GEO LD 15W40 (12 GAL)

2670C Component

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



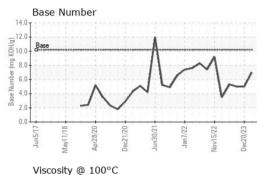


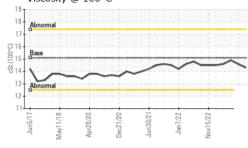
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esample at the next service interval to monitor.Sample DateClient Info23 Jan 202420 Dec 202303 Oct 2023/earMachine AgehrsClient Info769176917691I component wear rates are normal.Oil AgehrsClient Info209492504ontaminationOil ChangedClient InfoN/AN/AN/A	DIAGNOSIS	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Team Mainine Age hts Cleant Indo 7601 7601 7601 Normatinitation Contamination Cliant Indo 200 492 504 serie is nolidication of any contamination in the i. Cliant Indo NA NA NA suid Condition the DN readuli indicates that there is suitable to further service. Imitable Contamination Imitable Current Na NoRMAL NORM	Recommendation	Sample Number		Client Info		GFL0098136	GFL0088498	GFL0088516
Component wear rates are normal. Oil Age hrs Client Info 209 492 504 enter is no indication of any contamination in the total contamination Client Info NA N/A N/A evel is no indicates that there is suitable takinity remaining in the oil. The condition of the savinable for further service. WEAR METALS method Imit/base current history2 46 Veach METALS method Imit/base current history2 4 Veach METALS method Sittors Sittors 1 1 1 1 1 1 1 1	Resample at the next service interval to monitor.	Sample Date		Client Info		23 Jan 2024	20 Dec 2023	03 Oct 2023
i component wear rates are normal. Ohl Age hrs Client Info 209 492 504 ontamination Pree is no indication of any contamination in the i. Normal. NORMAL NORMAL<	Near	Machine Age	hrs	Client Info		7691	7691	7691
Sample Status NORMAL NORMAL NORMAL NORMAL val condition re BN result indicates that there is suitable alkininy remaining in the oil. The condition of the is suitable for further service. CONTAMINATION method Imit/base current history1 history1 history2 Valer WC Method >0.1 NEG NEG NEG Valer WC Method >0.1 NEG NEG NEG Valer WC Method >0.1 NEG NEG NEG Valer WC AMELOS method innubase current history1 history2 Valer WC Method >0.0 0<	All component wear rates are normal.	Oil Age	hrs	Client Info		209	492	504
Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL uid Condition the BN result indicates that there is suitable alinity remaining in the oil. The condition of the is suitable for further service. CONTAMINATION method Imit/base current History1 History2 Water WC Method >.0.1 NEG NEG NEG Is suitable for further service. method imit/base current History1 History2 Iron ppm ASTM 0586m >.60 3 2 4 Ornormium ppm ASTM 0586m >.2 0 0 0 Titianium ppm ASTM 0586m >.2 0 0 -1 -1 Lead ppm ASTM 0586m >.90 0 0 -1 -1 -1 ADDITIVES method Imit/base current History1 History2 Maganese ppm ASTM 0586m 50 27 13 12 Corpor ppm ASTM 0586m	Contamination	Oil Changed		Client Info		N/A	N/A	N/A
OUNT AMINA TON method unitables current history1 history2 Water WC Method >0.1 NEG	here is no indication of any contamination in the	Sample Status				NORMAL	NORMAL	NORMAL
