

OIL ANALYSIS REPORT

Area [DR1582209] **A320-1 SIMULATOR**

Component **Hydraulic System** SHELL TELLUS S3 M 46 (--- GAL)

Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

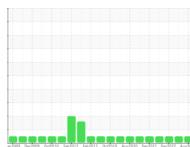
All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

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



Sample Rating Trend

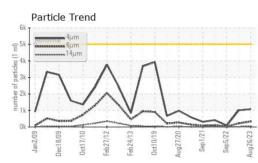


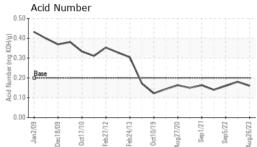
NORMAL

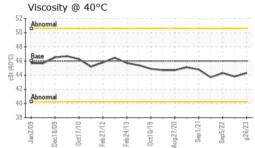
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0803922	WC0784100	WC0680005
Sample Date		Client Info		26 Aug 2023	23 Mar 2023	05 Sep 2022
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	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	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	0	0
Lead	ppm	ASTM D5185m	>20	0	1	<1
Copper	ppm	ASTM D5185m	>20	0	0	0
Tin	ppm	ASTM D5185m	>20	<1	0	0
Antimony	ppm	ASTM D5185m				
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		0	0	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	<1	0
Calcium	ppm	ASTM D5185m	55	39	41	38
Phosphorus	ppm	ASTM D5185m	60	48	48	56
Zinc	ppm	ASTM D5185m	0	4	11	8
Sulfur	ppm	ASTM D5185m	180	194	221	204
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	nnm	AOTH DELOF	1 -			
	ppm	ASTM D5185m	>15	0	0	0
Sodium	ppm	ASTM D5185m ASTM D5185m	>15	0 <1	0	0 <1
Sodium Potassium				-		
	ppm ppm	ASTM D5185m		<1	0	<1
Potassium	ppm ppm	ASTM D5185m ASTM D5185m	>20	<1 0	0 <1	<1 0
Potassium FLUID CLEANLIN	ppm ppm	ASTM D5185m ASTM D5185m method	>20 limit/base	<1 0 current	0 <1 history1	<1 0 history2
Potassium FLUID CLEANLIN Particles >4µm	ppm ppm	ASTM D5185m ASTM D5185m method ASTM D7647	>20 limit/base >5000	<1 0 current 1078	0 <1 history1 1009	<1 0 history2 89
Potassium FLUID CLEANLIN Particles >4μm Particles >6μm	ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D7647 ASTM D7647	>20 limit/base >5000 >1300 >160	<1 0 current 1078 337	0 <1 history1 1009 222	<1 0 history2 89 17
Potassium FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm	ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D7647 ASTM D7647 ASTM D7647	>20 limit/base >5000 >1300 >160	<1 0 current 1078 337 40	0 <1 history1 1009 222 13	<1 0 history2 89 17 3
Potassium FLUID CLEANLIN Particles >4μm Particles >6μm Particles >14μm Particles >21μm	ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 limit/base >5000 >1300 >160 >40 >10	<1 0 current 1078 337 40 16	0 <1 history1 1009 222 13 5	<1 0 history2 89 17 3 1
Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 limit/base >5000 >1300 >160 >40 >10	<1 0 current 1078 337 40 16 1	0 <1 history1 1009 222 13 5 0	<1 0 history2 89 17 3 1 1 0
Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ESS	ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	>20 limit/base >5000 >1300 >160 >40 >10 >3	<1 0 current 1078 337 40 16 1 1 0	0 <1 history1 1009 222 13 5 0 0 0	<1 0 history2 89 17 3 1 0 0 0

