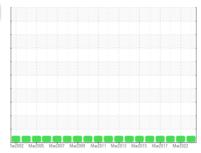


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

GENERAC KANOY RD

Component
Propane Engine

SHELL ROTELLA T 15W40 (4 QTS)

Recommendation

Resample at the next service interval to monitor.

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

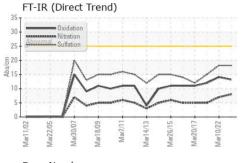
Fluid Condition

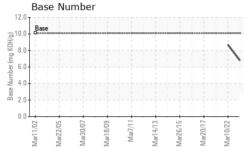
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

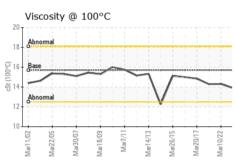
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0887887	WC0628397	WCM1395277
Sample Date		Client Info		18 Apr 2024	10 Mar 2022	14 Mar 2018
Machine Age	hrs	Client Info		558	498	421
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	1	2	2
Chromium	ppm	ASTM D5185m	>25	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>5	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>25	0	0	2
Copper	ppm	ASTM D5185m	>35	0	<1	<1
Tin	ppm	ASTM D5185m	>8	0	0	0
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	0 <1	1
Cadmium	ppm	ASTIVI DSTOSIII		U	<	U
				-		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		316	66	history1	history2 23
Boron Barium		method ASTM D5185m ASTM D5185m	316 0.0	66 0	history1 115 <1	history2 23 0
Boron Barium Molybdenum	ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	316	66 0 91	history1 115 <1 75	history2 23 0 61
Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2	66 0 91 0	history1 115 <1 75 <1	history2 23 0 61 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2	66 0 91 0 101	history1 115 <1 75 <1 192	history2 23 0 61 <1 811
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292	66 0 91 0 101 2492	history1 115 <1 75 <1 192 1998	history2 23 0 61 <1 811 1124
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064	66 0 91 0 101 2492 1085	history1 115 <1 75 <1 192 1998 1041	history2 23 0 61 <1 811 1124 950
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160	66 0 91 0 101 2492 1085 1388	history1 115 <1 75 <1 192 1998 1041 1260	history2 23 0 61 <1 811 1124 950 1106
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	66 0 91 0 101 2492 1085 1388 4494	history1 115 <1 75 <1 192 1998 1041 1260 3621	history2 23 0 61 <1 811 1124 950 1106 2555
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	66 0 91 0 101 2492 1085 1388 4494	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1	history2 23 0 61 <1 811 1124 950 1106 2555 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	66 0 91 0 101 2492 1085 1388 4494 current	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base	66 0 91 0 101 2492 1085 1388 4494 current 3	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20	66 0 91 0 101 2492 1085 1388 4494 current 3 2 <1	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4 2	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base	66 0 91 0 101 2492 1085 1388 4494 current 3 2 <1	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4 2 2 history1	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2 4 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20	66 0 91 0 101 2492 1085 1388 4494 current 3 2 <1	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4 2 2 history1 0	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2 4 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20	66 0 91 0 101 2492 1085 1388 4494 current 3 2 <1 current 0 8.0	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4 2 2 history1 0 7.0	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2 4 history2 0 5.
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20 limit/base	66 0 91 0 101 2492 1085 1388 4494 current 3 2 <1 current 0 8.0 18.2	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4 2 2 history1 0 7.0 18.2	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2 4 history2 0 5. 15.
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m method *ASTM D7624 *ASTM D7624 *ASTM D7415 method	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20 limit/base	66 0 91 0 101 2492 1085 1388 4494 current 3 2 <1 current 0 8.0 18.2 current	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4 2 2 history1 0 7.0 18.2 history1	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2 4 history2 0 5. 15. history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method *ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20 limit/base >20 >30 limit/base	66 0 91 0 101 2492 1085 1388 4494 current 3 2 <1 current 0 8.0 18.2	history1 115 <1 75 <1 192 1998 1041 1260 3621 history1 4 2 2 history1 0 7.0 18.2	history2 23 0 61 <1 811 1124 950 1106 2555 history2 3 2 4 history2 0 5. 15.



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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPER	TIES	method			riistory i	nistoryz
Visc @ 100°C	cSt	ASTM D445	15.7	13.9	14.3	14.29

VISC @ TOO'C	CSI	A5 1 W D445	15.7	13.9	14.3		14.29
GRAPHS							
Iron (ppm)				Lead (ppm)			
150				40			
E 100 - Abnormal			-	Abnormal			
50-				10-			
03	13	15	22	07	90	13	22
Mar22,05 Mar30,07 Mar18,09	Mar7/11 Mar14/13	Mar26/15 Mar20/17	Mar10/22	Mar11/02 Mar22/05 Mar30/07	Mar18/09 Mar7/11	Mar14/13 Mar26/15	Mar20/17 Mar10/22
Aluminum (ppm)				Chromium (opm)		
Severe				Severe			
30 Abnormal							
10				20			
	<u> </u>			10			
Mar22/05 - Mar30/07 - Mar18/09 -	Mar7/11.	Mar26/15	Mar10/22	Mar11/02 Mar22/05	Mar18/09 -	Mar14/13	Mar20/17
	Ma Ma	M _a	Ma			M a	Ma Ma
Copper (ppm)				Silicon (ppm) ' 1 1		
60 Severe				80			
E 40 - Abnormal			-	Abnormal			
20 -				20			
000	13	15	22	02 00	60	3	22
Mar11,02 Mar2,05 Mar18,09	Mar7/11	Mar26/15 Mar20/17	Mar10/22	Mar11/02 Mar22/05 Mar30/07	Mar18/09 Mar7/11	Mar14/13 Mar26/15	Mar20/17 Mar10/22
Viscosity @ 100°C				Base Numbe			
Abnormal	U U Granavarana			12.0 Base			
				Base Number (mg KOH (d) 4.00 -			\
00 16 - Base Abnormal			_	4.0 4.0			
12				% 2.0			
ar11,02 + iar22,05 + iar30,07 + iar18,09 + iar18,00 + i	Mar7/11-	lar26/15 -	lar10/22	or 11/02 ar 12/05 lar 30/07 lar 30/0	lar18/09 -	lar14/13 -	lar20/17 -
जा जो जो	ar M	ar,	in air	<u>ar</u> <u>ar</u>	Me	ar,	ਕੂ ਕੂ





Certificate 12367

Sample No. : WC0887887 Lab Number : 06158763 Unique Number : 10994186

Test Package : MOB 1

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Apr 2024 **Tested** : 25 Apr 2024 Diagnosed

: 25 Apr 2024 - Wes Davis

PIEDMONT GENERATOR 7560 NC HWY 22 NORTH CLIMAX, NC

US 27233 Contact: TERRY SHEPPARD

terry1pg@bellsouth.net; bill3pg@bellsouth.net T: (336)685-4859

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - 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) F: (336)685-5297 Contact/Location: TERRY SHEPPARD - PIEJUL