

## **OIL ANALYSIS REPORT**

Sample Rating Trend





Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

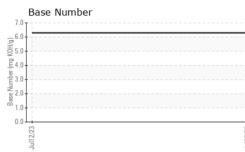
## Fluid Condition

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

Sample Number         Client Info         PCA0097643             Sample Date         Client Info         12 Jul 2023             Machine Age         mis         Client Info         0             Oil Age         mis         Client Info         0             Oil Changed         Client Info         Changed             Sample Status         Imit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0             Glycol         WC Method         >3.0         <1.0             WEAR METALS         method         limit/base         current         history1         history2           fron         ppm         ASTM D5185m         >200         19             Chromium         ppm         ASTM D5185m         >2         <1             Silver         ppm         ASTM D5185m         >2         0             Auminum         ppm         ASTM D5185m         50         6 <th>SAMPLE INFORM</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM		method	limit/base	current	history1	history2
Sample Date         Client Info         12 Jul 2023             Machine Age         mits         Client Info         485000             Oil Age         mits         Client Info         0             Sample Status         Client Info         Changed             CONTAMINATION         method         imit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0             Otomation         ppm         ASTM D5185m         >0         19             Chromium         ppm         ASTM D5185m         >3         <1             Nickel         ppm         ASTM D5185m         >2         <1             Auminum         ppm         ASTM D5185m         >50         6             Auminum         ppm         ASTM D5185m         >50         4             Auminum         ppm         ASTM D5185m         >50         4             Copper				innivoase		, in the second s	, i i i i i i i i i i i i i i i i i i i
Machine Age         mls         Client Info         0             Oil Age         mls         Client Info         0             Oil Changed         Client Info         0              Sample Status         Imit/base         current         history1             Glycol         Imit/base         current         history1             WEAR METALS         method         imit/base         current         history1            WEAR METALS         method         imit/base         current         history1            Trainium         ppm         ASTM D5185m         >200         19             Nickel         ppm         ASTM D5185m         >2         <1             Silver         ppm         ASTM D5185m         >2         0             Copper         ppm         ASTM D5185m         >50         4             Adminum         ppm         ASTM D5185m         <         0             <	,						
Oil Age         mils         Client Info         0             Oil Changed         Client Info         Changed             Sample Status         Imil/base         current         history1            CONTAMINATION         method         imil/base         current         history1            Glycol         WC Method         >3.0         <1.0             WEAR METALS         method         Imil/base         current         history1            WEAR METALS         method         Imil/base         current         history1            Tron         ppm         ASTM 05185m         >200         19             Tranium         ppm         ASTM 05185m         >2         0             Aluminum         ppm         ASTM 05185m         >2         0             Aluminum         ppm         ASTM 05185m         >50         6             Copper         ppm         ASTM 05185m         >50         4             Adm		mla					
Oil Changed         Client Info         Changed NORMAL             Sample Status         Image in the image i	•						
Sample Status         NORMAL             CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0             Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM DS185m         >200         19             Nickel         ppm         ASTM DS185m         >2         1             Silver         ppm         ASTM DS185m         >2         0             Itanium         ppm         ASTM DS185m         >2         0             Gopper         ppm         ASTM DS185m         >50         6              Cadmium         ppm         ASTM DS185m         >50         4             Cadmium         ppm         ASTM DS185m         0              Barium	-	11115					
CONTAMINATION         method         limit/base         current         history1         history2           Fuel         WC Method         >3.0         <1.0             Glycol         WC Method         NEG             WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         19             Chromium         ppm         ASTM D5185m         >3         <1             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >0         6             Silver         ppm         ASTM D5185m         >0         0             Aluminum         ppm         ASTM D5185m         >0         0             Addmium         ppm         ASTM D5185m         0         0             Copper         ppm         ASTM D5185m         0         0	-		Client into		-		
Fuel         WC Method         >3.0         <1.0					NORMAL		
Glycol         WC Method         NEG             WEAR METALS         method         imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         19             Chromium         ppm         ASTM D5185m         >3         <1             Nickel         ppm         ASTM D5185m         >2         c1             Silver         ppm         ASTM D5185m         >2         0             Aduminum         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >6              Adminum         ppm         ASTM D5185m         >6              Vanadium         ppm         ASTM D5185m         >6              Addminum         pm         ASTM D5185m         0              Vanadium         pm         ASTM D5185m         0         0	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >200         19             Chromium         ppm         ASTM D5185m         >3         <1             Nickel         ppm         ASTM D5185m         >2         <1             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >2         0             Lead         ppm         ASTM D5185m         >50         4             Copper         ppm         ASTM D5185m         >6         0             Cadmium         ppm         ASTM D5185m         0              Admium         ppm         ASTM D5185m         0              Cadmium         ppm         ASTM D5185m         0              Barium         ppm         ASTM D5185m         0	Fuel		WC Method	>3.0	<1.0		
