# **OIL ANALYSIS REPORT**

## **VOLVO PENTA**

### VOLVO PENTA A 1129110 - PORT DIESEL ENGINE

Sample No: VPA053067

Oil Type: DIESEL ENGINE OIL SAE 15W40

Sample Date         24 Apr 2024              Machine Hours         581              Oil Hours         0              Oil Changed         N/A              Sample Status         NORMAL              OIL CONDITION         Visc @ 100°C         cSt         13.4              Oxidation (PA)         %         55               Contramination (PA)         %         55               Water         %         NEG               Soot %         %         0.7               Solutation (PA)         %         54               Silcon         ppm         7               Sodium         ppm         2	Sample Number		VPA053067	 	
Machine Hours       581            Oil Hours       0            Sample Status       NORMAL            Sample Status       NORMAL            OIL CONDITION             Visc @ 100°C       CSt       13.4            Sample Status       9.6             Oxidation (PA)       %       55             CONTAMINATION       ***       53             Water       %       NEG             Soot %       %       54             Sulfation (PA)       %       <1.0             Soot %       %       <1.0             Sulfation (PA)       %       <1.0            Sodium       ppm			24 Apr 2024	 	
Oil Changed         N/A              Sample Status         NORMAL              OIL CONDITION	-		-	 	
Sample Status         NORMAL              OIL CONDITION               Visc @ 100°C         CSt         13.4              Base Number (BN)         mg KOH/g         9.6              Cwidation (PA)         %         55              CWTAMINATION         %         53              Soot %         %         0.7              Soot %         %         54              Sulfation (PA)         %         54              Sulfation (PA)         %         51              Sulfation (PA)         %         <1.0	Oil Hours		0	 	
OIL CONDITION           Visc @ 100°C         cSt         13.4              Base Number (BN)         mg KOH/g         9.6              Coxidation (PA)         %         55              CONTAMINATION                Water         %         NEG              Soot %         %         0.7              Silation (PA)         %         53              Sulfation (PA)         %         S4              Sulfation (PA)         %         S1              Sulfation (PA)         %         <1.0              Sulfation (PA)         %         <1.0              Sulfation (PA)         %         <1.0              Sodium         ppm         2 <tr< th=""><th>Oil Changed</th><th></th><th>N/A</th><th> </th><th></th></tr<>	Oil Changed		N/A	 	
Visc @ 100°C       cSt       13.4            Base Number (BN)       mg KOH/g       9.6            Oxidation (PA)       %       55            CONTAMINATION       Water       %       NEG            Solf %       0.7             Nitration (PA)       %       53            Sulfation (PA)       %       54            Glycol       %       NEG            Sulfation (PA)       %       54            Sulfation (PA)       %       <1.0            Soliton       ppm       7             Soliton       ppm       12             WeAR METALS                Aluminum       ppm       1	Sample Status		NORMAL	 	
Base Number (BN)       mg KOH/g       9.6            Cxidation (PA)       %       55            CONTAMINATION       Water       %       NEG            Water       %       NEG             Solf %       0.7             Nitration (PA)       %       54            Sylfation (PA)       %       S4            Sylfation (PA)       %       S4 <td>OIL CONDITION</td> <td></td> <td></td> <td></td> <td></td>	OIL CONDITION				
Oxidation (PA)         %         55              CONTAMINATION           Water         %         NEG              Soot %         %         0.7              Nitration (PA)         %         53              Sulfation (PA)         %         54              Glycol         %         NEG              Sulfation (PA)         %         54              Solicon         ppm         77              Solicinn         ppm         21              WEAR METALS                Iron         ppm         43              Iron         ppm         4              Iron         ppm         4              Iron         ppm <t< td=""><td>Visc @ 100°C</td><td>cSt</td><td><b>13.4</b></td><td> </td><td></td></t<>	Visc @ 100°C	cSt	<b>13.4</b>	 	
CONTAMINATION           Water         %         NEG              Soot %         %         0.7              Nitration (PA)         %         53              Sulfation (PA)         %         54              Glycol         %         NEG              Fuel         %         <1.0	Base Number (BN)	mg KOH/g	9.6	 	
Water         %         NEG              Soot %         %         0.7              Nitration (PA)         %         53              Sulfation (PA)         %         54              Glycol         %         NEG              Glycol         %         <1.0	Oxidation (PA)	%	55	 	
Soot %       %       0.7            Nitration (PA)       %       53            Sulfation (PA)       %       54            Glycol       %       NEG            Fuel       %       <1.0	CONTAMINATION				
Nitration (PA)       %       53            Sulfation (PA)       %       54            Glycol       %       NEG            Fuel       %       <1.0	Water	%	NEG	 	