By Burger Woldering Sec NEG NEG NEG NEG Water Woldering initiality initiality current history1 history2 Iron ppm ASTM 0518m >50 3 2 4 Nickel ppm ASTM 0518m >4 -1 -1 -1 Nickel ppm ASTM 0518m >3 0 0 -1 Nickel ppm ASTM 0518m >3 0 0 -1 Aluminum ppm ASTM 0518m >3 0 0 -1 Laad ppm ASTM 0518m >3 0 0 -1 Copper ppm ASTM 0518m >3 0 -1 -1 Vanadum ppm ASTM 0518m >3 0 -1 -1 Vanadum ppm ASTM 0518m 5 0 0 0 -1 Vanadum ppm ASTM 0518m 5 <t< th=""><th></th><th>CONTAMINAT</th><th>ION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>		CONTAMINAT	ION	method	limit/base	current	history1	history2
Tips suitable for further service. THE INTICE THE INTICE <th>ne BN result indicates that there is suitable</th> <th></th> <th></th> <th>WC Method</th> <th>>0.1</th> <th>NEG</th> <th>NEG</th> <th>NEG</th>	ne BN result indicates that there is suitable			WC Method	>0.1	NEG	NEG	NEG
Chromium ppm ASTM D5185m >4 <1		WEAR METAL	.S	method	limit/base	current	history1	history2
Nickel ppm ASTM DS185m >2 0 0 0 Ttranium ppm ASTM D5185m >3 0 0 <1 Silver ppm ASTM D5185m >30 0 0 <1 Aluminum ppm ASTM D5185m >30 0 0 11 <1 Lead ppm ASTM D5185m >30 0 0 11 <1 Copper ppm ASTM D5185m >35 <1 <1 <1 <1 Tin ppm ASTM D5185m >4 0 <1 <1 <1 Vanadium ppm ASTM D5185m 5 <1 <1 <1 <1 ADDITIVE method Imit/b5185m 50 277 13.0 12 Barium ppm ASTM D5185m 50 267 13.0 12 Barium ppm ASTM D5185m 50 277 13.0 12 <		Iron	ppm	ASTM D5185m	>50	3	2	4
Titanium ppm ASTM D5185m <1		Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Silver ppm ASTM D5185m >3 0 0 <1 Aluminum ppm ASTM D5186m >90 <1 1 <1 Leada ppm ASTM D5186m >90 6.1 <1 <1 Copper ppm ASTM D5185m >35 <1 <1 <1 Copper ppm ASTM D5185m >4 0 <1 <1 Vanaduum ppm ASTM D5185m >4 0 <1 <1 Cadmium ppm ASTM D5185m 0 0 <1 <1 ADDITIVES method limit/base current history1 Mistory1 Mistory2 Barrium ppm ASTM D5185m 50 Q Q 0 0 Magnesium ppm ASTM D5185m 50 Q Q 30 12 Barrium ppm ASTM D5185m 50 G G7 52 63 637 536 657 586 657 586 657 586 657 2863 273		Nickel	ppm	ASTM D5185m	>2	0	0	0
Aluminum ppm ASTM D5185m >9 <1		Titanium	ppm	ASTM D5185m		<1	0	<1
Lead ppm ASTM D5185m >300 0 0 1 Copper ppm ASTM D5185m >45 <1		Silver	ppm	ASTM D5185m	>3	0	0	<1
Copper ppm ASTM D5185m >35 <1 <1 <1 Tin ppm ASTM D5185m >4 0 <1		Aluminum	ppm	ASTM D5185m	>9	<1	1	<1
Tin ppm ASTM D5185m >4 0 <1 <1 Vanadium ppm ASTM D5185m 0 <1 <1 0 Cadmium ppm ASTM D5185m 0 <1 <1 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 27 13 12 Barium ppm ASTM D5185m 50 47 52 53 Manganese ppm ASTM D5185m 50 47 52 53 Manganese ppm ASTM D5185m 50 587 586 657 Calcium ppm ASTM D5185m 780 747 744 Zinc ppm ASTM D5185m 780 785 747 744 Zinc ppm ASTM D5185m 780 747 24893 Sulfur ppm ASTM D5185m 780 747 744 Zinc ppm ASTM D5185m 780 747 744 <th< td=""><td></td><td>Lead</td><td>ppm</td><td>ASTM D5185m</td><td>>30</td><th>0</th><td>0</td><td>1</td></th<>		Lead	ppm	ASTM D5185m	>30	0	0	1
Vanadium ppm ASTM D5185m <1		Copper	ppm	ASTM D5185m	>35	<1	<1	<1
Cadmium ppm ASTM D5185m 0 <1 <1 ADDITIVES method limit/base current history1 Boron ppm ASTM D5185m 50 27 13 12 Barium ppm ASTM D5185m 50 27 13 12 Barium ppm ASTM D5185m 50 47 52 53 Magnesse ppm ASTM D5185m 50 47 52 53 Magnesium ppm ASTM D5185m 50 47 54 56 Calcium ppm ASTM D5185m 510 1615 1546 1838 Phosphorus ppm ASTM D5185m 780 785 747 744 Zinc ppm ASTM D5185m 200 2506 2573 2893 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >20 0 10.1 <td></td> <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>4</td> <th>0</th> <td><1</td> <td><1</td>		Tin	ppm	ASTM D5185m	>4	0	<1	<1
