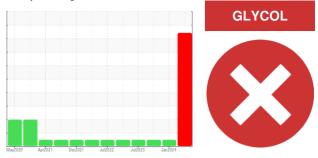




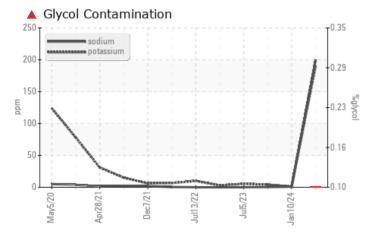
Machine Id

## **PROBLEM SUMMARY**



### Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (36 GAL)

## COMPONENT CONDITION SUMMARY



### RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

PROBLEMATIO	C TES	T RESULT	S			
Sample Status				SEVERE	NORMAL	NORMAL
Potassium	ppm	ASTM D5185m	>20	🔺 191	1	4
Glycol	%	*ASTM D2982		<b>0.10</b>	NEG	NEG

Customer Id: NWWSSC Sample No.: PCA0102237 Lab Number: 06155767 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

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.		
Information Required			?	Please specify the component make and model with your next sample.		
Check Glycol Access			?	We advise that you check for the source of the coolant leak.		

## HISTORICAL DIAGNOSIS



### 10 Jan 2024 Diag: Wes Davis

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.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



## 11 Oct 2023 Diag: Wes Davis

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.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.



### 05 Jul 2023 Diag: Wes Davis

NORMAL

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.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**

Sample Rating Trend



T307 Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (36 GAL)

## DIAGNOSIS

Machine Id

### Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

### Wear

All component wear rates are normal.

### Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil.