Nitration (PA)       %       53            Sulfation (PA)       %       54            Glycol       %       NEG            Fuel       %       <1.0	Soot %	%	0.7	 	
Sulfation (PA)       %       54            Glycol       %       NEG            Fuel       %       <1.0	Nitration (PA)			 	
Fuel       %       <1.0            Silicon       ppm       7            Sodium       ppm       2            Potassium       ppm       <1		%	54	 	
Silicon       ppm       7            Sodium       ppm       2            Potassium       ppm       <1	Glycol	%	NEG	 	
Sodium         ppm         2             Potassium         ppm         <1              WEAR METALS                Iron         ppm         43              Copper         ppm         12              Lead         ppm         2              Aluminum         ppm         2              Molybdenum         ppm         61              Molybdenum         ppm         0              Silver         ppm         0              Manganese         ppm         0              ADDITIVES               Magnesium         ppm         1145	Fuel	%	<1.0	 	
Potassium       ppm       <1	Silicon	ppm	7	 	
WEAR METALS         Iron       ppm       43            Copper       ppm       12            Lead       ppm       4            Aluminum       ppm       4            Aluminum       ppm       4            Aluminum       ppm       61            Molybdenum       ppm       61            Nickel       ppm       0            Silver       ppm       0            Manganese       ppm       0            ADDITIVES              Magnesium       ppm       1133	Sodium	ppm	2	 	
Iron       ppm       43            Copper       ppm       12            Lead       ppm       4            Aluminum       ppm       2            Aluminum       ppm       4            Aluminum       ppm       4            Aluminum       ppm       61            Molybdenum       ppm       61            Nickel       ppm       0            Silver       ppm       0            Manganese       ppm       <1	Potassium	ppm	<b>  </b> <1	 	
Copper       ppm       12           Lead       ppm       4           Tin       ppm       2           Aluminum       ppm       4           Aluminum       ppm       4           Aluminum       ppm       1           Chromium       ppm       61           Molybdenum       ppm       61           Nickel       ppm       0           Silver       ppm       0           Manganese       ppm       0           ADDITIVES            Magnesium       ppm       1033	WEAR METALS				
Lead       ppm       4           Tin       ppm       2           Aluminum       ppm       4           Aluminum       ppm       1           Molybdenum       ppm       61           Molybdenum       ppm       61           Nickel       ppm       3           Nickel       ppm       0           Silver       ppm       0           Manganese       ppm       0           ADDITIVES            Magnesium       ppm       1033	Iron	ppm	<b>4</b> 3	 	
Tin       ppm       2            Aluminum       ppm       4            Chromium       ppm       1            Molybdenum       ppm       61            Nickel       ppm       3            Titanium       ppm       0            Silver       ppm       0            Manganese       ppm       0            ADDITIVES             Magnesium       ppm       1033	Copper	ppm	<b>12</b>	 	
Aluminum       ppm       4           Chromium       ppm       1           Molybdenum       ppm       61           Nickel       ppm       3           Titanium       ppm       0           Silver       ppm       0           Manganese       ppm       <1	Lead	ppm	4	 	
Chromium         ppm         1              Molybdenum         ppm         61              Nickel         ppm         3              Titanium         ppm         0              Silver         ppm         0              Manganese         ppm         <1	Tin	ppm	2	 	
Molybdenum         ppm         61              Nickel         ppm         3              Titanium         ppm         0              Silver         ppm         0              Manganese         ppm         <1	Aluminum	ppm	<b>4</b>	 	
Nickel         ppm         3              Titanium         ppm         0              Silver         ppm         0              Manganese         ppm         <1	Chromium	ppm	<b>1</b>	 	
Titanium       ppm       0            Silver       ppm       0            Manganese       ppm       <1		ppm	61	 	
Silver         ppm         0              Manganese         ppm         <1		ppm		 	
Manganese         ppm         <1              Vanadium         ppm         0              ADDITIVES               Calcium         ppm         1145              Magnesium         ppm         1033	Titanium	ppm		 	
Vanadium         ppm         0              ADDITIVES         Calcium         ppm         1145              Magnesium         ppm         1033		ppm		 	
ADDITIVES           Calcium         ppm         1145              Magnesium         ppm         1033	5		_	 	
Calcium         ppm         1145              Magnesium         ppm         1033	Vanadium	ppm	0	 	
Magnesium ppm <b>1033</b>	ADDITIVES				
Zinc ppm <b>1340</b>	-	ppm		 	
		ppm			
Phosphorus ppm <b>1122</b>				 	
Barium         ppm         0              Boron         ppm         2				 	

