

OIL ANALYSIS REPORT

Sample Rating Trend



TOWER 14S (S/N K3543)

Right Gearbox Fluid SHELL MORLINA S4 B 220 (18 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

		May202	3 Aug2023	Jan2024 M	/lar2024	
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		TO60002409	TO60001395	TO60001116
Sample Date		Client Info		25 Mar 2024	04 Jan 2024	03 Aug 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		13	19	10
Iron	ppm	ASTM D5185m	>200	15	12	5
Chromium	ppm	ASTM D5185m	>15	0	0	0
Nickel	ppm	ASTM D5185m	>15	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	0	0	0
Lead	ppm	ASTM D5185m		0	0	0
Copper	ppm		>200	<1	<1	<1
Tin	ppm	ASTM D5185m		0	<1	0
Vanadium	ppm	ASTM D5185m	220	0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ppiii					
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		1	2	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	<1	0
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		0	0	0
Phosphorus	ppm	ASTM D5185m		289	279	307
Zinc	ppm	ASTM D5185m		0	0	2
Sulfur	ppm	ASTM D5185m		997	813	710
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	2	4	3
Sodium	ppm	ASTM D5185m		<1	<1	0
Potassium	ppm	ASTM D5185m	>20	0	0	<1
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	LIGHT	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	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	mittedEBy: CLA	Y OSTERHOUT
					-	



OIL ANALYSIS REPORT