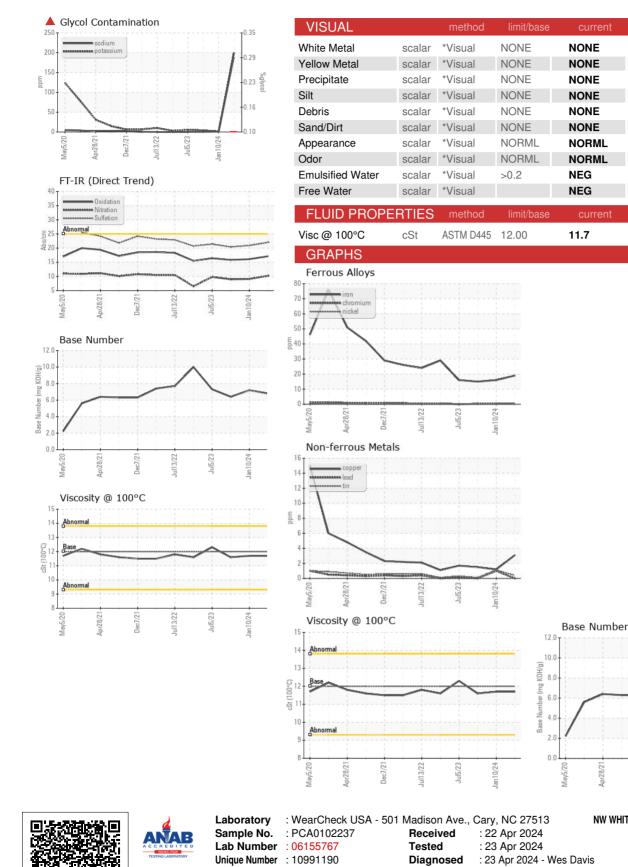
#### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sample Date     Client Info     11 Apr 2024     10 Jan 2024     11 Oct 2023       Machine Age     mis     Client Info     345460     316470     290899       Oil Age     mis     Client Info     25000     25000     25000       Sample Status     Client Info     Changed     Changed     NORMAL     NORMAL       CONTAMINATION     method     Imit/base     current     history1     history2       Fuel     WC Method     >5     <1.0     <1.0     <1.0       Water     WC Method     >0.2     NEG     NEG     NEG       VEAR METALS     method     Init/base     current     history1     history2       Iron     ppm     ASTM 05185m     >20     <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 INFOR	MATION	method	limit/base	current	history1	history2
Machine Age     mis     Client Info     345460     316470     290899       Oil Age     mis     Client Info     25000     25000     25000       Oil Age     Client Info     SEVERE     NORMAL     Changed     Changed       Sample Status     Imit/base     current     history1     History2       Fuel     WC Method     >5     <1.0     <1.0     <1.0       Water     WC Method     >0.2     NEG     NEG     NEG       WEAR METALS     method     Imit/base     current     history1     history2       Iron     ppm     ASTM 05155m     >100     19     16     15       Chromium     ppm     ASTM 05155m     >4     0     <1     0       Silver     ppm     ASTM 05155m     >3     0     0     0       Silver     ppm     ASTM 05155m     >30     0     0     0       Vanduimum     ppm     ASTM 05155m     >30     0     0     0       Vanduimum	Sample Number		Client Info		PCA0102237	PCA0114717	PCA0107491
Oil Age     mis     Client Info     25000     25000     25000       Oil Changed     Client Info     Changed     Ch	Sample Date		Client Info		11 Apr 2024	10 Jan 2024	11 Oct 2023
Oil Changed Sample Status Client Info Changed SEVERE Changed NORMAL Changed NORMAL Changed NORMAL Changed NORMAL   CONTAMINATION method limit/base current history1 history2   Fuel WC Method >5. <1.0 <1.0 <1.0   Water WC Method >0.2 NEG NEG NEG   WEAR METALS method imit/base current history1 history2   Iron ppm ASTM D5185m >200 <1 <1 0   Othornium ppm ASTM D5185m >20 <1 <1 0   Nickel ppm ASTM D5185m >20 <1 0 0   Aluminum ppm ASTM D5185m >20 <1 1 0   Copper ppm ASTM D5185m >30 3 1 2   Tin ppm ASTM D5185m >30 3 1 2   Vanadium ppm ASTM D5185m 20 3 0 0   Addenium ppm ASTM D5185m 0 3 0 0   Mandaume ppm ASTM D5185m 0 3 0 0 <t< th=""><th>Machine Age</th><th>mls</th><th>Client Info</th><th></th><th>345460</th><th>316470</th><th>290899</th></t<>	Machine Age	mls	Client Info		345460	316470	290899
Sample Status     SEVERE     NORMAL     NORMAL       CONTAMINATION     method     imit/base     current     history1     history2       Fuel     WC Method     >5     <1.0     <1.0     <1.0       Water     WC Method     >0.2     NEG     NEG     NEG       WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM D5165m     >100     19     16     15       Chromium     ppm     ASTM D5165m     >44     0     <1     0       Nickel     ppm     ASTM D5165m     >40     0     1     0       Silver     ppm     ASTM D5165m     >20     4     3     3       Lead     ppm     ASTM D5165m     >430     0     1     0       Cadmium     ppm     ASTM D5165m     >430     3     4     2       Barium     ppm     ASTM D5165m     0     3     0     0       Cadmium     ppm	Oil Age	mls	Client Info		25000	25000	25000
CONTAMINATION     method     limit/base     current     history1     history2       Fuel     WC Method     >5     <1.0     <1.0     <1.0       Water     WC Method     >0.2     NEG     NEG     NEG       Wear     WC Method     >0.2     NEG     NEG     NEG       Wear     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     <1     <1     0       Silver     ppm     ASTM D5185m     >20     <1     <1     0       Silver     ppm     ASTM D5185m     >20     4     3     3       Lead     ppm     ASTM D5185m     >20     4     3     3       Lead     ppm     ASTM D5185m     >330     3     11     2     1       Vanadium     ppm     ASTM D5185m     >1     0      0     0       Cadmium     ppm     ASTM D5185m     0     3     0     0     <	Oil Changed		Client Info		Changed	Changed	Changed
Fuel     WC Method     >5     <1.0	Sample Status				SEVERE	NORMAL	NORMAL
