

**Natural Gas Engine** 

(ML7006)

**2687C** Component

# **PROBLEM SUMMARY**

Nov10/

1777

Mar21

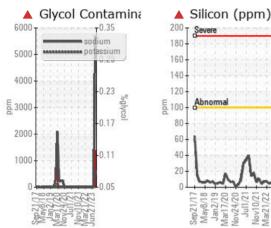
Mar 17 Vov24 ΠP

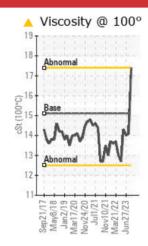
# Sample Rating Trend

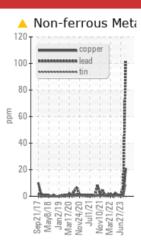


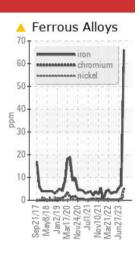
PETRO CANADA DURON GEO LD 15W40 (36 QTS)

### COMPONENT CONDITION SUMMARY









#### RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS						
Sample Status				SEVERE	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>50	<u> </u>	6	5
Chromium	ppm	ASTM D5185m	>4	<b>4</b> 5	<1	<1
Lead	ppm	ASTM D5185m	>30	<u> </u>	7	<1
Copper	ppm	ASTM D5185m	>35	<b>A</b> 21	0	1
Tin	ppm	ASTM D5185m	>4	<u> </u>	<1	0
Silicon	ppm	ASTM D5185m	>+100	<b>145</b>	5	4
Sodium	ppm	ASTM D5185m		<b>6</b> 5708	14	7
Potassium	ppm	ASTM D5185m	>20	<b>622</b>	1	<1
Glycol	%	*ASTM D2982		<b>4</b> 0.12		
Visc @ 100°C	cSt	ASTM D445	15.1	<b>17.4</b>	14.1	14.0

Customer Id: GFL002 Sample No.: PCA0101762 Lab Number: 06104051 Test Package: FLEET



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To discuss the diagnosis or test data: Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS					
Action	Status	Date	Done By	Description	
Resample			?	We recommend an early resample to monitor this condition.	
Check Dirt Access			?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.	
Check Glycol Access			?	We advise that you check for the source of the coolant leak.	

#### HISTORICAL DIAGNOSIS



 $\checkmark$ 

28 Aug 2023 Diag: Wes Davis

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



view report

27 Jun 2023 Diag: Wes Davis

#### NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

#### 03 Nov 2022 Diag: Angela Borella



Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





# **OIL ANALYSIS REPORT**



Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (36 QTS)

#### DIAGNOSIS

#### Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

#### 🔺 Wear

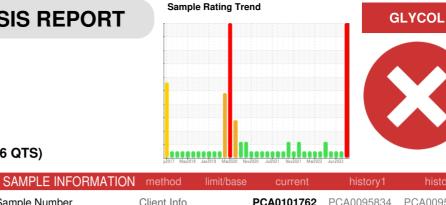
Cylinder, crank, or cam shaft wear is indicated. Bearing and/or bushing wear is indicated.

#### Contamination

Sodium and/or potassium levels are high. Test for glycol is positive. Elemental levels of silicon (Si) and aluminum (AI) indicate alumina-silicate (coarse dirt) ingress.