#### JOHNSTONS MARINE SERVICES

1850 NW 15th AVENUE, SUITE 205 POMPANO BEACh, FL US 33069 Contact: NEIL JOHNSTON neil@1jms.com T: (984)448-0813 F:

### Diagnosis

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

 Depot:
 VPJOHDEE

 Unique No:
 11002971

 Signed:
 Don Baldridge

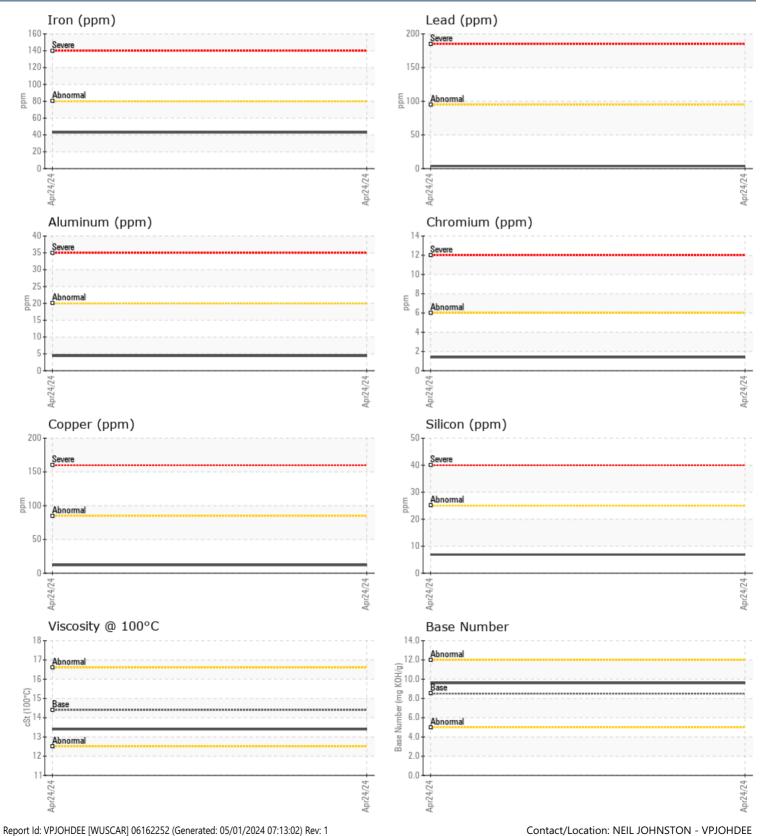
 Report Date:
 30 Apr 2024

Contact/Location: NEIL JOHNSTON - VPJOHDEE

# **OIL ANALYSIS REPORT**



#### GRAPHS



Page 2 of 2