

## **OIL ANALYSIS REPORT**





Component Transmission (Auto) Fluid COGNIS EMGARD 2805 ATF (--- hrs)

### DIAGNOSIS

#### A Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

#### 🔺 Wear

Machine Id T305

Clutch wear is indicated.

#### Contamination

There is no indication of any contamination in the fluid.

#### Fluid Condition

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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0116093	PCA0110907	PCA0098256
Sample Date		Client Info		27 Feb 2024	14 Nov 2023	26 May 2023
Machine Age	mls	Client Info		353191	294670	294670
Oil Age	mls	Client Info		75000	151114	294670
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
CONTAMINAT	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	mag	ASTM D5185m	>160	105	105	75
Chromium	ppm	ASTM D5185m	>5	0	<1	0
Nickel	mag	ASTM D5185m	>5	0	0	0
Titanium	mag	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>50	20	18	15
Lead	mag	ASTM D5185m	>50	<u> </u>	▲ 57	38
Copper	mag	ASTM D5185m	>225	72	71	45
Tin	ppm	ASTM D5185m	>10	2	2	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	mag	ASTM D5185m		0	0	0
		method	limit/base	current	history1	history2
Demo			initi base	ourient	motory	Thotory 2
				000	070	000
Boron	ppm	ASTM D5185m		203	276	239
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m		203 0	276 4	239 0
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		203 0 0	276 4 0	239 0 0
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		203 0 0 <1	276 4 0 <1	239 0 0 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		203 0 0 <1 <1	276 4 0 <1 3	239 0 0 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		203 0 	276 4 0 <1 3 163	239 0 0 <1 <1 162
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		203 0 <1 <1 161 499	276 4 0 <1 3 163 545	239 0 <1 <1 162 479
Boron 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 ASTM D5185m		203 0 <1 <1 161 499 20	276 4 0 <1 3 163 545 28	239 0 <1 <1 162 479 12
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		203 0 21 21 161 499 20 3069	276 4 0 <1 3 163 545 28 3432	239 0 () <1 () () () () () () () () () () () () ()
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	203 0 0 <1 (1 161 499 20 3069 current	276 4 0 <1 3 163 545 28 3432 history1	239 0 0 <1 <1 162 479 12 3611 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	limit/base	203 0 0 <1 <1 161 499 20 3069 current 6	276 4 0 <1 3 163 545 28 3432 history1 8	239 0 0 <1 <1 162 479 12 3611 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >20	203 0 0 <1 <1 161 499 20 3069 current 6 11	276 4 0 <1 3 163 545 28 3432 history1 8 7	239 0 0 <1 <1 162 479 12 3611 history2 5 10
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1	276 4 0 <1 3 163 545 28 3432 history1 8 7 2	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >20 >20 >20 limit/base	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m XSTM D5185m	limit/base >20 >20 limit/base >20 NONE	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 NONE	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE
Boron 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 <b>TS</b> ppm ppm ppm scalar	ASTM D5185m ASTM D5185m Y Uisual	limit/base >20 >20 limit/base NONE NONE	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NONE	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 NONE NONE NONE	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE NONE NONE
Boron 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	limit/base >20 >20 limit/base NONE NONE NONE	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NONE NONE NONE	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 8 NONE NONE NONE NONE	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE NONE NONE NONE
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL VISUAL Vhite Metal Yellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm scalar scalar scalar scalar	ASIM D5185m         YOISUAL         *Visual         *Visual         *Visual         *Visual         *Visual	limit/base >20 >20 limit/base NONE NONE NONE NONE NONE	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NONE NONE NONE NONE NONE	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 8 NONE NONE NONE NONE NONE NONE	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE NONE NONE NONE NONE NONE
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL VISUAL Vhite Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASIM D5185m         ASIM D5185m	limit/base >20 >20 limit/base >20 limit/base NONE NONE NONE NONE NONE	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NONE NONE NONE NONE NONE NONE	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 8 7 2 NONE NONE NONE NONE NONE NONE NONE NO	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE NONE NONE NONE NONE NONE NONE NONE
Boron 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 ppm <b>TS</b> ppm ppm ppm scalar scalar scalar scalar scalar	ASIM D5185m         ASIM D5185m	limit/base >20 >20 limit/base >20 limit/base NONE NONE NONE NONE NONE NONE NONE	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 8 7 2 history1 NONE NONE NONE NONE NONE NONE NONE NON	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE NONE NONE NONE NONE NONE NONE NONE NONE
Boron 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 ppm TS ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASIM D5185m         ASTM D5185m         VISUAL         *Visual         *Visual         *Visual         *Visual         *Visual         *Visual	Iimit/base >20 >20 Imit/base >20 NONE	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 8 7 2 history1 NONE NONE NONE NONE NONE NONE NONE NON	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE NONE
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL VISUAL Vhite Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASIM D5185m         ASIM D5185m	limit/base           >20           >20           limit/base           >20           limit/base           NONE           NORML           NORML	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NORML	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 8 7 2 history1 NONE NONE NONE NONE NONE NONE NONE NON	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium VISUAL White Metal Yellow Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASIM D5185m         ASTM D5185m	limit/base         >20         >20         limit/base         >20         limit/base         NONE         NORML         NORML         >0.1	203 0 0 <1 <1 161 499 20 3069 current 6 11 <1 current NONE NOR NOR NONE NOR NOR NOR NOR NOR NOR NOR NOR	276 4 0 <1 3 163 545 28 3432 history1 8 7 2 history1 8 7 2 history1 NONE NONE NONE NONE NONE NONE NONE NON	239 0 0 <1 <1 162 479 12 3611 history2 5 10 0 history2 NONE NORE NE NE NE NE



# **OIL ANALYSIS REPORT**

#### 🔺 Non-ferrous Metals





FLUID PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	38.9	32.9	33.1	33.6
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image



NW WHITE & CO - SPECIAL SERVICE DIVISION 100 INDEPENDENCE BLVD COLUMBIA, SC : 07 Mar 2024 - Jonathan Hester US 29210 Contact: George Edwards gedwards@nwwhite.com Т: F:



Test Package : FLEET Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Received

Diagnosed

Tested

: 05 Mar 2024

: 06 Mar 2024

Laboratory

Sample No.

Lab Number : 06109031

Unique Number : 10912528

: PCA0116093