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 27 13 12 Barium ppm ASTM D5185m 50 27 13 12 Barium ppm ASTM D5185m 50 47 52 53 Manganese ppm ASTM D5185m 0 <1		Vanadium	ppm	ASTM D5185m		<1	<1	0
Boron ppm ASTM D5185m 50 27 13 12 Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 47 52 53 Manganese ppm ASTM D5185m 60 587 586 657 Calcium ppm ASTM D5185m 1510 1615 1546 1838 Posphorus ppm ASTM D5185m 1510 1615 1546 1838 Posphorus ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINATS method imit/base current history1 history2 Silicon ppm ASTM D5185m >20 0 1 2 NFRA-RED method imi		Cadmium	ppm	ASTM D5185m		0	<1	<1
Barium ppm ASTM D5185m 5 0 0 0 Molybdenum ppm ASTM D5185m 50 47 52 53 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 587 586 657 Calcium ppm ASTM D5185m 560 587 586 657 Calcium ppm ASTM D5185m 560 587 586 657 Calcium ppm ASTM D5185m 780 785 747 744 Zinc ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 0 1 2 Noressium ppm ASTM D5185m >20		ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 50 47 52 53 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 587 586 657 Calcium ppm ASTM D5185m 1510 1615 1546 1838 Phosphorus ppm ASTM D5185m 780 787 744 1099 Sulfur ppm ASTM D5185m 870 971 1012 10993 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINANT method Imit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >20 0 1 2 NERASSIUM ppm ASTM D5185m >20 0 1 2 Sodium ppm ASTM D5185m >20 0 0 0 0 0 1 NERASSI		Boron	ppm	ASTM D5185m	50	27	13	12
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 560 587 586 657 Calcium ppm ASTM D5185m 1510 1615 1546 1838 Phosphorus ppm ASTM D5185m 780 785 747 744 Zinc ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >20 0 1 2 Silicon ppm ASTM D5185m >20 0 1 2 Sodium ppm ASTM D5185m >20 0 0 0 1 Notasium ppm								1
Magnesium ppm ASTM D5185m 560 587 586 657 Calcium ppm ASTM D5185m 1510 1615 1546 1838 Phosphorus ppm ASTM D5185m 780 785 747 744 Zinc ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINAITY method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >20 0 1 2 INFRA-RED method limit/base current history1 history2 Soot % % 'ASTM D7624 >20 8.2 10.4 10.8 Sulfation Abs/.tmm 'ASTM D7415 >30 19.7 21.7 21.9 FLUID DEGRADATION 'ASTM D74		Barium			5			0
Calcium ppm ASTM D5185m 1510 1615 1546 1838 Phosphorus ppm ASTM D5185m 780 785 747 744 Zinc ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >20 0 1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 1 Nitration Abs/cm *ASTM D7624 >20 8.2 10.4 10.8 Sulfation Abs/.tmm *ASTM D7624 >20 8.2 10.4 10.8 Sulfation Abs/.tmm <			ppm	ASTM D5185m		0	0	0
Phosphorus ppm ASTM D5185m 780 785 747 744 Zinc ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINANTS method imit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >20 0 1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 8.2 10.4 10.8 Sulfation Abs/cm *ASTM D7415 >30 19.7 21.7 21.9 FLUID DEGRADATION method limit/base		Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	50	0 47	0 52	0 53
