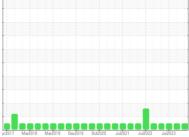


## **OIL ANALYSIS REPORT**

#### Sample Rating Trend

### NORMAL





Sample Number         Client Info         PCA0108367         PCA0101131         PCA0088744           Sample Date         Client Info         17 Dec 2023         23 Sep 2023         09 Jul 2023           Machine Age         mis         Client Info         40000         2000         40000           Oil Age         mis         Client Info         Changed         NORMAL         NORMAL         NORMAL           Sample Status         Imit base         current         Initotyse         History         History           Fuel         WC Method         >6.0         <1.0	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Machine Age         mis         Client Info         0         660776         0           Oil Age         mis         Client Info         40000         20000         40000           Oil Age         Client Info         Changed         N/A           Sample Status         Imilibase         current         NoRMAL         NORMAL           CONTAMINATION         method         56.0         <1.0	Sample Number		Client Info		PCA0106367	PCA0101131	PCA0088744
Oil Age         mis         Client Info         40000         20000         40000           Oil Changed         Client Info         Changed         N/A           Sample Status         Imit/Dase         current         history1           Fuel         WC Method         >6.0         <1.0	Sample Date		Client Info		17 Dec 2023	23 Sep 2023	09 Jul 2023
Oil Changed         Client Info         Changed NORMAL         NA           Sample Status         Image of the status         Normal Norma	Machine Age	mls	Client Info		0	660776	0
Sample Status         NORMAL         NORMAL         NORMAL         NORMAL         NORMAL           CONTAMINATION         method         imitibase         current         history1         history2           Fuel         WC Method         >6.0         <1.0         <1.0         <1.0           Water         WC Method         >0.2         NEG         NEG         NEG           Glycol         WC Method         >0.2         NEG         NEG         NEG           WEAR METALS         method         imitibase         current         history1         history2           Iron         ppm         ASTM D5185m         >20         1         1         <1           Nickel         ppm         ASTM D5185m         >22         1         1         <1           Muminum         ppm         ASTM D5185m         >22         <1         <1         <1           Auminum         ppm         ASTM D5185m         >20         0         0         0           Lead         ppm         ASTM D5185m         >15         1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Van	Oil Age	mls	Client Info		40000	20000	40000
CONTAMINATION         method         imit/base         current         history1         history2           Fuel         WC Method         >6.0         <1.0         <1.0         <1.0           Water         WC Method         >0.2         NEG         NEG         NEG           Glycol         WC Method         S0.2         NEG         NEG         NEG           WEAR METALS         method         imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         1         1         <1           Nickel         ppm         ASTM D5185m         >2         1         1         1         <1           Nickel         ppm         ASTM D5185m         >2         1         1         1         1         1           Nickel         ppm         ASTM D5185m         >2         <1         <1         0         1	Oil Changed		Client Info		Changed	Changed	N/A
Fuel         WC Method         >6.0         <1.0	Sample Status				NORMAL	NORMAL	NORMAL
Water         WC Method         >0.2         NEG         NEG         NEG         NEG           Glycol         WC Method         Imil/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         53         40         28           Chromium         ppm         ASTM D5185m         >20         1         1         -1           Nickel         ppm         ASTM D5185m         >2         1         1         -1           Silver         pom         ASTM D5185m         >2         -1         -1         0           Aluminum         ppm         ASTM D5185m         >2         -7         5         6           Lead         ppm         ASTM D5185m         >25         7         5         6           Lead         ppm         ASTM D5185m         >30.0         4         3         3           Tin         ppm         ASTM D5185m         >40         2         <1	CONTAMINAT	ION	method	limit/base	current	history1	history2
Głycoł         WC Method         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         1         1         <1	Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >100         53         40         28           Chromium         ppm         ASTM D5185m         >20         1         1         1           Nickel         ppm         ASTM D5185m         >2         1         1         1           Titanium         ppm         ASTM D5185m         >2         2         2         2           Silver         ppm         ASTM D5185m         >2         <1         2         2           Aluminum         ppm         ASTM D5185m         >2         <1         2         <1         2           Copper         ppm         ASTM D5185m         >2         <1         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0         0         0         0         0         0         0         0         0         2         <1         1         1         1         1         1         1         1         1         1         1         1         1         1         1	Water		WC Method	>0.2	NEG	NEG	NEG
Iron         ppm         ASTM 05185m         >100         53         40         28           Chromium         ppm         ASTM 05185m         >20         1         1         <1           Nickel         ppm         ASTM 05185m         >2         1         1         1           Titanium         ppm         ASTM 05185m         >2         <1         1         0           Aluminum         ppm         ASTM 05185m         >2         <1         0         0         0           Lead         ppm         ASTM 05185m         >2         7         5         6         0         0         0           Copper         ppm         ASTM 05185m         >40         2         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         1         11         S1         S1<	Glycol		WC Method		NEG	NEG	NEG
Chromium         ppm         ASTM D5185m         >20         1         1         <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >2         1         1         1           Titanium         ppm         ASTM D5185m         >2         1         1         1           Titanium         ppm         ASTM D5185m         >2         1         1         0           Aluminum         ppm         ASTM D5185m         >25         7         5         6           Lead         ppm         ASTM D5185m         >40         2         <1	Iron	ppm	ASTM D5185m	>100	53	40	28