Iron         ppm         ASTM D5185m         >200         19             Chromium         ppm         ASTM D5185m         >6         1             Nickel         ppm         ASTM D5185m         >3         <1             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >2         0             Lead         ppm         ASTM D5185m         >50         4             Copper         ppm         ASTM D5185m         >6         0             Cadmium         ppm         ASTM D5185m         >6         0             ADDITVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         67             Magnesium         ppm         ASTM D5185m <t< th=""><th>Glycol</th><th></th><th>WC Method</th><th></th><th>NEG</th><th></th><th></th></t<>	Glycol		WC Method		NEG		
Chromium         ppm         ASTM D5185m         >6         1             Nickel         ppm         ASTM D5185m         >3         <1             Titanium         ppm         ASTM D5185m         >2         0             Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >50         6             Copper         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >6         0             Cadmium         ppm         ASTM D5185m         >6         0             ADDITIVES         method         Imit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         6             Magnesium         ppm         ASTM D5185m         950         1056             Magnesium         ppm         ASTM D5185m         950	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >3         <1	Iron	ppm	ASTM D5185m	>200	19		
Titanium         ppm         ASTM D5185m         >2         <1	Chromium	ppm	ASTM D5185m	>6	1		
Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >50         4             Copper         ppm         ASTM D5185m         >50         4             Vanadium         ppm         ASTM D5185m         >6         0             Vanadium         ppm         ASTM D5185m         >6         0             Cadmium         ppm         ASTM D5185m         >6         0             ADDITIVES         method         imit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0             Magnesse         ppm         ASTM D5185m         0         67             Magnesium         ppm         ASTM D5185m         0         1056             Sulfur         ppm         ASTM D5185m <t< th=""><th>Nickel</th><th>ppm</th><th>ASTM D5185m</th><th>&gt;3</th><th>&lt;1</th><th></th><th></th></t<>	Nickel	ppm	ASTM D5185m	>3	<1		
Silver         ppm         ASTM D5185m         >2         0             Aluminum         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         4             Vanadium         ppm         ASTM D5185m         >50         4             Vanadium         ppm         ASTM D5185m         >50         4             Cadmium         ppm         ASTM D5185m         >6         0             ADDITIVES         method         imit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         67             Molybdenum         ppm         ASTM D5185m         0         67             Maganese         ppm         ASTM D5185m         950         1056             Sulfur         ppm         ASTM D5185m	Titanium	ppm	ASTM D5185m	>2	<1		
Aluminum         ppm         ASTM D5185m         >50         6             Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         4             Vanadium         ppm         ASTM D5185m         >6         0             Cadmium         ppm         ASTM D5185m         >6         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         <1             Molybdenum         ppm         ASTM D5185m         0         0             Magnesium         ppm         ASTM D5185m         0.0         <1             Phosphorus         ppm         ASTM D5185m         0.0         <1             Sulfur         ppm         ASTM D5185m         1050         1218             Sulfur         ppm         ASTM D5185m	Silver		ASTM D5185m	>2	0		
Lead         ppm         ASTM D5185m         >10         0             Copper         ppm         ASTM D5185m         >50         4             Tin         ppm         ASTM D5185m         >6         0             Vanadium         ppm         ASTM D5185m          <1             Cadmium         ppm         ASTM D5185m         2         <1             ADDITIVES         method         Imit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0             Magnasnese         ppm         ASTM D5185m         0         67             Magnesium         ppm         ASTM D5185m         50         67             Calcium         ppm         ASTM D5185m         50         1056             Calcium         ppm         ASTM D5185m         950         10955             Sulfur         ppm         ASTM D5185m	Aluminum		ASTM D5185m	>50	6		
Tin         ppm         ASTM D5185m         >6         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         <1	Lead	ppm	ASTM D5185m	>10	0		
Vanadium         ppm         ASTM D5185m         <1	Copper		ASTM D5185m	>50	4		
Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         <1	Tin	ppm	ASTM D5185m	>6	0		
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         <1             Barium         ppm         ASTM D5185m         0         0             Molybdenum         ppm         ASTM D5185m         50         67             Magnesium         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         1056             Calcium         ppm         ASTM D5185m         950         1095             Calcium         ppm         ASTM D5185m         995         1095             Zinc         ppm         ASTM D5185m         2600         3426             Sulfur         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/ba	Vanadium	ppm	ASTM D5185m		<1		
Boron         ppm         ASTM D5185m         2         <1	Cadmium	ppm	ASTM D5185m		0		
Barium         ppm         ASTM D5185m         0         0             Molybdenum         ppm         ASTM D5185m         50         67             Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         1056             Calcium         ppm         ASTM D5185m         950         1095             Calcium         ppm         ASTM D5185m         995         1095             Zinc         ppm         ASTM D5185m         995         1095             Sulfur         ppm         ASTM D5185m         995         1095             Sulfur         ppm         ASTM D5185m         2600         3426             Sulfur         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >20         <1             NtFRA-RED         method         limit/base							
