

## **OIL ANALYSIS REPORT**

# 40 MILE [46004111]

**TGY001215 - SHELL OMALA S5 WIND 320 (S/N BM0037)** 

New (Unused) Oil

{not provided} (--- LTR)

Sample Rating Trend



### Recommendation

This is a baseline read-out on the submitted sample.

Sample Number   Client Info   NX014219					JUNZUZ4		
Sample Date   Client Info   18 Jun 2024	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age         hrs         Client Info         0	Sample Number		Client Info		NX014219		
Oil Changed         hrs         Client Info         Not Changd   <	Sample Date		Client Info		18 Jun 2024		
Cilient Info	Machine Age	hrs	Client Info		0		
WEAR METALS	Oil Age	hrs	Client Info		0		
WEAR METALS         method         limit/base         current         history1         history2           PQ         ASTM D8184         23	Oil Changed		Client Info		Not Changd		
PQ         ASTM D8184         23             Iron         ppm         ASTM D5185m         0             Chromium         ppm         ASTM D5185m         0             Nickel         ppm         ASTM D5185m         0             Titanium         ppm         ASTM D5185m         0             Silver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         0             Copper         ppm         ASTM D5185m         0             Tin         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             Barium         ppm	Sample Status				NORMAL		
Iron         ppm         ASTM D5185m         0             Chromium         ppm         ASTM D5185m         0             Nickel         ppm         ASTM D5185m         0             Siliver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         0             Lead         ppm         ASTM D5185m         0             Copper         ppm         ASTM D5185m         0             Tin         ppm         ASTM D5185m         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         0             Barium	WEAR METALS		method	limit/base	current	history1	history2
Chromium         ppm         ASTM D5185m         0             Nickel         ppm         ASTM D5185m         0             Tittanium         ppm         ASTM D5185m         0             Siliver         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         0             Aluminum         ppm         ASTM D5185m         0             Lead         ppm         ASTM D5185m         0             Copper         ppm         ASTM D5185m         0             Vanadium         ppm         ASTM D5185m         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         0             Boron         ppm         ASTM D5185m         0             Molybden	PQ		ASTM D8184		23		
Nickel ppm ASTM D5185m 0	Iron	ppm	ASTM D5185m		0		
Titanium	Chromium	ppm	ASTM D5185m		0		
Silver	Nickel	ppm	ASTM D5185m		0		
Aluminum	Titanium	ppm	ASTM D5185m		0		
Lead         ppm         ASTM D5185m         0             Copper         ppm         ASTM D5185m         0             Tin         ppm         ASTM D5185m         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0              Manganese         ppm         ASTM D5185m         0              Manganesium         ppm         ASTM D5185m         2              Calcium         ppm         ASTM D5185m         2              Phosphorus         ppm         ASTM D518	Silver	ppm	ASTM D5185m		0		
Copper         ppm         ASTM D5185m         0             Tin         ppm         ASTM D5185m         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         2             Phosphorus         ppm         ASTM D5185m         2             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0	Aluminum	ppm	ASTM D5185m		0		
Tin         ppm         ASTM D5185m         0             Vanadium         ppm         ASTM D5185m         0             Cadmium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Manganesium         ppm         ASTM D5185m         2             Manganesium         ppm         ASTM D5185m         2             Calcium         ppm         ASTM D5185m         2             Phosphorus         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0	Lead	ppm	ASTM D5185m		0		
Vanadium         ppm         ASTM D5185m         0             ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         2             Calcium         ppm         ASTM D5185m         2             Phosphorus         ppm         ASTM D5185m         2             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         0             Silicon         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         2	Copper	ppm	ASTM D5185m		0		
ADDITIVES	Tin	ppm	ASTM D5185m		0		
ADDITIVES	Vanadium	ppm	ASTM D5185m		0		
Boron         ppm         ASTM D5185m         0             Barium         ppm         ASTM D5185m         0             Molybdenum         ppm         ASTM D5185m         0             Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         2             Calcium         ppm         ASTM D5185m         2             Phosphorus         ppm         ASTM D5185m         0             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         2             Sulfur         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         1             Water	Cadmium	ppm	ASTM D5185m		0		
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum   ppm   ASTM D5185m   0               Manganese   ppm   ASTM D5185m   0           Magnesium   ppm   ASTM D5185m   <1         Calcium   ppm   ASTM D5185m   2         Phosphorus   ppm   ASTM D5185m   508         Zinc   ppm   ASTM D5185m   0         Sulfur   ppm   ASTM D5185m   4128         CONTAMINANTS   method   limit/base   current   history1   history2     Silicon   ppm   ASTM D5185m   2         Sodium   ppm   ASTM D5185m   2         Sodium   ppm   ASTM D5185m   1         Potassium   ppm   ASTM D5185m   >20   <1         Water   %   ASTM D6304   0.010         ppm Water   ppm   ASTM D6304   109         Particles >4μm   ASTM D6304   109         Particles >6μm   ASTM D7647   >5000   1413         Particles >14μm   ASTM D7647   >160   16         Particles >21μm   ASTM D7647   >10   3         Particles >38μm   ASTM D7647   >3   0         Particles >71μm   ASTM D7647   >3   0         Oil Cleanliness   ISO 4406 (c)   >19/17/14   18/15/11	Boron	ppm	ASTM D5185m		0		
Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         <1	Barium	ppm	ASTM D5185m		0		