Titanium         ppm         ASTM D5185m         2         <1         <1         0           Aluminum         ppm         ASTM D5185m         >2         <1	Chromium	ppm	ASTM D5185m	>20	1	1	<1
Silver         ppm         ASTM D5185m         >2         <1         <1         0           Aluminum         ppm         ASTM D5185m         >25         7         5         6           Lead         ppm         ASTM D5185m         >40         2         <1	Nickel	ppm	ASTM D5185m	>2	1	1	1
Aluminum         ppm         ASTM D5185m         >25         7         5         6           Lead         ppm         ASTM D5185m         >40         2         <1	Titanium	ppm	ASTM D5185m		2	2	2
Lead         ppm         ASTM D5185m         >40         2         <1         2           Copper         ppm         ASTM D5185m         >330         4         3         3           Tin         ppm         ASTM D5185m         >15         1         <1         <1         <1           Vanadium         ppm         ASTM D5185m         >15         1         <1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0         0           ADDITIVES         method         limi/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         5         56         59           Magnaese         ppm         ASTM D5185m         0         <1         <1         <1<           Magnesium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         950         1064         1032         1001           Zinc         ppm	Silver	ppm	ASTM D5185m	>2	<1	<1	0
Copper         ppm         ASTM D5185m         >330         4         3         3           Tin         ppm         ASTM D5185m         >15         1         <1	Aluminum	ppm	ASTM D5185m	>25	7	5	6
Tin         ppm         ASTM D5185m         >15         1         <1         <1           Vanadium         ppm         ASTM D5185m         0         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         2         <1	Lead	ppm	ASTM D5185m	>40	2	<1	2
Vanadium         ppm         ASTM D5185m         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         2         <1         <1           Barium         ppm         ASTM D5185m         0         0         0         0         2           Molybdenum         ppm         ASTM D5185m         0         55         56         59           Magnesium         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         950         1064         1032         1001           Zinc         ppm         ASTM D5185m         950         2426         2556         2827           Sulfur         ppm         ASTM D5185m         225         7         6         6           Socium         ppm         ASTM D5185m         225         7         6	Copper	ppm	ASTM D5185m	>330	4	3	3
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         2         <1         <1           Barium         ppm         ASTM D5185m         0         0         0         0         2           Boron         ppm         ASTM D5185m         0         0         0         0         2           Barium         ppm         ASTM D5185m         0         55         56         59           Magnesium         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         950         896         919         1150           Phosphorus         ppm         ASTM D5185m         1050         1078         1099         1150           Sulfur         ppm         ASTM D5185m         2600         2426         2556         2827           Soliton         ppm         ASTM D5185m         20 <td>Tin</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;15</td> <th>1</th> <td>&lt;1</td> <td>&lt;1</td>	Tin	ppm	ASTM D5185m	>15	1	<1	<1
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         2         2         <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron         ppm         ASTM D5185m         2         2         <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         0         0         0         2           Molybdenum         ppm         ASTM D5185m         50         55         56         59           Manganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         1050         1078         1099         1150           Phosphorus         ppm         ASTM D5185m         995         1064         1032         1001           Zinc         ppm         ASTM D5185m         2600         2426         2556         2827           CONTAMINANT         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base			and the second				
Molybdenum         ppm         ASTM D5185m         50         55         56         59           Manganese         ppm         ASTM D5185m         0         <1	ADDITIVES		method	limit/base	current	history1	history2
Maganese         ppm         ASTM D5185m         0         <1         <1         <1           Magnesium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         1050         1078         1099         1150           Phosphorus         ppm         ASTM D5185m         995         1064         1032         1001           Zinc         ppm         ASTM D5185m         995         1064         1032         1225           Sulfur         ppm         ASTM D5185m         2600         2426         2556         2827           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         6         6           Sodium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/.1mm         *ASTM D7624		ppm					
Magnesium         ppm         ASTM D5185m         950         896         919         867           Calcium         ppm         ASTM D5185m         1050         1078         1099         1150           Phosphorus         ppm         ASTM D5185m         995         1064         1032         1001           Zinc         ppm         ASTM D5185m         995         1064         1032         1225           Sulfur         ppm         ASTM D5185m         2600         2426         2556         2827           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         6         6           Sodium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/.m         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.m         *ASTM D7415	Boron		ASTM D5185m	2	2	<1	<1
Calcium         ppm         ASTM D5185m         1050         1078         1099         1150           Phosphorus         ppm         ASTM D5185m         995         1064         1032         1001           Zinc         ppm         ASTM D5185m         995         1064         1032         1225           Sulfur         ppm         ASTM D5185m         1180         1278         1262         1225           Sulfur         ppm         ASTM D5185m         2600         2426         2556         2827           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         6         6           Sodium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/.mm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.lmm         *ASTM D	Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	2 0	<1 0	<1 2