Zinc ppm ASTM D5185m 870 971 1012 1099 Sulfur ppm ASTM D5185m 2040 2506 2573 2893 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >+100 4 3 4 Sodium ppm ASTM D5185m >20 0 1 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7644 0 0 0.1 10.8 Sulfation Abs/.tmm *ASTM D7644 >20 8.2 10.4 10.8 Sulfation Abs/.tmm *ASTM D7415 >30 <th></th> <th>Molybdenum Manganese</th> <th>ppm ppm ppm</th> <th>ASTM D5185m ASTM D5185m ASTM D5185m</th> <th>50 0</th> <th>0 47 <1</th> <th>0 52 <1</th> <th>0 53 <1</th>		Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0	0 47 <1	0 52 <1	0 53 <1
SulfurppmASTM D5185m2040250625732893CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>+100434SodiumppmASTM D5185m>+100434SodiumppmASTM D5185m>20012PotassiumppmASTM D5185m>20012INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844000.1NitrationAbs/cm*ASTM D7624>208.210.410.8SulfationAbs/1mm*ASTM D7415>3019.721.721.9FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/1mm*ASTM D7414>2516.318.219.1		Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560	0 47 <1 587	0 52 <1 586	0 53 <1 657
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>+100434SodiumppmASTM D5185m>+100567PotassiumppmASTM D5185m>20012INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844000.1NitrationAbs/cm*ASTM D7624>208.210.410.8SulfationAbs/.1mm*ASTM D7415>3019.721.721.9FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2516.318.219.1		Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510	0 47 <1 587 1615	0 52 <1 586 1546	0 53 <1 657 1838
SiliconppmASTM D5185m>+100434SodiumppmASTM D5185m567PotassiumppmASTM D5185m>20012INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844000.1NitrationAbs/cm*ASTM D7624>208.210.410.8SulfationAbs/1m*ASTM D7624>3019.721.721.9FLUID DEGRADATION methodlimit/basecurrenthistory1history2OxidationAbs/1m*ASTM D7414>2516.318.219.1		Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780	0 47 <1 587 1615 785	0 52 <1 586 1546 747	0 53 <1 657 1838 744
SodiumppmASTM D5185m567PotassiumppmASTM D5185m>20012INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844000.1NitrationAbs/cm*ASTM D7624>208.210.410.8SulfationAbs/1mm*ASTM D7415>3019.721.721.9FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/1mm*ASTM D7414>2516.318.219.1		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780 870	0 47 <1 587 1615 785 971	0 52 <1 586 1546 747 1012	0 53 <1 657 1838 744 1099
PotassiumppmASTM D5185m>20012INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844000.1NitrationAbs/cm*ASTM D7624>208.210.410.8SulfationAbs/.1mm*ASTM D7415>3019.721.721.9FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2516.318.219.1		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	50 0 560 1510 780 870 2040	0 47 <1 587 1615 785 971 2506	0 52 <1 586 1546 747 1012 2573	0 53 <1 657 1838 744 1099 2893
INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844000.1NitrationAbs/cm*ASTM D7624>208.210.410.8SulfationAbs/.1mm*ASTM D7415>3019.721.721.9FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2516.318.219.1		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 limit/base	0 47 <1 587 1615 785 971 2506 current	0 52 <1 586 1546 747 1012 2573 history1	0 53 <1 657 1838 744 1099 2893 history2