Molybdenum         ppm         ASTM D5185m         50         67             Manganese         ppm         ASTM D5185m         0         <1             Magnesium         ppm         ASTM D5185m         950         1056             Calcium         ppm         ASTM D5185m         1050         1218             Phosphorus         ppm         ASTM D5185m         1050         1218             Zinc         ppm         ASTM D5185m         995         1095             Sulfur         ppm         ASTM D5185m         995         10342             Sulfur         ppm         ASTM D5185m         2600         3426             Sulfur         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >20         <1             Potassium         ppm         ASTM D5185m         >20         <1        INFRA-RED         method	ADDITIVES		method				history2
Manganese         ppm         ASTM D5185m         0         <1	ADDITIVES Boron	ppm					
Manganese         ppm         ASTM D5185m         0         <1	Boron		ASTM D5185m	2	<1		
Calcium         ppm         ASTM D5185m         1050         1218             Phosphorus         ppm         ASTM D5185m         995         1095             Zinc         ppm         ASTM D5185m         1180         1334             Sulfur         ppm         ASTM D5185m         1180         1334             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >50         4             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.6             Nitration         Abs/.mm         *ASTM D7624         >20         9.8             Sulfation         Abs/.lmm         *ASTM D7415	Boron	ppm	ASTM D5185m ASTM D5185m	2 0	<1 0		
Phosphorus         ppm         ASTM D5185m         995         1095             Zinc         ppm         ASTM D5185m         1180         1334             Sulfur         ppm         ASTM D5185m         2600         3426             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.6             Nitration         Abs/cm         *ASTM D7624         >20         9.8             Sulfation         Abs/.tmm         *ASTM D7415         >30         22.2             FLUID DEGRADATION         method         lim	Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	<1 0 67		
Zinc         ppm         ASTM D5185m         1180         1334             Sulfur         ppm         ASTM D5185m         2600         3426             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         >20         <1             Potassium         ppm         ASTM D5185m         >20         <1	Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	<1 0 67 <1		
SulfurppmASTM D5185m26003426CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>504SodiumppmASTM D5185m>204PotassiumppmASTM D5185m>20<1INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.6NitrationAbs/cm*ASTM D7624>209.8SulfationAbs/limm*ASTM D7415>3022.2FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/limm*ASTM D7414>2519.1	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	<1 0 67 <1 1056		
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>504SodiumppmASTM D5185m2PotassiumppmASTM D5185m>20<1INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.6NitrationAbs/cm*ASTM D7624>209.8SulfationAbs/.imm*ASTM D7415>3022.2FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.imm*ASTM D7414>2519.1	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	<1 0 67 <1 1056 1218	  	  
Silicon         ppm         ASTM D5185m         >50         4             Sodium         ppm         ASTM D5185m         2              Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.6             Nitration         Abs/cm         *ASTM D7624         >20         9.8             Sulfation         Abs/.imm         *ASTM D7415         >30         22.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.imm         *ASTM D7414         >25         19.1	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	<1 0 67 <1 1056 1218 1095	   	
Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.6             Nitration         Abs/cm         *ASTM D7624         >20         9.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.1	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	2 0 50 950 1050 995 1180	<1 0 67 <1 1056 1218 1095 1334	    	
Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         <1             INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.6             Nitration         Abs/cm         *ASTM D7624         >20         9.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.1	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	2 0 50 0 950 1050 995 1180 2600	<1 0 67 <1 1056 1218 1095 1334 3426		
Potassium         ppm         ASTM D5185m         >20         <1	Boron Barium 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	2 0 50 950 1050 995 1180 2600	<1 0 67 <1 1056 1218 1095 1334 3426 current		
Soot %         %         *ASTM D7844         >3         0.6             Nitration         Abs/cm         *ASTM D7624         >20         9.8             Sulfation         Abs/.1mm         *ASTM D7615         >30         22.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	<1 0 67 <1 1056 1218 1095 1334 3426 current 4	    history1	
Nitration         Abs/cm         *ASTM D7624         >20         9.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >50	<1 0 67 <1 1056 1218 1095 1334 3426 <u>current</u> 4 2	    history1	     history2
Nitration         Abs/cm         *ASTM D7624         >20         9.8             Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >50	<1 0 67 <1 1056 1218 1095 1334 3426 current 4 2 2 <1	    history1  	     history2
Sulfation         Abs/.1mm         *ASTM D7415         >30         22.2             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         19.1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >50 >20 <b>limit/base</b>	<1 0 67 <1 1056 1218 1095 1334 3426 current 4 2 <1 current	     history1   history1	     history2   history2
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     19.1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >50 >20 limit/base >3	<1 0 67 <1 1056 1218 1095 1334 3426 <u>current</u> 4 2 <1 2 <1 <u>current</u>	     history1   history1  	     history2   history2
Oxidation Abs/.1mm *ASTM D7414 >25 19.1	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >50 >20 <i>limit/base</i> >3 >20	<1 0 67 <1 1056 1218 1095 1334 3426 <i>current</i> 4 2 <1 2 <1 <i>current</i> 0.6 9.8	     history1   history1  	history2 history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20	<1 0 67 <1 1056 1218 1095 1334 3426 <u>current</u> 4 2 <1 2 <1 <u>current</u> 0.6 9.8 22.2	     history1   history1  history1	     history2  history2  history2
Base Number (BN) mg KUH/g ASIM D2896 6.3	Boron Barium 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 D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >50 >20 >3 >20 >30 imit/base	<1 0 67 <1 1056 1218 1095 1334 3426 <i>current</i> 4 2 <1 <i>current</i> 0.6 9.8 22.2 <i>current</i>	     history1   history1  history1	     history2  history2  history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >50 >20 >3 >20 >30 imit/base	<1 0 67 <1 1056 1218 1095 1334 3426 current 4 2 <1 current 0.6 9.8 22.2 current 19.1	      history1  history1  history1  history1	     history2  history2  history2