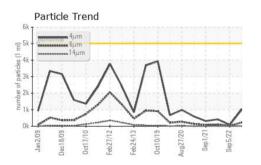


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				VISUAL		method	limit/base	current	history1	history2
			-	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
1				Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
				Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
1				Silt	scalar	*Visual	NONE	NONE	NONE	NONE
L	~	1	-	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
57		2	10000	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
0ct10/19	Aug27/20 Sep1/21	Sep5/22	2	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
0	Au		Au	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
				Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
				Free Water	scalar	*Visual		NEG	NEG	NEG
				FLUID PROPER		method	limit/base	current	history1	history2
				Visc @ 40°C	cSt	ASTM D445	46	44.3	43.8	44.3
6	21	2	3	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
0ct10/19	Aug27/20 Sep1/21	Sep 5/22	Aug26/23	Color						
				Bottom						
		\sim		MPC				no image	no image	no image
0/19	27/20 + -	5/22	26/23	GRAPHS						
0ct10/19	Aug27/20 Sep1/21	Sep5/22	g26/23	GRAPHS Ferrous Alloys			491,520	Particle Count		
0ct10/19 -	Aug27/20 Sep1/21	Sep 5/22	1	Ferrous Alloys			491,520	I		
0ct10/19	Aug27/20	Sep 5/22		Ferrous Alloys			122,880	Severe		-2
Oct10/19	Aug27/20 + Sep1/21 -	Sep 5/22	1	Ferrous Alloys			122,880 30,720	Severe		+2 +2
Oct10/19	Aug27/20	Sep 5/22 -	1	Ferrous Alloys	V13	/20 //21	122,880 30,720	Severe		+2 +2
Oct10/19	Aug27/20	Sep5/22 -	1	Ferrous Alloys	Feb24/13 Oct10/19	Aug27/20	122,880 30,720	Severe		+2 +2
0ct10/19	Aug27/20	Sep5/22	1	Ferrous Alloys		Aug27/20 Sep1/21 Sep5/22	122,880 30,720	Severe		+2 +2
0ct10/19	Sep1/21-	Sep5/22 -	1 wdd	Ferrous Alloys		Aug27/20 Sep1/21 Sep5/72	122,880 30,720 (m 7,680 200p 200p 480 480	Severe		+2 +2
1			1 wdd 1	Ferrous Alloys		Aug27/20 Sep1/21 Sep5/22	122,880 30,720 (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Severe		+2 +2 +2 +1 1 +1
1		Sep5/22	1 wdd	Ferrous Alloys		Aug27/20 Sep1/21 Sep5/22	122,880 30,720 (m 7,680 200p 200p 480 480	Severe		+2 +2 +2 +1 +1 +1 +1 +1
1	~		1 wdd 1	Ferrous Alloys	als		122,880 30,720 (IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Severe Abnormal		2 -2 -2 -1 -1 -1 -1 -1 -1 -1
1			1 wdd 1	Ferrous Alloys	als		122,880 30,720 (m 7,680 1,30 2,000 1,30 1,30 1,920 1,30 1,92	Severe Abnormal		+2 +2 +2 +1 +1 +1 +1 +1
1			1 wdd 1	Ferrous Alloys		Aug27/20 Sep1/21 Sep5/22 Sep5/22	122,880 30,720 100 100 100 100 100 100 100 100 100 1	Severe Abnormal		+2 +2 +2 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1
1			1 wdd 1 wdd	Ferrous Alloys	Feb24/13		122,880 30,720 (m 7,680 1,200 (m 1,200) (m 1,2	Abnormal	14μ 21μ	+2 +2 +2 +1 +1 +1 +1 +1
1			1 wdd 1 wdd	Ferrous Alloys	Feb24/13		122,880 30,720 (m 7,680 1,200 (m 1,200) (m 1,2	Abnormal		
1			1 wdd 1 wdd	Ferrous Alloys	Feb24/13		122,880 30,720 (m 7,680 1,200 (m 1,200) (m 1,2	Abnormal		+2 +2 +2 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1
1			1 wdd 1 wdd	Ferrous Alloys	Feb24/13		122,880 30,720 (m 7,680 1,200 (m 1,200) (m 1,2	Abnormal		
1			1 mdd 1 mdd 5.52-54	Ferrous Alloys	Peb24/13	Aug27/20- Sep1/21- Sep5/22-	122,880 30,720 (m 7,680 (1, m 1, 1, 920) (m 1, 1, 920) (1, m 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Abnormal		
1			1 mdd 1 mdd 5.52-54	Ferrous Alloys	als E462413	Aug27/20 Sep1/21	122,880 30,720 (m 7,680 (1, m 1, 1, 920 (1, m 1, 1, 920 (1, m 1, 1, 920) (1, m 1, 1, 920) (1, m 1, 1, 920) (1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	Severe Abnormal Acid Number	14μ 21μ	
1			1 mdd 1 mdd 5.52-54	Ferrous Alloys	Feb24/13		122,880 30,720 (m 7,680 (1, m 1, 1, 920) (m 1, 1, 920) (1, m 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Abnormal		+2 +2
1	Labe Sam		1 mdd 5 5 (0-01) 189	Ferrous Alloys	Feb24/13 - Feb24/13 - Feb24/13 - Oct10/19 -	son Ave., Ca d : 30 / red : 31 /	1122,880 30,720 (m 7,680 (m 1, ad) (sopport (ad) (ad) (ad) (ad) (ad) (ad) (ad) (ad)	Acid Number	14μ 21μ	12/145 38μ 71μ 12/145 TED AIRLIN
1	Labo Sam Lab Uniq	oratory	1 udd 5 5 (3-0)+139 (3-0)+139 3 3	Ferrous Alloys	als Europa 501 Madii Received Diagnos	son Ave., Ca d : 30 / red : 31 /	1122,880 30,720 (W 7,680 2007 100 100 100 100 100 100 100 100 100	Acid Number	14μ 21μ 0ct10/13 0ct10/	1 36μ 7μ 1 1 1 1 1 1 1 1 1 1 1 1 1

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: MARKUS MANGRA - DENDEN

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