Soot % % *ASTM D7844 0 0 0.1 Nitration Abs/cm *ASTM D7624 >20 8.2 10.4 10.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.7 21.7 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.3 18.2 19.1		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 method	50 0 560 1510 780 870 2040 limit/base	0 47 <1 587 1615 785 971 2506 <u>current</u> 4	0 52 <1 586 1546 747 1012 2573 history1 3	0 53 <1 657 1838 744 1099 2893 history2 4
Nitration Abs/cm *ASTM D7624 >20 8.2 10.4 10.8 Sulfation Abs/1mm *ASTM D7415 >30 19.7 21.7 21.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 16.3 18.2 19.1		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm 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	50 0 560 1510 780 870 2040 limit/base >+100	0 47 <1 587 1615 785 971 2506 current 4 5	0 52 <1 586 1546 747 1012 2573 history1 3 6	0 53 <1 657 1838 744 1099 2893 history2 4 7
SulfationAbs/.1mm*ASTM D7415>3019.721.721.9FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2516.318.219.1		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 2040 >+100 >+100	0 47 <1 587 1615 785 971 2506 <u>current</u> 4 5 0	0 52 <1 586 1546 747 1012 2573 history1 3 6 1	0 53 <1 657 1838 744 1099 2893 history2 4 7 2
SulfationAbs/.1mm*ASTM D7415>3019.721.721.9FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2516.318.219.1		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 2040 >+100 >+100	0 47 <1 587 1615 785 971 2506 current 4 5 0	0 52 <1 586 1546 747 1012 2573 history1 3 6 1 1 history1	0 53 <1 657 1838 744 1099 2893 history2 4 7 2 history2
Oxidation Abs/.1mm *ASTM D7414 >25 16.3 18.2 19.1		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 limit/base >+100 	0 47 <1 587 1615 785 971 2506 <u>current</u> 4 5 0 <u>current</u>	0 52 <1 586 1546 747 1012 2573 history1 3 6 1 1 history1 0	0 53 <1 657 1838 744 1099 2893 history2 4 7 2 history2 0.1
		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 2040 >+100 >+100 >20 Iimit/base	0 47 <1 587 1615 785 971 2506 <u>current</u> 4 5 0 <u>current</u> 0 8.2	0 52 <1 586 1546 747 1012 2573 history1 3 6 1 1 history1 0 10.4	0 53 <1 657 1838 744 1099 2893 history2 4 7 2 4 7 2 history2 0.1 10.8
		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	<pre>ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm</pre>	ASTM D5185m ASTM D5185m	50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base >20 limit/base	0 47 <1 587 1615 785 971 2506 Current 4 5 0 Current 0 8.2 19.7	0 52 <1 586 1546 747 1012 2573 history1 3 6 1 1 history1 0 10.4 21.7	0 53 <1 657 1838 744 1099 2893 history2 4 7 2 4 7 2 <u>history2</u> 0.1 10.8 21.9
		Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	50 0 560 1510 780 870 2040 limit/base >20 limit/base >20 >30	0 47 <1 587 1615 785 971 2506 current 4 5 0 current 0 8.2 19.7 current	0 52 <1 586 1546 747 1012 2573 <u>history1</u> 3 6 1 1 <u>history1</u> 0 10.4 21.7 <u>history1</u>	0 53 <1 657 1838 744 1099 2893 history2 4 7 2 history2 0.1 10.8 21.9 history2

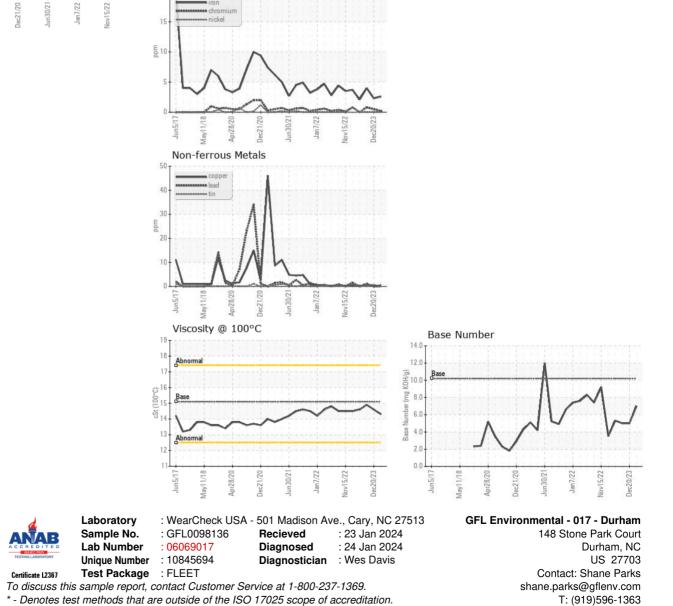


OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.6	14.9
GRAPHS						
Ferrous Alloys						



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: Shane Parks

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