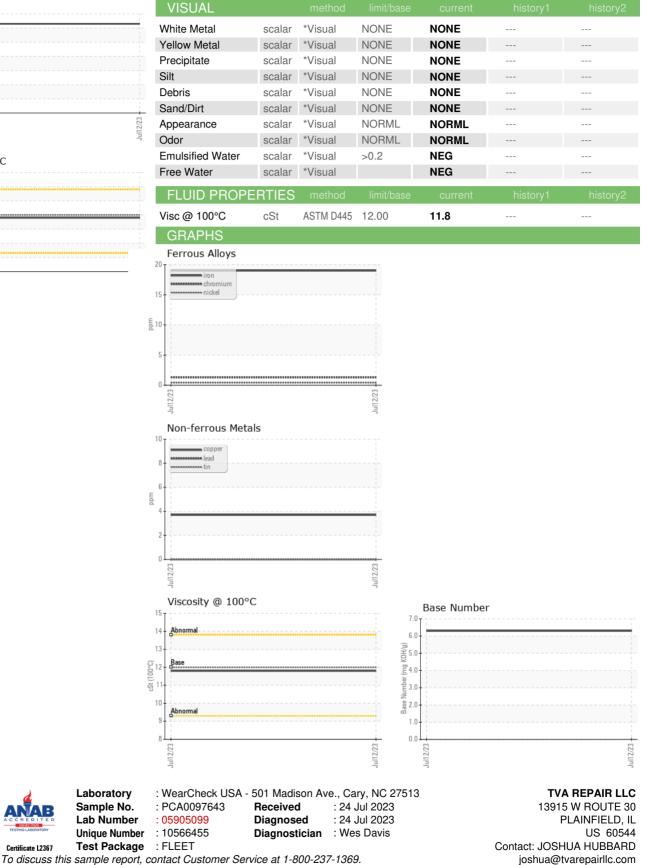


# **OIL ANALYSIS REPORT**









\* - 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)

Certificate L2367

Laboratory

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F: