

(C-GZSU) Machine Id [C-GZSU] CESSNA 152 L-22876-15 Component

Front Piston Aircraft Engine

SHELL AEROSHELL W 15W50 MGR (6 LTR)

RECOMMENDATION

We advise that you check for the source of water entry. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

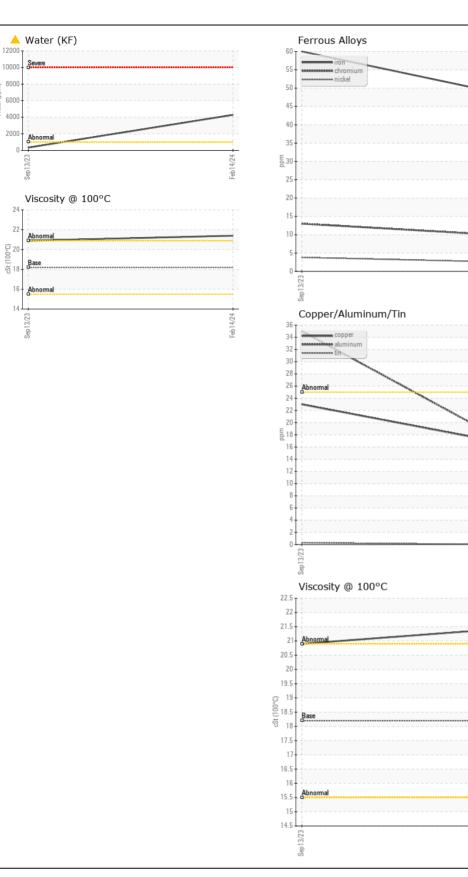
There is a moderate concentration of water present in the oil.

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FLUID CONDITION

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

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Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0858923	WC0743835	
Sample Date		Client Info		14 Feb 2024	13 Sep 2023	
TSN	hrs	Client Info		0	0	
TSO	hrs	Client Info		2266	2220	
Oil Age	hrs	Client Info		46	56	
Filter Age	hrs	Client Info		46	56	
Oil Changed		Client Info		Changed	Changed	
Filter Changed		Client Info		Changed	Changed	
Sample Status				ABNORMAL	ABNORMAL	
Iron	ppm	ASTM D5185(m)	>90	49	60	
Chromium	ppm	ASTM D5185(m)	>20	10	13	
Nickel	ppm	ASTM D5185(m)	>15	3	4	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)	>5	0	<1	
Aluminum	ppm	ASTM D5185(m)	>25	18	4 35	
Lead	ppm	ASTM D5185(m)	>20000	3407	3713	
Copper	ppm	ASTM D5185(m)	>25	17	23	
Tin	ppm	ASTM D5185(m)	>30	0	<1	
Vanadium	ppm	ASTM D5185(m)		0	0	
White Metal	scalar	Visual*	NONE	NONE	NONE	
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
0'1'			4.5	-	_	
Silicon	ppm	ASTM D5185(m)	>15	7	5	
Potassium	ppm ppm	ASTM D5185(m)	>20	<1	<1	
Potassium Fuel	ppm	ASTM D5185(m) WC Method	>20 >4.0	<1 <1.0	<1 <1.0	
Potassium Fuel Water	ppm %	ASTM D5185(m) WC Method ASTM D6304*	>20 >4.0 >0.1	<1 <1.0 ▲ 0.428	<1 <1.0 0.033	
Potassium Fuel Water ppm Water	ppm	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304*	>20 >4.0	<1 <1.0 0.428 4282	<1 <1.0 0.033 331.0	
Potassium Fuel Water ppm Water Glycol	ppm % ppm	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method	>20 >4.0 >0.1 >1000	<1 <1.0 • 0.428 • 4282 NEG	<1 <1.0 0.033 331.0 NEG	
Potassium Fuel Water ppm Water Glycol Silt	ppm % ppm scalar	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual*	>20 >4.0 >0.1 >1000 NONE	<1 <1.0 0.428 4282 NEG LIGHT	<1 <1.0 0.033 331.0 NEG NONE	
Potassium Fuel Water ppm Water Glycol Silt Debris	ppm % ppm scalar scalar	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual*	>20 >4.0 >0.1 >1000 NONE NONE	<1 <1.0 0.428 4282 NEG LIGHT NONE	<1 <1.0 0.033 331.0 NEG NONE NONE	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt	ppm % ppm scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual*	>20 >4.0 >0.1 >1000 NONE NONE NONE	 <1 <1.0 0.428 4282 NEG LIGHT NONE NONE 	<1 <1.0 0.033 331.0 NEG NONE NONE NONE	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance	ppm % ppm scalar scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* WC Method Visual* Visual* Visual* Visual*	>20 >4.0 >0.1 >1000 NONE NONE NONE NORML	 <1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML 	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NONE	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor	ppm % ppm scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual*	>20 >4.0 >0.1 >1000 NONE NONE NORME NORML	<1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML NORML 	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NORML NORML	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance	ppm % ppm scalar scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* WC Method Visual* Visual* Visual* Visual*	>20 >4.0 >0.1 >1000 NONE NONE NONE NORML	 <1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML 	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NONE	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor	ppm % ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual*	>20 >4.0 >0.1 >1000 NONE NONE NORME NORML	<1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML NORML 	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NORML NORML	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm % ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual*	>20 >4.0 >0.1 >1000 NONE NONE NORME NORML	<1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML NORML 2%	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NORML NORML .2%	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm % ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m)	>20 >4.0 >0.1 >1000 NONE NONE NORME NORML	<1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML NORML 2	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NORML NORML .2%	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm % ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >4.0 >0.1 >1000 NONE NONE NONE NORML NORML >0.1	 <1 <1.0 0.428 4282 NEG LIGHT NONE NORML NORML NORML 2% 2 <1 	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NORML .2% 2 <1	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm % ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >4.0 >0.1 >1000 NONE NONE NONE NORML NORML >0.1	 <1 <1.0 0.428 4282 NEG LIGHT NONE NORML NORML 2% 2 <1 0 	<1 <1.0 0.033 331.0 NEG NONE NONE NORE NORML .2% 2 <1 <1	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm % ppm scalar scalar scalar scalar scalar scalar gpm ppm ppm	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >4.0 >0.1 >1000 NONE NONE NONE NORML NORML >0.1	<1 <1.0 0.428 4282 NEG LIGHT NONE NORML NORML NORML 2 <1 0 0	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NORML .2% 2 <1 <1 0	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm % ppm scalar scalar scalar scalar scalar scalar gpm ppm	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >4.0 >0.1 >1000 NONE NONE NONE NORML >0.1	<1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML NORML 2 2 <1 0 0	<1 <1.0 0.033 331.0 NEG NONE NONE NORE NORML .2% 2 <1 <1 0 0	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm % ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	 >20 >4.0 >0.1 >1000 NONE NONE NONE NORML NORML >0.1 5 10 	<1 <1.0 0.428 4282 NEG LIGHT NONE NONE NORML NORML 2 2 <1 0 0 <1	<1 <1.0 0.033 331.0 NEG NONE NONE NORE NORML .2% 2 <1 <1 0 0 0 <1	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm % ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	 >20 >4.0 >0.1 >1000 NONE NONE NORML NORML >0.1 5 10 10 	<1 <1.0 <1.0 <1.0 <4282 NEG LIGHT NONE NORML NORML 2 <1 <2 <1 <0 <1 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	<1 <1.0 0.033 331.0 NEG NONE NONE NONE NONE NORML .2% 2 <1 <1 0 0 <1 2	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm % ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	 >20 >4.0 >0.1 >1000 NONE NONE NORML >0.1 >0.1 5 10 10 1280 10 	<1 <1.0 <1.0 <1.0 <4282 NEG LIGHT NONE NONE NORML NORML <	<1 <1.0 0.033 331.0 NEG NONE NONE NORML .2% 2 <1 <1 <1 0 0 0 <1 2 1087 6	
Potassium Fuel Water ppm Water Glycol Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm % ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185(m) WC Method ASTM D6304* ASTM D6304* WC Method Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	 >20 >4.0 >0.1 >1000 NONE NONE NORML >0.1 >0.1 5 10 10 1280 	<1 <1.0 <1.0 <0.428 <0.428 <0.428 <0.428 <0.428 <0.428 <0.000 <0.000 <10 <10 <0 <10 <0 <10 <0 <10 <0 <10 <0 <10 <0 <10 <0 <10 <0 <1152 <8	<1 <1.0 0.033 331.0 NEG NONE NONE NORML .2% 2 <1 <1 <1 0 0 0 <1 2 1087	



Water (ppm)

CANADIAN FLIGHT ACADEMY Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : WC0858923 Received : 21 Feb 2024 1250 AIRPORT BOULEVARD Lab Number : 02617010 Tested : 22 Feb 2024 OSHAWA, ON ISO 17025:2017 Accredited Laboratory Unique Number : 5734120 : 22 Feb 2024 - Kevin Marson CA L1J 8P5 Diagnosed Test Package : AVI 1 (Additional Tests: KF) Contact: John Bayes To discuss this sample report, contact Customer Service at 1-800-268-2131. cfa.engineering@beapilot.ca Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (905)404-9252 Validity of results and interpretation are based on the sample and information as supplied. F: (905)404-1803

Feb 14/24

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