Water     WC Method     >0.2     NEG     NEG     NEG       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >20     <1     <1     <1       Nickel     ppm     ASTM D5185m     >20     <1     <1     0       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >40     0     1     0       Copper     ppm     ASTM D5185m     >15     <1     1     <1     0       Vanadium     ppm     ASTM D5185m     15     <1     1     <1     0       Vanadium     ppm     ASTM D5185m     0     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     3     0     0     0       Barium     ppm     ASTM D5185m	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >100     19     16     15       Chromium     ppm     ASTM D5185m     >20     <1	Fuel		WC Method	>5	<1.0	<1.0	<1.0
Iron     ppm     ASTM D5185m     >100     19     16     15       Chromium     ppm     ASTM D5185m     >20     <1     <1     <1       Nickel     ppm     ASTM D5185m     >4     0     <1     0       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >3     0     1     0       Copper     ppm     ASTM D5185m     >3     0     1     0       Copper     ppm     ASTM D5185m     >3     0     1     0       Cadmium     ppm     ASTM D5185m     5     1     1     1       Vanadium     ppm     ASTM D5185m     0      0     0       Cadmium     ppm     ASTM D5185m     0     3     0     0       ADDITVES     method     imil/base     current     history1     history2       Boron     ppm     ASTM D5185m     50     78     64     66 </th <th>Water</th> <th></th> <th>WC Method</th> <th>&gt;0.2</th> <th>NEG</th> <th>NEG</th> <th>NEG</th>	Water		WC Method	>0.2	NEG	NEG	NEG
Chromium     ppm     ASTM D5185m     >20     <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel     ppm     ASTM D5185m     >4     0     <1     0       Titanium     ppm     ASTM D5185m     >3     0     0     0       Silver     ppm     ASTM D5185m     >20     4     3     3       Lead     ppm     ASTM D5185m     >20     4     3     3       Lead     ppm     ASTM D5185m     >20     4     3     3       Copper     ppm     ASTM D5185m     >20     4     3     3       Copper     ppm     ASTM D5185m     >40     0     1     <1	Iron	ppm	ASTM D5185m	>100	19	16	15
Titanium     ppm     ASTM D5185m     <1     0     0       Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >20     4     3     3       Lead     ppm     ASTM D5185m     >40     0     1     0       Copper     ppm     ASTM D5185m     >330     3     1     2       Tin     ppm     ASTM D5185m     >15     <1	Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Silver     ppm     ASTM D5185m     >3     0     0     0       Aluminum     ppm     ASTM D5185m     >20     4     3     3       Lead     ppm     ASTM D5185m     >40     0     1     0       Copper     ppm     ASTM D5185m     >330     3     1     2       Tin     ppm     ASTM D5185m     >15     <1     1     <1     <1       Vanadium     ppm     ASTM D5185m     0     0     <10     0       Cadmium     ppm     ASTM D5185m     0     3     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     3     0     0       Malybenum     ppm     ASTM D5185m     0     1     <1     0       Magnesium     ppm     ASTM D5185m     1050     1080     1249     1080       Plosphorus     ppm     ASTM D5185m     260	Nickel	ppm	ASTM D5185m	>4	0	<1	0
Aluminum     ppm     ASTM D5185m     >20     4     3     3       Lead     ppm     ASTM D5185m     >40     0     1     0       Copper     ppm     ASTM D5185m     >330     3     1     2       Tin     ppm     ASTM D5185m     >15     <1	Titanium	ppm	ASTM D5185m		<1	0	0
Lead     ppm     ASTM D5185m     >40     0     1     0       Copper     ppm     ASTM D5185m     >330     3     1     2       Tin     ppm     ASTM D5185m     >15     <1	Silver	ppm	ASTM D5185m	>3	0	0	0
Copper     ppm     ASTM D5185m     >330     3     1     2       Tin     ppm     ASTM D5185m     >15     <1	Aluminum	ppm	ASTM D5185m	>20	4	3	3
Tin     ppm     ASTM D5185m     >15     <1     1     <1       Vanadium     ppm     ASTM D5185m     >15     <1	Lead	ppm	ASTM D5185m	>40	0	1	0
Vanadium     ppm     ASTM D5185m     0     <1     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     2     3     4     2       Barium     ppm     ASTM D5185m     0     3     0     0       Magnanese     ppm     ASTM D5185m     50     78     64     66       Magnanese     ppm     ASTM D5185m     0     1     <1     0       Magnesium     ppm     ASTM D5185m     950     913     1030     894       Calcium     ppm     ASTM D5185m     950     1002     1134     966       Zinc     ppm     ASTM D5185m     950     1002     1134     1202       Sulfur     ppm     ASTM D5185m     2600     3059     32999     2976       CONTAMINANTS     method     limit/base     current     history1 <th>Copper</th> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;330</td> <th>3</th> <td>1</td> <td>2</td>	Copper	ppm	ASTM D5185m	>330	3	1	2
Cadmium     ppm     ASTM D5185m     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     2     3     4     2       Barium     ppm     ASTM D5185m     0     3     0     0       Molybdenum     ppm     ASTM D5185m     0     3     0     0       Marganese     ppm     ASTM D5185m     50     78     64     66       Marganese     ppm     ASTM D5185m     0     1     <1     0       Magnesium     ppm     ASTM D5185m     050     913     1030     894       Calcium     ppm     ASTM D5185m     1050     1080     1249     1080       Phosphorus     ppm     ASTM D5185m     995     1002     1134     1202       Sulfar     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     imit/base     current     hist	Tin	ppm	ASTM D5185m	>15	<1	1	<1
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     2     3     4     2       Barium     ppm     ASTM D5185m     0     3     0     0       Molybdenum     ppm     ASTM D5185m     50     78     64     66       Magnesium     ppm     ASTM D5185m     0     1     <1	Vanadium	ppm	ASTM D5185m		0	<1	0
Boron     ppm     ASTM D5185m     2     3     4     2       Barium     ppm     ASTM D5185m     0     3     0     0       Molybdenum     ppm     ASTM D5185m     50     78     64     66       Manganese     ppm     ASTM D5185m     0     1     <1     0       Magnesium     ppm     ASTM D5185m     950     913     1030     894       Calcium     ppm     ASTM D5185m     950     913     1030     894       Calcium     ppm     ASTM D5185m     1050     1080     1249     1080       Phosphorus     ppm     ASTM D5185m     995     1002     1134     966       Zinc     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >20 </th <th>Cadmium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Cadmium	ppm	ASTM D5185m		0	0	0
Barium     ppm     ASTM D5185m     0     3     0     0       Molybdenum     ppm     ASTM D5185m     50     78     64     66       Manganese     ppm     ASTM D5185m     0     1     <1     0       Magnesium     ppm     ASTM D5185m     950     913     1030     894       Calcium     ppm     ASTM D5185m     1050     1080     1249     1080       Phosphorus     ppm     ASTM D5185m     1050     1080     1249     1080       Zinc     ppm     ASTM D5185m     1050     1002     1134     966       Zinc     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >20     191     1     4       Glycol     %     'ASTM D5185m <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     78     64     66       Magnese     ppm     ASTM D5185m     0     1     <1	Boron	ppm	ASTM D5185m	2	3	4	
Manganese   ppm   ASTM D5185m   0   1   <1   0     Magnesium   ppm   ASTM D5185m   950   913   1030   894     Calcium   ppm   ASTM D5185m   950   913   1030   894     Calcium   ppm   ASTM D5185m   1050   1080   1249   1080     Phosphorus   ppm   ASTM D5185m   995   1002   1134   966     Zinc   ppm   ASTM D5185m   995   1002   1134   966     Zinc   ppm   ASTM D5185m   2600   3059   3299   2976     CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   >25   10   16   14     Sodium   ppm   ASTM D5185m   >20   191   1   4     Glycol   %   *ASTM D5185m   >20   191   1   4     Glycol   %   *ASTM D5185m   >20   191   1   4     Glycol   %   *ASTM D5185m	Barium	ppm	ASTM D5185m		3		0
Magnesium     ppm     ASTM D5185m     950     913     1030     894       Calcium     ppm     ASTM D5185m     1050     1080     1249     1080       Phosphorus     ppm     ASTM D5185m     995     1002     1134     966       Zinc     ppm     ASTM D5185m     995     1002     1134     926       Sulfur     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >20     ▲ 191     1     4       Glycol     %     *ASTM D5185m     >20     ▲ 191     1     4       Glycol     %     *ASTM D5185m     >20     ▲ 191     1     4       Glycol     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/.1mm     *ASTM D74152	Molybdenum	ppm	ASTM D5185m	50	78	64	66
Calcium     ppm     ASTM D5185m     1050     1080     1249     1080       Phosphorus     ppm     ASTM D5185m     995     1002     1134     966       Zinc     ppm     ASTM D5185m     1180     1235     1434     1202       Sulfur     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >20     191     1     4       Sodium     ppm     ASTM D585m     >20     191     1     4       Glycol     %     *ASTM D2982      0.10     NEG     NEG       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/.mm     *ASTM D7624 <td< td=""><th>Manganese</th><td></td><td></td><td></td><th></th><td></td><td></td></td<>	Manganese						
Phosphorus     ppm     ASTM D5185m     995     1002     1134     966       Zinc     ppm     ASTM D5185m     1180     1235     1434     1202       Sulfur     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >20     191     1     4       Glycol     %     *ASTM D2982      0.10     NEG     NEG       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/cm     *ASTM D7624     >20     10.2     9.1     9.0       Sulfation     Abs/.1mm     *ASTM D7415		ppm					
Zinc     ppm     ASTM D5185m     1180     1235     1434     1202       Sulfur     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >20     4     191     1     4       Glycol     %     *ASTM D2982      0.10     NEG     NEG       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/cm     *ASTM D7624     >20     10.2     9.1     9.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.0     20.9     20.4       FLUID DEGRADATION     method	Magnesium			950	913	1030	
Sulfur     ppm     ASTM D5185m     2600     3059     3299     2976       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >20     191     1     4       Potassium     ppm     ASTM D5185m     >20     191     1     4       Glycol     %     *ASTM D5882     0.10     NEG     NEG       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/cm     *ASTM D7624     >20     10.2     9.1     9.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.0     20.9     20.4       FLUID DEGRADATION     method     limit/base     curre	Calcium	ppm	ASTM D5185m ASTM D5185m	950 1050	913 1080	1030 1249	894 1080
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >25     10     16     14       Sodium     ppm     ASTM D5185m     >200     <1	Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995	913 1080 1002	1030 1249 1134	894 1080 966
Silicon   ppm   ASTM D5185m   >25   10   16   14     Sodium   ppm   ASTM D5185m   200   <1	Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180	913 1080 1002 1235	1030 1249 1134 1434	894 1080 966 1202
Sodium     ppm     ASTM D5185m     200     <1	Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180	913 1080 1002 1235	1030 1249 1134 1434	894 1080 966 1202
Potassium     ppm     ASTM D5185m     >20     ▲ 191     1     4       Glycol     %     *ASTM D2982     ▲ 0.10     NEG     NEG       INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/cm     *ASTM D7624     >20     10.2     9.1     9.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.0     20.9     20.4       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     17.1     16.1     15.8	Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	950 1050 995 1180 2600 limit/base	913 1080 1002 1235 3059 current	1030 1249 1134 1434 3299 history1	894 1080 966 1202 2976 history2
Glycol     %     *ASTM D2982     Image: Constraint of the start of the st	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	950 1050 995 1180 2600 limit/base	913 1080 1002 1235 3059 current 10	1030 1249 1134 1434 3299 history1 16	894 1080 966 1202 2976 history2 14
INFRA-RED     method     limit/base     current     history1     history2       Soot %     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/cm     *ASTM D7624     >20     10.2     9.1     9.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.0     20.9     20.4       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     17.1     16.1     15.8	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm tTS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	913 1080 1002 1235 3059 <u>current</u> 10 200	1030 1249 1134 1434 3299 history1 16 <1	894 1080 966 1202 2976 history2 14 <1
Soot %     %     *ASTM D7844     >3     1     0.8     0.7       Nitration     Abs/cm     *ASTM D7624     >20     10.2     9.1     9.0       Sulfation     Abs/.1mm     *ASTM D7415     >30     22.0     20.9     20.4       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     17.1     16.1     15.8	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm trs	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	913 1080 1002 1235 3059 <u>current</u> 10 ● 200 ▲ 191	1030 1249 1134 1434 3299 history1 16 <1 1	894 1080 966 1202 2976 history2 14 <1 4
Nitration     Abs/cm     *ASTM D7624     >20     10.2     9.1     9.0       Sulfation     Abs/.1mm     *ASTM D7615     >30     22.0     20.9     20.4       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     17.1     16.1     15.8	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm trs	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	913 1080 1002 1235 3059 <u>current</u> 10 ● 200 ▲ 191	1030 1249 1134 1434 3299 history1 16 <1 1	894 1080 966 1202 2976 history2 14 <1 4 NEG
Sulfation     Abs/.1mm     *ASTM D7415     >30     22.0     20.9     20.4       FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     17.1     16.1     15.8	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm trs ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method	950 1050 995 1180 2600 <b>limit/base</b> >25 >20	913 1080 1002 1235 3059 current 10 ● 200 ▲ 191 ▲ 0.10 current	1030 1249 1134 3299 history1 16 <1 1 NEG history1	894 1080 966 1202 2976 history2 14 <14 <1 4 NEG NEG history2
FLUID DEGRADATION method limit/base current history1 history2   Oxidation Abs/.1mm *ASTM D7414 >25 17.1 16.1 15.8	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm iTS ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 <b>method</b> *ASTM D7844	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	913 1080 1002 1235 3059 current 10 ● 200 ▲ 191 ▲ 0.10 current 1	1030 1249 1134 3299 history1 16 <1 1 NEG history1 0.8	894 1080 966 1202 2976 history2 14 <14 <1 4 NEG history2 0.7
Oxidation Abs/.1mm *ASTM D7414 >25 17.1 16.1 15.8	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm TTS ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	913 1080 1002 1235 3059 current 10 ● 200 ▲ 191 ▲ 0.10 current 1 1 10.2	1030 1249 1134 1434 3299 history1 16 <1 1 NEG history1 0.8 9.1	894 1080 966 1202 2976 history2 14 <14 ×1 4 NEG history2 0.7 9.0
	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm TTS ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 method *ASTM D7844 *ASTM D7844	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20	913 1080 1002 1235 3059 current 10 ● 200 ▲ 191 ▲ 0.10 current 1 1 10.2	1030 1249 1134 1434 3299 history1 16 <1 1 NEG history1 0.8 9.1	894 1080 966 1202 2976 history2 14 <14 ×1 4 NEG history2 0.7 9.0
Base Number (BN)     mg KOH/g     ASTM D2896     6.8     7.2     6.4	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7624	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20 >30	913 1080 1002 1235 3059 Current 10 200 ▲ 191 ▲ 0.10 Current 1 10.2 22.0	1030 1249 1134 3299 history1 16 <1 1 NEG history1 0.8 9.1 20.9	894 1080 966 1202 2976 history2 14 <14 <1 4 NEG history2 0.7 9.0 20.4
	Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm % % Abs/cm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D2982 *ASTM D2982 *ASTM D7844 *ASTM D7624 *ASTM D7615	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20 >30 <b>limit/base</b>	913 1080 1002 1235 3059 Current 10 ● 200 ● 191 ● 0.10 Current 1 10.2 22.0 Current	1030 1249 1134 1434 3299 history1 16 <1 1 NEG history1 0.8 9.1 20.9 history1	894 1080 966 1202 2976 history2 14 <14 ×1 4 NEG history2 0.7 9.0 20.4 history2



# **OIL ANALYSIS REPORT**



Test Package : FLEET ( Additional Tests: Glycol )

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

To discuss this sample report, contact Customer Service at 1-800-237-1369.

NW WHITE & CO - SPECIAL SERVICE DIVISION 100 INDEPENDENCE BLVD COLUMBIA, SC US 29210 Contact: George Edwards gedwards@nwwhite.com T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

ul13/22

Apr28/21.

Dec7/21

NONE

NONE

NONE

NONE

NONE

NONE

NORML

NORML

NEG

NEG

11.7

NONE

NONE

NONE

NONE

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NONE

NORML

NORML

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Report Id: NWWSSC [WUSCAR] 06155767 (Generated: 04/23/2024 11:38:41) Rev: 1

Certificate 12367

Submitted By: Paul Riddick Page 4 of 4

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