Magnesium         ppm         ASTM D5185m         <1             Calcium         ppm         ASTM D5185m         2             Phosphorus         ppm         ASTM D5185m         508             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         4128             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         1              Water         %         ASTM D5185m         1              Water         %         ASTM D5185m         1              Water         %         ASTM D5185m         1 </td <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td></td> <td></td>	Molybdenum	ppm	ASTM D5185m		0		
Calcium         ppm         ASTM D5185m         2             Phosphorus         ppm         ASTM D5185m         508             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         4128             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         >20         <1	Manganese	ppm	ASTM D5185m		0		
Phosphorus         ppm         ASTM D5185m         508             Zinc         ppm         ASTM D5185m         0             Sulfur         ppm         ASTM D5185m         4128             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         20         <1	Magnesium	ppm	ASTM D5185m		<1		
Zinc   ppm   ASTM D5185m   Q       Sulfur   ppm   ASTM D5185m   A128         Sulfur   ppm   ASTM D5185m   A128         Sulfur   ppm   ASTM D5185m   Q         Sodium   ppm   ASTM D5185m   Q             Sodium   ppm   ASTM D5185m   Q             Sodium   ppm   ASTM D5185m   Q   Q   ASTM D5185m   Q   Q   ASTM D5185m   Q   Q   Q   Q   Q   Q   Q   Q   Q	Calcium	ppm	ASTM D5185m		2		
Sulfur         ppm         ASTM D5185m         4128             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         >20         <1	Phosphorus	ppm	ASTM D5185m		508		
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         2             Sodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D6304         0.010             Water         %         ASTM D6304         109             ppm Water         ppm         ASTM D6304         109             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         1413             Particles >6μm         ASTM D7647         >1300         241             Particles >14μm         ASTM D7647         >160         16             Particles >21μm         ASTM D7647         >40         6             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >	Zinc	ppm	ASTM D5185m		0		
Silicon ppm ASTM D5185m 2 Sodium ppm ASTM D5185m 1 Sodium ppm ASTM D5185m 1 Sodium ppm ASTM D5185m >20 <1 Sodium ppm ASTM D5185m >20 <1 Sodium ppm ASTM D6304 STM D7647 STM D764	Sulfur	ppm	ASTM D5185m		4128		
Sodium   ppm   ASTM D5185m   1	CONTAMINANTS	3	method	limit/base	current	history1	history2
Sodium         ppm         ASTM D5185m         1             Potassium         ppm         ASTM D5185m         >20         <1	Silicon	ppm	ASTM D5185m		2		
Potassium         ppm         ASTM D5185m         >20         <1             Water         %         ASTM D6304         0.010              ppm Water         ppm         ASTM D6304         109             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         1413             Particles >6μm         ASTM D7647         >1300         241             Particles >14μm         ASTM D7647         >160         16             Particles >21μm         ASTM D7647         >40         6             Particles >38μm         ASTM D7647         >3         0             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         18/15/11	Sodium	ppm	ASTM D5185m		1		
Water         %         ASTM D6304         0.010             ppm Water         ppm         ASTM D6304         109             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         1413             Particles >6μm         ASTM D7647         >1300         241             Particles >14μm         ASTM D7647         >160         16             Particles >21μm         ASTM D7647         >40         6             Particles >38μm         ASTM D7647         >10         3             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         18/15/11	Potassium	ppm		>20	<1		
ppm Water         ppm         ASTM D6304         109             FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         1413             Particles >6μm         ASTM D7647         >1300         241             Particles >14μm         ASTM D7647         >160         16             Particles >21μm         ASTM D7647         >40         6             Particles >38μm         ASTM D7647         >10         3             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         18/15/11	Water		ASTM D6304		0.010		
Particles >4μm       ASTM D7647       >5000       1413           Particles >6μm       ASTM D7647       >1300       241           Particles >14μm       ASTM D7647       >160       16           Particles >21μm       ASTM D7647       >40       6           Particles >38μm       ASTM D7647       >10       3           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       18/15/11	ppm Water		ASTM D6304		109		
Particles >6μm         ASTM D7647         >1300         241             Particles >14μm         ASTM D7647         >160         16             Particles >21μm         ASTM D7647         >40         6             Particles >38μm         ASTM D7647         >10         3             Particles >71μm         ASTM D7647         >3         0             Oil Cleanliness         ISO 4406 (c)         >19/17/14         18/15/11	FLUID CLEANLIN	NESS	method	limit/base	current	history1	history2
Particles >14μm       ASTM D7647       >160       16           Particles >21μm       ASTM D7647       >40       6           Particles >38μm       ASTM D7647       >10       3           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       18/15/11	Particles >4µm		ASTM D7647	>5000	1413		
Particles >21μm       ASTM D7647       >40       6           Particles >38μm       ASTM D7647       >10       3           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       18/15/11	Particles >6μm		ASTM D7647	>1300	241		
Particles >38μm       ASTM D7647       >10       3           Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       18/15/11	Particles >14μm		ASTM D7647	>160	16		
Particles >71μm       ASTM D7647       >3       0           Oil Cleanliness       ISO 4406 (c)       >19/17/14       18/15/11	Particles >21µm		ASTM D7647	>40	6		
Oil Cleanliness ISO 4406 (c) >19/17/14 <b>18/15/11</b>	Particles >38µm		ASTM D7647	>10	3		
	Particles >71µm		ASTM D7647	>3	0		
FLUID DEGRADATION method limit/base current history1 history2	Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/15/11		
	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2