#### Fluid Condition

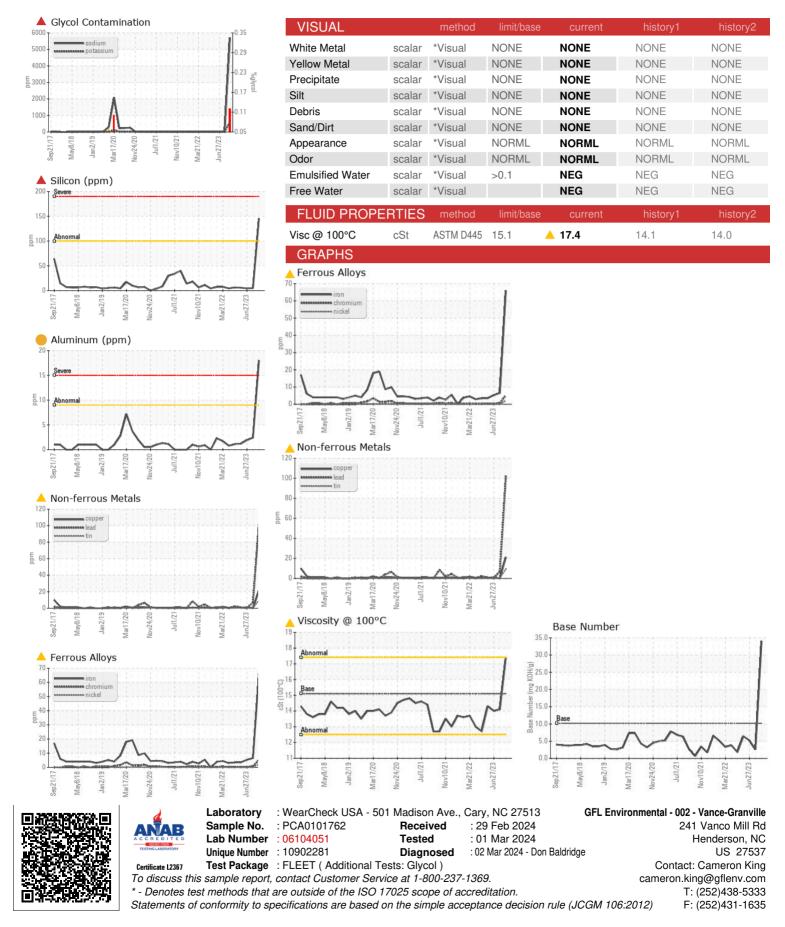
The oil viscosity is higher than normal. The oil is no longer serviceable.



Sample Number   Client Info   PCA01017E2   PCA00383.4   PCA00383.4   PCA00383.4   PCA00383.4     Sample Date   Client Info   28 Feb 2024   28 Aug 2023   27 Jun 2023     Machine Age   hrs   Client Info   17254   16063   15545     Oil Changed   Client Info   1191   518   1759     Oil Changed   Client Info   Changed   Changed   Changed   Changed     Sample Status   Nethod   setVERE   NORMAL   NORMAL   NORMAL     CONTAMINATION   method   Imit/base   current   history1   history2     Water   WC Method   >0.1   NEG   NEG   SetVERE   NORMAL     Iron   ppm   ASTM 05185m   >2   2   0   0     Silver   ppm   ASTM 05185m   >30   0   0   0     Silver   ppm   ASTM 05185m   >30   102   7   <1     Contraminum   ppm   ASTM 05185m   >30   21			method	innii/base	Current	mistoryi	mstoryz
Machine Age   hrs   Client Info   17254   16063   15545     Oil Age   hrs   Client Info   Changed   Changed   Changed     Sample Status   Client Info   Changed   Changed   Changed   Changed     QOI Changed   WC Method   >0.1   NCRMAL   NORMAL   NORMAL     Water   WC Method   >0.1   NEG   NEG   NEG     Water   WC Method   >0.1   NEG   NEG   NEG     Iron   ppm   ASTM D5185m   >50   666   6   5     Chromium   ppm   ASTM D5185m   >22   2   0   0     Silver   ppm   ASTM D5185m   >3   0   0   0     Auminum   ppm   ASTM D5185m   >3   0   0   102   7   <102     Copper   ppm   ASTM D5185m   >3   0   0   0   0     Copper   ppm   ASTM D5185m   >35   21 <t< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>PCA0101762</th><th>PCA0095834</th><th>PCA0095830</th></t<>	Sample Number		Client Info		PCA0101762	PCA0095834	PCA0095830
Oil Age   Ins   Client Info   1191   518   1759     Oil Changed   Client Info   Changed   Chang	Sample Date		Client Info		28 Feb 2024	28 Aug 2023	27 Jun 2023
Oil Changed Sample Status   Client Info   Changed SEVERE   Changed NORMAL   Changed NORMAL   Changed NORMAL   Changed NORMAL     CONTAMINATION   method   imit/base   current   history1   history2     Water   WC Method   >0.1   NEG   NEG   NEG     WEAR METALS   method   imit/base   current   history1   history2     Iron   ppm   ASTM D5185m   >50   4   66   5     Chromium   ppm   ASTM D5185m   >2   2   0   0     Nickel   ppm   ASTM D5185m   >3   0   0   0     Silver   ppm   ASTM D5185m   >30   102   7   <1     Cadmium   ppm   ASTM D5185m   >30   0   0   0     Cadmium   ppm   ASTM D5185m   50   30   8   13     Barium   ppm   ASTM D5185m   50   300   51   55     Maganesium   ppm   ASTM D518	Machine Age	hrs	Client Info		17254	16063	15545
Sample Status   Initial Sevene   NORMAL   NORMAL     CONTAMINATION   method   imit/base   current   history1   history2     Water   WC Method   >0.1   NEG   NEG   NEG     Wetar   WC Method   >0.1   NEG   NEG   NEG     Wetar   WC Method   >0.1   NEG   NEG   NEG     Wetar   method   imit/base   current   history1   history2     Iron   ppm   ASTM D5185m   >50   666   6   5     Silver   ppm   ASTM D5185m   >4   5   <1	Oil Age	hrs	Client Info		1191	518	1759
CONTAMINATION   method   limit/base   current   history1   history2     Water   WC Method   >0.1   NEG   NEG   NEG     Wear   ppm   ASTM D5185m   >50   66   6   5     Chromium   ppm   ASTM D5185m   >22   2   0   0     Nickel   ppm   ASTM D5185m   >22   2   0   0     Aluminum   ppm   ASTM D5185m   >3   0   0   0     Aluminum   ppm   ASTM D5185m   >3   0   0   0   0     Aluminum   ppm   ASTM D5185m   >30   4   102   7   <1   0   0     Aluminum   ppm   ASTM D5185m   >30   4   102   0   0   0     Vanadium   ppm   ASTM D5185m   >30   4   10   0   0   0     Abandium   ppm   ASTM D5185m   50   300   8   13 <t< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>Changed</th><th>Changed</th><th>Changed</th></t<>	Oil Changed		Client Info		Changed	Changed	Changed
Water   WC Method   >0.1   NEG   NEG   NEG     Wear METALS   method   imit/base   current   history1   history2     Iron   ppm   ASTM D5185m   >50   66   6   5     Chromium   ppm   ASTM D5185m   >2   2   0   0     Nickel   ppm   ASTM D5185m   >2   2   0   0     Silver   ppm   ASTM D5185m   >3   0   0   0     Aluminum   ppm   ASTM D5185m   >3   0   0   1     Copper   ppm   ASTM D5185m   >30   4   102   7   <1     Cadmium   ppm   ASTM D5185m   >30   4   9   <1   0   1     Cadmium   ppm   ASTM D5185m   >4   9   <1   0   0     Cadmium   ppm   ASTM D5185m   50   300   51   55     Boron   ppm   ASTM D5185m	Sample Status				SEVERE	NORMAL	NORMAL