Phosphorus         ppm         ASTM D5185m         995         1064         1032         1001           Zinc         ppm         ASTM D5185m         1180         1278         1262         1225           Sulfur         ppm         ASTM D5185m         2600         2426         2556         2827           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         6         6           Sodium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/.mm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.imm         *ASTM D7415	Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 0 55	<1 0 56	<1 2 59
Zinc         ppm         ASTM D5185m         1180         1278         1262         1225           Sulfur         ppm         ASTM D5185m         2600         2426         2556         2827           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         6         6           Sodium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.tmm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base	Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 55 <1	<1 0 56 <1	<1 2 59 <1
Sulfur         ppm         ASTM D5185m         2600         2426         2556         2827           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >25         7         6         6           Sodium         ppm         ASTM D5185m         >20         24         18         16           Potassium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         25.2         22.4         19.8	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	2 0 55 <1 896	<1 0 56 <1 919	<1 2 59 <1 867
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25766SodiumppmASTM D5185m>20241816PotassiumppmASTM D5185m>20202INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>30.80.70.6NitrationAbs/cm*ASTM D7624>2012.611.410.3SulfationAbs/lim*ASTM D7415>3026.424.523.4FLUID DEGRADATION methodlimit/basecurrenthistory1history2OxidationAbs/.imm*ASTM D7414>2525.222.419.8	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	2 0 55 <1 896 1078	<1 0 56 <1 919 1099	<1 2 59 <1 867 1150
Silicon         ppm         ASTM D5185m         >25         7         6         6           Sodium         ppm         ASTM D5185m         24         18         16           Potassium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.tm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.tmm         *ASTM D7414         >25         25.2         22.4         19.8	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	2 0 50 0 950 1050 995	2 0 55 <1 896 1078 1064	<1 0 56 <1 919 1099 1032	<1 2 59 <1 867 1150 1001
Sodium         ppm         ASTM D5185m         24         18         16           Potassium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         25.2         22.4         19.8	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	2 0 55 <1 896 1078 1064 1278	<1 0 56 <1 919 1099 1032 1262	<1 2 59 <1 867 1150 1001 1225
Potassium         ppm         ASTM D5185m         >20         2         0         2           INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         25.2         22.4         19.8	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 50 950 1050 995 1180 2600	2 0 55 <1 896 1078 1064 1278 2426	<1 0 56 <1 919 1099 1032 1262 2556	<1 2 59 <1 867 1150 1001 1225 2827
INFRA-RED         method         limit/base         current         history1         history2           Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         25.2         22.4         19.8	Boron Barium 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 ASTM D5185m <b>method</b>	2 0 50 950 1050 995 1180 2600	2 0 555 <1 896 1078 1064 1278 2426 2426 current 7	<1 0 56 <1 919 1099 1032 1262 2556 history1 6	<1 2 59 <1 867 1150 1001 1225 2827 history2
Soot %         %         *ASTM D7844         >3         0.8         0.7         0.6           Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         25.2         22.4         19.8	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 <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	2 0 55 <1 896 1078 1064 1278 2426 current 7 24	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18	<1 2 59 <1 867 1150 1001 1225 2827 history2 6 16
Nitration         Abs/cm         *ASTM D7624         >20         12.6         11.4         10.3           Sulfation         Abs/.1mm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         25.2         22.4         19.8	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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 <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	2 0 55 <1 896 1078 1064 1278 2426 current 7 24	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18	<1 2 59 <1 867 1150 1001 1225 2827 history2 6 16
Sulfation         Abs/.1mm         *ASTM D7415         >30         26.4         24.5         23.4           FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         25.2         22.4         19.8	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	2 0 55 <1 896 1078 1064 1278 2426 current 7 24 24 2	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18 0	<1 2 59 <1 867 1150 1001 1225 2827 history2 6 16 16 2
FLUID DEGRADATION     method     limit/base     current     history1     history2       Oxidation     Abs/.1mm     *ASTM D7414     >25     25.2     22.4     19.8	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 -20 <b>imit/base</b>	2 0 55 <1 896 1078 1064 1278 2426 current 7 24 2 2 2 current	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18 0 Vistory1	<1 2 59 <1 867 1150 1001 1225 2827  history2 6 16 2 history2
Oxidation Abs/.1mm *ASTM D7414 >25 25.2 22.4 19.8	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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3	2 0 55 <1 896 1078 1064 1278 2426 <u>current</u> 7 24 2 2 <u>current</u> 0.8	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18 0 history1 0.7	<1 2 59 <1 867 1150 1001 1225 2827  history2 6 16 2 history2 0.6
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm <b>TS</b> <b>TS</b> ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	2 0 55 <1 896 1078 1064 1278 2426 <i>current</i> 7 24 2 2 <i>current</i> 0.8 12.6	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18 0 history1 0.7 11.4	<1 2 59 <1 867 1150 1001 1225 2827 history2 6 16 2 history2 0.6 10.3
Base Number (BN)         mg KOH/g         ASTM D2896         3.1         2.4         5.7	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 D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 <b>imit/base</b> >3 >20 33 >30	2 0 55 <1 896 1078 1064 1278 2426 <u>current</u> 7 24 2 2 <u>current</u> 0.8 12.6 26.4	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18 0 history1 0.7 11.4 24.5	<1 2 59 <1 867 1150 1001 1225 2827  history2 6 16 2  history2 0.6 10.3 23.4
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b> >3 >20 >30	2 0 55 <1 896 1078 1064 1278 2426 <i>current</i> 7 24 2 2 <i>current</i> 0.8 12.6 26.4 <i>current</i>	<1 0 56 <1 919 1099 1032 1262 2556 history1 6 18 0 history1 0.7 11.4 24.5 history1	<1 2 59 <1 867 1150 1001 1225 2827 history2 6 16 2 history2 0.6 10.3 23.4 history2

# VOLVO 26507

Component **Diesel Engine** Fluid

PETRO CANADA DURON SHP 10W30 (--- QTS)

#### DIAGNOSIS

#### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

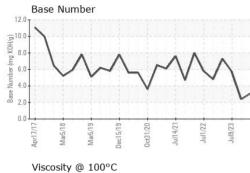
There is no indication of any contamination in the oil.

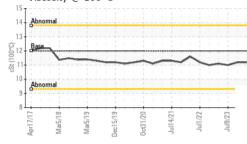
#### Fluid Condition

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

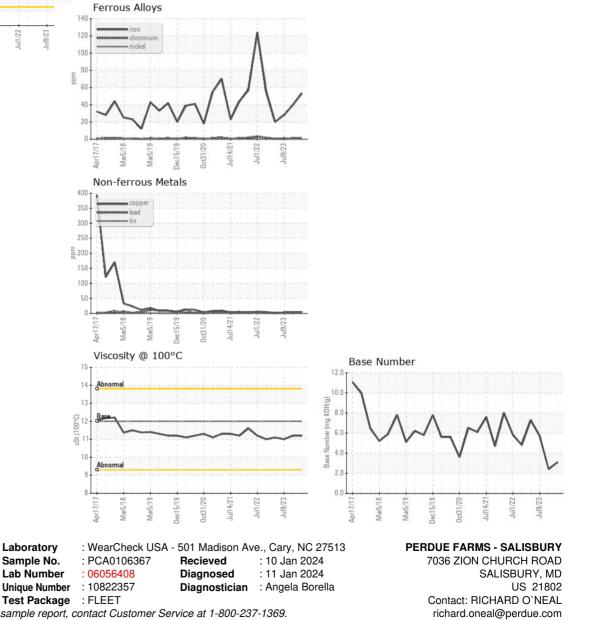


# **OIL ANALYSIS REPORT**





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	>0.2	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	12.00	11.2	11.2	11.0
GRAPHS						





\* - 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)

Ě

T: (410)543-3628

F: (410)341-2164