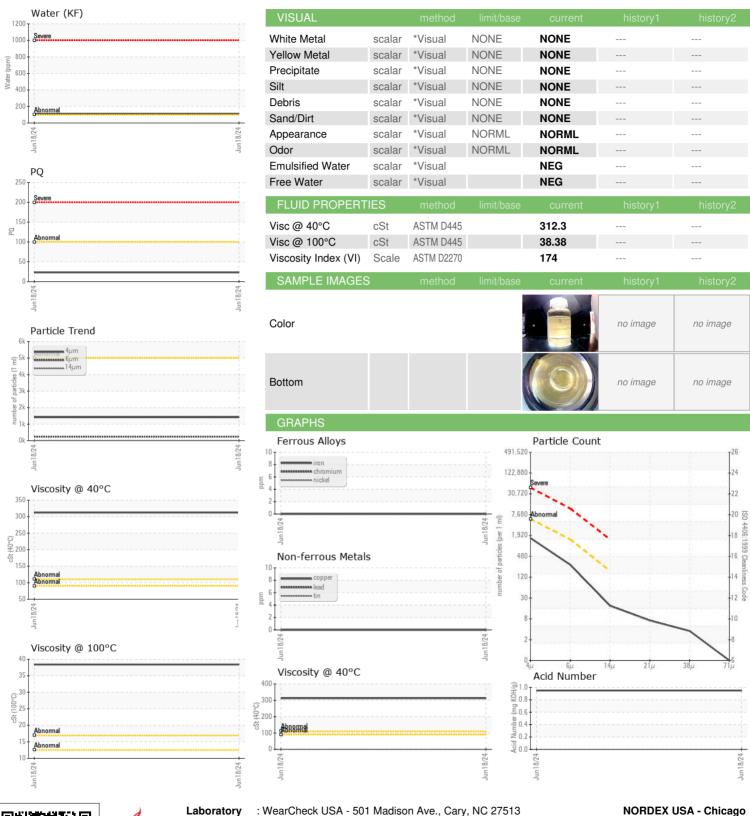
Acid Number (AN) Report Id: NORDEX [WUSCAR] 06234385 (Generated: 07/16/2024 16:07:16) Rev: 1

mg KOH/g ASTM D8045

Contact/Location: DEVIN LINEHAN - NORDEX



## **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

Lab Number

: NX014219 : 06234385

Received : 11 Jul 2024 **Tested** : 16 Jul 2024

: 16 Jul 2024 - Jonathan Hester

300 SOUTH WACKER DRIVE, SUITE 1500

Unique Number : 11123219 Diagnosed US 60606 Test Package : IND 2 ( Additional Tests: FT-IR, ICP-NewOil, KF, KV100, PQ, PrtCount, VI ) Contact: DEVIN LINEHAN To discuss this sample report, contact Customer Service at 1-800-237-1369. DLinehan@nordex-online.com

 $^st$  - 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)

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