WEAR METALS   method   limit/base   current   history1   history2     Iron   ppm   ASTM D5185m   >50   ▲ 66   6   5     Chromium   ppm   ASTM D5185m   >2   2   0   0     Nickel   ppm   ASTM D5185m   >2   2   0   0     Silver   ppm   ASTM D5185m   >3   0   0   0     Aluminum   ppm   ASTM D5185m   >3   0   0   0     Aluminum   ppm   ASTM D5185m   >3   0   0   0     Copper   ppm   ASTM D5185m   >30   102   7   <1     Cadmium   ppm   ASTM D5185m   50   100   0   0     Vanadium   ppm   ASTM D5185m   50   300   8   13     Barium   ppm   ASTM D5185m   50   300   51   55     Magnesium   ppm   ASTM D5185m   50   300   51<	CONTAMINAT	ION	method	limit/base	current	history1	history2
Iron   ppm   ASTM D5185m   >50   ▲ 66   6   5     Chromium   ppm   ASTM D5185m   >4   ▲ 5   <1   <1     Nickel   ppm   ASTM D5185m   >2   2   0   0     Silver   ppm   ASTM D5185m   >3   0   0   0     Auminum   ppm   ASTM D5185m   >3   0   0   0     Auminum   ppm   ASTM D5185m   >3   0   0   0     Copper   ppm   ASTM D5185m   >3   0   0   0   0     Cadmium   ppm   ASTM D5185m   >4   9   <1   0   0     Cadmium   ppm   ASTM D5185m   5   30   8   13     Baron   ppm   ASTM D5185m   5   0   0   0     Molybdenum   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   780	Water		WC Method	>0.1	NEG	NEG	NEG
Chromium   ppm   ASTM D5185m   >4   ▲ 5   <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel   ppm   ASTM D5185m   >2   2   0   0     Titanium   ppm   ASTM D5185m   >3   0   0   0     Silver   ppm   ASTM D5185m   >3   0   0   0     Aluminum   ppm   ASTM D5185m   >9   18   2   2     Lead   ppm   ASTM D5185m   >30   102   7   <1     Copper   ppm   ASTM D5185m   >30   4   102   7   <1     Tin   ppm   ASTM D5185m   >30   4   9   <1   0   0     Vanadium   ppm   ASTM D5185m   >4   9   <1   0   0     ADDITIVES   method   limit/base   current   history1   history1   history2     Boron   ppm   ASTM D5185m   50   300   8   13     Barium   ppm   ASTM D5185m   560   563   599   640     Calcium <t< th=""><th>Iron</th><th>ppm</th><th>ASTM D5185m</th><th>&gt;50</th><th><mark>▲</mark> 66</th><th>6</th><th>5</th></t<>	Iron	ppm	ASTM D5185m	>50	<mark>▲</mark> 66	6	5
Titanium   ppm   ASTM D5185m   <1   0   0     Silver   ppm   ASTM D5185m   >3   0   0   0     Aluminum   ppm   ASTM D5185m   >30   102   7   <1	Chromium	ppm	ASTM D5185m	>4	<u> </u>	<1	<1
Silver ppm ASTM D5185m >3 0 0 0   Aluminum ppm ASTM D5185m >9 18 2 2   Lead ppm ASTM D5185m >30 4 102 7 <1   Copper ppm ASTM D5185m >35 4 21 0 1   Tin ppm ASTM D5185m >4 9 <1 0 0   Vanadium ppm ASTM D5185m >4 9 <1 0 0   Cadmium ppm ASTM D5185m 50 30 8 13   Boron ppm ASTM D5185m 50 300 51 55   Maganese ppm ASTM D5185m 50 300 51 55   Magnesium ppm ASTM D5185m 560 563 599 640   Calcium ppm ASTM D5185m 1510 1568 1704 1491   Phosphorus ppm ASTM D5185m 2040 2856 3166 3235   Sulfur	Nickel	ppm	ASTM D5185m	>2	2	0	0
Aluminum   ppm   ASTM D5185m   >9   18   2   2     Lead   ppm   ASTM D5185m   >30   ▲ 102   7   <1	Titanium	ppm	ASTM D5185m		<1	0	0
Lead   ppm   ASTM D5185m   >30   ▲ 102   7   <1     Copper   ppm   ASTM D5185m   >35   ▲ 21   0   1     Tin   ppm   ASTM D5185m   >4   ▲ 9   <1	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper   ppm   ASTM D5185m   >35   21   0   1     Tin   ppm   ASTM D5185m   >4   9   <1	Aluminum	ppm	ASTM D5185m	>9	<mark> </mark> 18	2	2
Tin   ppm   ASTM D5185m   >4   ▲   9   <1   0     Vanadium   ppm   ASTM D5185m   0   0   0   0     Cadmium   ppm   ASTM D5185m   <1	Lead	ppm	ASTM D5185m	>30	<u> </u>	7	<1
Vanadium   ppm   ASTM D5185m   0   0   0     Cadmium   ppm   ASTM D5185m   <1	Copper	ppm	ASTM D5185m	>35	<u> </u>	0	1
