

OIL ANALYSIS REPORT

ALLIS-CHALMERS U-27 GENERATOR Component

Thrust Bearing Fluic

R&O OIL ISO 68 (2000 GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

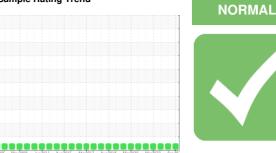
All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



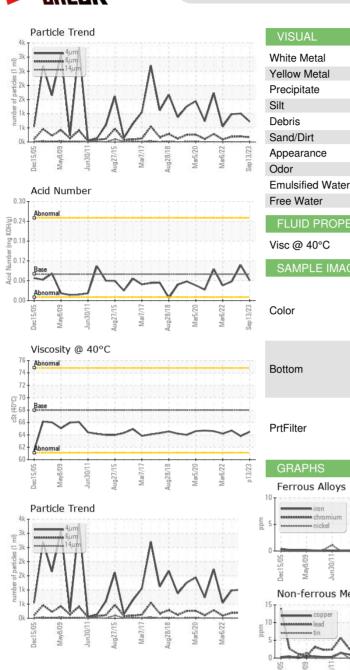


Sample Rating Trend

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0845035	WC0786721	WC0731020
Sample Date		Client Info		13 Sep 2023	03 Mar 2023	16 Sep 2022
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>85	0	0	0
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>20	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>40	0	<1	0
Lead	ppm	ASTM D5185m	>60	0	<1	0
Copper	ppm	ASTM D5185m	>7	1	<1	<1
Tin	ppm	ASTM D5185m	>40	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	<1	0	<1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	5	1	<1	1
Calcium	ppm	ASTM D5185m	5	7	5	0
Phosphorus	ppm	ASTM D5185m	100	10	3	17
Zinc	ppm	ASTM D5185m	25	0	0	0
Sulfur	ppm	ASTM D5185m	1500	3216	2637	2918
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	1	<1	2
Sodium	ppm	ASTM D5185m		3	0	<1
Potassium	ppm	ASTM D5185m	>20	1	1	0
FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		720	1007	981
Particles >6µm		ASTM D7647	>1300	167	195	187
Particles >14µm		ASTM D7647	>160	10	9	8
Particles >21µm		ASTM D7647		2	1	2
Particles >38µm		ASTM D7647	>10	0	0	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>/17/14	17/15/10	17/15/10	17/15/10
FLUID DEGRADA		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.08	0.061	0.107	0.058



OIL ANALYSIS REPORT



Aug2B/18 Mar6/22 Sep13/23	White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual	NONE	NONE NONE	NONE	NONE
Aug28/18	Precipitate Silt Debris Sand/Dirt Appearance	scalar scalar scalar	*Visual		NONE	NONE	
Mar5/20 Mar5/20 Mar6/22 Sep13/23	Silt Debris Sand/Dirt Appearance	scalar scalar		NANE			NONE
Mar6/20 Mar6/22 Sep13/23	Debris Sand/Dirt Appearance	scalar	*Visual	NONE	NONE	NONE	NONE
Mar6/22	_ Sand/Dirt Appearance			NONE	NONE	NONE	NONE
Mar6/22	Appearance	scalar	*Visual	NONE	NONE	NONE	NONE
Mar6/22 Sep 13/23	Appearance Odor		*Visual	NONE	NONE	NONE	NONE
Ma Sep 1	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
		scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>2	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPER	TIES	method	limit/base	current	history1	history
	Visc @ 40°C	cSt	ASTM D445	68	64.5	63.8	64.7
AA	SAMPLE IMAGE	S	method	limit/base	current	history1	history
Mar5/20 +	Color						
	Bottom						
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~							
	PrtFilter				no image	no image	no image
Aug.co.r o Mar6./22 + Mar6./22 +	GRAPHS						no image
Mar5/20 + Mar6/22 +	GRAPHS Ferrous Alloys			491,520	no image Particle Count		
Mat5/20 +	GRAPHS Ferrous Alloys			491,520 122,880			
Mar6/20 + Mar6/22 + Mar6/22 + p13/23 +	GRAPHS Ferrous Alloys			122,880	Particle Count		
Mar5/20 - Mar5/20 - Mar6/22 - Mar6/2	GRAPHS Ferrous Alloys			122,880 30,720	Particle Count		
Mar5/20	GRAPHS Ferrous Alloys	7//7#	28/18 #5/20 #6/22	122,880 30,720	Particle Count		
Mar5/20 - Mar5/20 - Mar6/22 - Mar6/2	GRAPHS Ferrous Alloys	Mar2/17	Aug28/18 Mar5/20 Mar6/22	122,880 30,720	Particle Count		
Mar6/20	GRAPHS Ferrous Alloys		Aug28/18	122,880 30,720	Particle Count		
Mar6/20-	GRAPHS Ferrous Alloys		Aug 28/18 Aug 28/18 Mar 6/22	122,880 30,720	Particle Count		
$\sim$	GRAPHS Ferrous Alloys		Aug28/18 Mar5/20 Mar6/22	122,880 30,720 (E 7,680 (E 146) 1,920 (E 480 (E 480) 1,920 (E 480) 1,920 (E 16) 1,9	Particle Count		
Mat5/20 - Mat5/20 - Mat5/20 - Mat5/20 - Mat6/22 - Mat6/2	GRAPHS Ferrous Alloys	ls		122,880 30,720 (m 7,680 (m 1,34) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,920) (1,92	Particle Count		
$\sim$	GRAPHS Ferrous Alloys	ls		122,880 30,720 ECC (m 7,680 ECC (a) b ad 1,920 b ad 10 b ad 120 m 120 300 8 300 8 300 8 300 8 300 8 300 8 300 8 300 8 300 8 300 7 20 30 30 30 30 30 30 30 30 30 30 30 30 30	Particle Count		
$\sim$	GRAPHS Ferrous Alloys	ls		122,880 30,720 ECC (m 7,680 ECC (a) b ad 1,920 b ad 10 b ad 120 m 120 300 8 300 8 300 8 300 8 300 8 300 8 300 8 300 8 300 8 300 7 20 30 30 30 30 30 30 30 30 30 30 30 30 30	Particle Count		
$\widetilde{\mathbb{A}}$	GRAPHS Ferrous Alloys	ls		122,880 30,720 (W 7,680 (W 1 ad, 1920) (W 1 ad, 192	Particle Count		
$\sim$	GRAPHS Ferrous Alloys	ls		122,880 30,720 (m 7,680 (m 1,ad) 1,920 (m 1,ad) 1,9	Particle Count		
$\sim$	GRAPHS Ferrous Alloys	ls		122,880 30,720 (m 7,680 (m 1,ad) 1,920 (m 1,ad) 1,9	Particle Count		
$\sim$	GRAPHS Ferrous Alloys	ls		122,880 30,720 (m 7,680 (m 1,ad) 1,920 (m 1,ad) 1,9	Particle Count		
$\sim$	GRAPHS Ferrous Alloys	ls		122,880 30,720 (m 7,680 (m 1,ad) 1,920 (m 1,ad) 1,9	Particle Count		
${\sim}$	GRAPHS Ferrous Alloys	Ils		122,880 30,720 CEVEL 46 CEVEL 46 September 480 120 480 120 480 30 22 2 2 2	Particle Count		

£

Contact/Location: ANDY WESTMACOTT - NEWMAS