

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **T299** Component **Transmission (Auto)** Fluid **COGNIS EMGARD 2805 ATF (--- QTS)**

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.

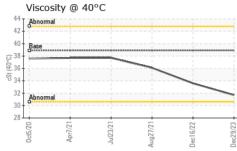
Fluid Condition

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		PCA0089184	PCA0080934	PCA0045176	
Sample Date		Client Info		29 Dec 2023	16 Dec 2022	27 Aug 2021	
Machine Age	mls	Client Info		266117	197437	0	
Oil Age	mls	Client Info		68680	105388	8 0	
Oil Changed		Client Info		Changed	Changed	Changed	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2	
Water		WC Method	>0.1	NEG	NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>160	47	60	49	
Chromium	ppm	ASTM D5185m	>5	<1	0	0	
Nickel	ppm	ASTM D5185m	>5	<1	0	<1	
Titanium	ppm	ASTM D5185m		0	0	0	
Silver	ppm	ASTM D5185m	>5	0	0	0	
Aluminum	ppm	ASTM D5185m	>50	15	18	16	
Lead	ppm	ASTM D5185m	>50	31	58	44	
Copper	ppm	ASTM D5185m	>225	36	42	11	
Tin	ppm	ASTM D5185m	>10	2	3	3	
Antimony	ppm	ASTM D5185m				0	
Vanadium	ppm	ASTM D5185m		0	0	0	
Cadmium	ppm	ASTM D5185m		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Deve		AOTH DELOF					
Boron	ppm	ASTM D5185m		107	187	177	
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m		107 0	187 1	0	
				-			
Barium	ppm	ASTM D5185m		0	1	0	
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		0 0	1 0	0 <1	
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1	1 0 <1	0 <1 <1	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 1	1 0 <1 <1	0 <1 <1 <1	
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 1 125	1 0 <1 <1 146	0 <1 <1 <1 108	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 1 125 273	1 0 <1 <1 146 430	0 <1 <1 <1 108 388	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 <1 1 125 273 20	1 0 <1 <1 146 430 29	0 <1 <1 <1 108 388 29	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 1 125 273 20 975	1 0 <1 <1 146 430 29 2469	0 <1 <1 108 388 29 1631	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 <1 1 125 273 20 975 current	1 0 <1 <1 146 430 29 2469 history1	0 <1 <1 <1 108 388 29 1631 history2	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	>20 >20	0 0 <1 1 125 273 20 975 current 4 5 1	1 0 <1 <1 146 430 29 2469 history1 4	0 <1 <1 <1 108 388 29 1631 history2 3	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	>20	0 0 <1 1 125 273 20 975 current 4 5 1	1 0 <1 <1 146 430 29 2469 history1 4 5	0 <1 <1 <1 108 388 29 1631 history2 3 7	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m XSTM D5185m	>20 >20 limit/base NONE	0 0 <1 1 125 273 20 975 current 4 5 1 1 current NONE	1 0 <1 <1 146 430 29 2469 history1 4 5 2 2 history1 NONE	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 1 history2 VLITE	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	>20 >20 limit/base	0 0 <1 1 125 273 20 975 current 4 5 1 1 current	1 0 <1 <1 146 430 29 2469 history1 4 5 2 2 history1	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 history2	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m Y Usual *Visual	>20 >20 limit/base NONE NONE NONE	0 0 <1 1 125 273 20 975 <u>current</u> 4 5 1 1 <u>current</u> NONE NONE NONE	1 0 <1 <1 146 430 29 2469 <u>history1</u> 4 5 2 2 <u>history1</u> NONE NONE NONE	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 1 history2 VLITE NONE NONE NONE	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m YUSUAL	>20 >20 limit/base NONE NONE	0 0 <1 1 125 273 20 975 current 4 5 1 1 current NONE NONE NONE NONE NONE	1 0 <1 <1 146 430 29 2469 <u>history1</u> 4 5 2 2 <u>history1</u> NONE NONE	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 1 history2 VLITE NONE	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m Y Usual *Visual	>20 >20 limit/base NONE NONE NONE	0 0 <1 1 125 273 20 975 <u>current</u> 4 5 1 1 <u>current</u> NONE NONE NONE	1 0 <1 <1 146 430 29 2469 <u>history1</u> 4 5 2 2 <u>history1</u> NONE NONE NONE	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 1 history2 VLITE NONE NONE NONE	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE NONE	0 0 <1 1 125 273 20 975 current 4 5 1 1 current NONE NONE NONE NONE NONE	1 0 <1 <1 146 430 29 2469 history1 4 5 2 history1 NONE NONE NONE NONE NONE	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 1 history2 VLITE NONE NONE NONE NONE	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m Yisual *Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE NONE NONE	0 0 <1 1 125 273 20 975 current 4 5 1 current NONE NONE NONE NONE NONE NONE NONE	1 0 <1 <1 146 430 29 2469 history1 4 5 2 history1 A 5 2 history1 NONE NONE NONE NONE NONE NONE NONE	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 history2 VLITE NONE NONE NONE NONE NONE	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m Visual *Visual *Visual *Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE NONE NONE	0 0 <1 1 125 273 20 975 current 4 5 1 current NONE NONE NONE NONE NONE NONE NONE NONE	1 0 <1 <1 146 430 29 2469 history1 4 5 2 2 history1 NONE NONE NONE NONE NONE NONE NONE NON	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 3 7 1 1 VLITE NONE NONE NONE NONE NONE NONE NONE	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 >20 limit/base NONE NONE NONE NONE NONE NONE NONE	0 0 <1 1 125 273 20 975 <i>current</i> 4 5 1 <i>current</i> 4 5 1 <i>current</i> 8 NONE NONE NONE NONE NONE NONE NONE NO	1 0 <1 <1 146 430 29 2469 history1 4 5 2 history1 A 5 2 V NONE NONE NONE NONE NONE NONE NONE NO	0 <1 <1 <1 108 388 29 1631 history2 3 7 1 3 7 1 1 VLITE NONE NONE NONE NONE NONE NONE NONE NO	



OIL ANALYSIS REPORT



С	FLUID PROPE	RTIES me	ethod li	imit/base	current	history1	history2
	Visc @ 40°C	cSt AST	VI D445 38	.9 3	1.7	33.6	36.1
	SAMPLE IMAG	GES me	ethod li	imit/base	current	history1	history2
22 + 23 + 23 + 23 + 23 + 23 + 23 + 23 +	Color			r	no image	no image	no image
Jur23/21 Aug27/21 Dec16/22	Bottom			r	no image	no image	no image
	GRAPHS Ferrous Alloys	ls	4	Dec29/23			
	34 34 32 4 4 4 4 4 4 4 4 4 4 4 4 4	Aug27/21	Dec16/22	Dec29/23 +			
Laboratory Sample No. Lab Number Unique Number Test Package To discuss this sample report, * - Denotes test methods that Statements of conformity to sp	: WearCheck USA - 50 : PCA0089184 : 06104679 : 10902909 : FLEET contact Customer Serv are outside of the ISO 1	1 Madison Ave Received Tested Diagnosed ice at 1-800-23 7025 scope of	e., Cary, NG : 29 Fe : 01 Ma : : 04 Mar 87-1369. accreditati	C 27513 b 2024 ar 2024 2024 - Don Balo ion.	Iridge	Contac mquinlan T:	EER DIVISION S BRIDGE RD DUNCAN, SC US 29334 :: Matt Quinlan @nwwhite.com (864)905-8506 F:

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