Cadmium   ppm   ASTM D5185m   <1   0   0     ADDITIVES   method   limit/base   current   history1   history2     Boron   ppm   ASTM D5185m   50   30   8   13     Barium   ppm   ASTM D5185m   50   300   51   55     Marganese   ppm   ASTM D5185m   50   300   51   55     Marganese   ppm   ASTM D5185m   50   300   511   55     Marganese   ppm   ASTM D5185m   50   563   599   640     Calcium   ppm   ASTM D5185m   50   563   599   640     Calcium   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   780   857   781   783     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     Sulfacion   ppm   ASTM D5185m   >100   145 <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;4</td> <th><u> </u></th> <td>&lt;1</td> <td>0</td>	Tin	ppm	ASTM D5185m	>4	<u> </u>	<1	0
ADDITIVES   method   limit/base   current   history1   history2     Boron   ppm   ASTM D5185m   50   30   8   13     Barium   ppm   ASTM D5185m   50   0   0   0     Molybdenum   ppm   ASTM D5185m   50   300   51   55     Magnesium   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   1510   1568   1704   1491     Phosphorus   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100< ▲	Vanadium	ppm	ASTM D5185m		0	0	0
Boron   ppm   ASTM D5185m   50   30   8   13     Barium   ppm   ASTM D5185m   5   0   0   0     Molybdenum   ppm   ASTM D5185m   50   300   51   55     Manganese   ppm   ASTM D5185m   0   2   <1   <1     Magnesium   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   780   857   781   3235     CONTAMINANTS   method   Imit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100<   145   5   4     Sodium   ppm   ASTM D5185m   >2040   2856   3166   2325     CONTAMINANTS   method   Imit/base   current   history1   history2     Solium   ppm   ASTM D5185m   >20	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium   ppm   ASTM D5185m   5   0   0   0     Molybdenum   ppm   ASTM D5185m   50   300   51   55     Manganese   ppm   ASTM D5185m   0   2   <1   <1     Magnesium   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   1510   1568   1704   1491     Phosphorus   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   870   1019   1018   1031     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   145   5   4     Sodium   ppm   ASTM D5185m   >20   622   1   <1     Glycol   %   'ASTM D7844 <td< th=""><th>ADDITIVES</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum   ppm   ASTM D5185m   50   300   51   55     Manganese   ppm   ASTM D5185m   0   2   <1   <1     Magnesium   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   1510   1568   1704   1491     Phosphorus   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   870   1019   1018   1031     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100< ▲   145   5   4     Sodium   ppm   ASTM D5185m   >20< ▲   622   1   <1     Potassium   ppm   ASTM D5185m   >20   622   1   <1     Glycol   %   'ASTM D7844 <th>Boron</th> <th>ppm</th> <th>ASTM D5185m</th> <th>50</th> <th>30</th> <th></th> <th></th>	Boron	ppm	ASTM D5185m	50	30		
Manganese   ppm   ASTM D5185m   0   2   <1   <1     Magnesium   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   1510   1568   1704   1491     Phosphorus   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   870   1019   1018   1031     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >40   5708   14   7     Potassium   ppm   ASTM D5185m   >20   €22   1   <1	Barium	ppm	ASTM D5185m	5	0	0	0
Magnesium   ppm   ASTM D5185m   560   563   599   640     Calcium   ppm   ASTM D5185m   1510   1568   1704   1491     Phosphorus   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   870   1019   1018   1031     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   ▲ 145   5   4     Sodium   ppm   ASTM D5185m   >+100   ▲ 145   5   4     Sodium   ppm   ASTM D5185m   >20   ▲ 622   1   <1	Molybdenum	ppm	ASTM D5185m	50		51	55
Calcium   ppm   ASTM D5185m   1510   1568   1704   1491     Phosphorus   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   870   1019   1018   1031     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   145   5   4     Sodium   ppm   ASTM D5185m   >+20   622   1   <1	Manganese	ppm	ASTM D5185m	0	2	<1	<1
Phosphorus   ppm   ASTM D5185m   780   857   781   782     Zinc   ppm   ASTM D5185m   870   1019   1018   1031     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   145   5   4     Sodium   ppm   ASTM D5185m   >+100   145   5   4     Sodium   ppm   ASTM D5185m   >20   622   1   <1	Magnesium	ppm	ASTM D5185m	560	563	599	640
Zinc   ppm   ASTM D5185m   870   1019   1018   1031     Sulfur   ppm   ASTM D5185m   2040   2856   3166   3235     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >+100   ▲ 145   5   4     Sodium   ppm   ASTM D5185m   >+100   ▲ 145   5   4     Sodium   ppm   ASTM D5185m   >+20   ▲ 622   1   <1	Calcium	ppm	ASTM D5185m	1510	1568	1704	1491
SulfurppmASTM D5185m2040285631663235CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>+10014554SodiumppmASTM D5185m>+10014554PotassiumppmASTM D5185m>206221<1	Phosphorus	ppm	ASTM D5185m	780		781	782
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>+100▲ 14554SodiumppmASTM D5185m>+100▲ 14554PotassiumppmASTM D5185m>20▲ 6221<1	Zinc	ppm	ASTM D5185m	870	1019	1018	1031
Silicon ppm ASTM D5185m >+100 ▲ 145 5 4   Sodium ppm ASTM D5185m >+100 ▲ 145 5 4   Sodium ppm ASTM D5185m >20 ▲ 5708 14 7   Potassium ppm ASTM D5185m >20 ▲ 622 1 <1   Glycol % *ASTM D2982 ▲ 0.12     INFRA-RED method limit/base current history1 history2   Soot % % *ASTM D7624 >20 25.9 11.4 9.3   Sulfation Abs/cm *ASTM D7624 >20 25.9 11.4 9.3   Sulfation Abs/.1mm *ASTM D7415 >30 30.3 26.3 21.8   FLUID DEGRADATION method limit/base current history1 history2   Oxidation Abs/.1mm *ASTM D7414 >25 21.5 23.7 18.6	Sulfur	ppm	ASTM D5185m	2040	2856	3166	3235
Sodium   ppm   ASTM D5185m   ▲ 5708   14   7     Potassium   ppm   ASTM D5185m<>20   ▲ 622   1   <1     Glycol   %   *ASTM D2982   ▲ 0.12       INFRA-RED   method   limit/base   current   history1   history2     Soot %   %   *ASTM D7844   0.1   0.1   0.2     Nitration   Abs/cm   *ASTM D7624   >20   25.9   11.4   9.3     Sulfation   Abs/.1mm   *ASTM D7615   >30   30.3   26.3   21.8     FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm   *ASTM D7414   >25   21.5   23.7   18.6	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium   ppm   ASTM D5185m   >20   ▲ 622   1   <1	Silicon	ppm	ASTM D5185m	>+100	<b>4</b> 145	5	4
Glycol   %   *ASTM D2982   0.12       INFRA-RED   method   limit/base   current   history1   history2     Soot %   %   *ASTM D7844   0.1   0.1   0.2     Nitration   Abs/cm   *ASTM D7624   >20   25.9   11.4   9.3     Sulfation   Abs/.1mm   *ASTM D7415   >30   30.3   26.3   21.8     FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm   *ASTM D7414   >25   21.5   23.7   18.6	Sodium	ppm	ASTM D5185m		<u> </u>	14	7
INFRA-RED   method   limit/base   current   history1   history2     Soot %   %   *ASTM D7844   0.1   0.1   0.2     Nitration   Abs/cm   *ASTM D7624   >20   25.9   11.4   9.3     Sulfation   Abs/.tmm   *ASTM D7415   >30   30.3   26.3   21.8     FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.tmm   *ASTM D7414   >25   21.5   23.7   18.6	Potassium	ppm	ASTM D5185m	>20	<b>622</b>	1	<1
Soot %   %   *ASTM D7844   0.1   0.1   0.2     Nitration   Abs/cm   *ASTM D7624   >20   25.9   11.4   9.3     Sulfation   Abs/.1mm   *ASTM D7415   >30   30.3   26.3   21.8     FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm   *ASTM D7414   >25   21.5   23.7   18.6	Glycol	%	*ASTM D2982		<b>a</b> 0.12		
Nitration   Abs/cm   *ASTM D7624   >20   25.9   11.4   9.3     Sulfation   Abs/.1mm   *ASTM D7415   >30   30.3   26.3   21.8     FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm   *ASTM D7414   >25   21.5   23.7   18.6	INFRA-RED		method	limit/base	current	history1	history2
Sulfation   Abs/.1mm   *ASTM D7415   >30   30.3   26.3   21.8     FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm   *ASTM D7414   >25   21.5   23.7   18.6	Soot %	%	*ASTM D7844		0.1	0.1	0.2
FLUID DEGRADATION   method   limit/base   current   history1   history2     Oxidation   Abs/.1mm   *ASTM D7414   >25   21.5   23.7   18.6	Nitration	Abs/cm	*ASTM D7624	>20	25.9	11.4	9.3
Oxidation   Abs/.1mm   *ASTM D7414   >25   21.5   23.7   18.6	Sulfation	Abs/.1mm	*ASTM D7415	>30	30.3	26.3	21.8
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	21.5	23.7	18.6
	Base Number (BN)	mg KOH/g	ASTM D2896	10.2	34.0	2.6	5.2



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