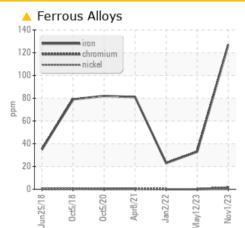
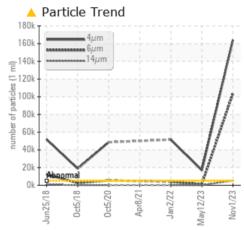
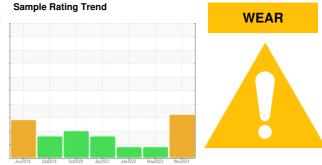
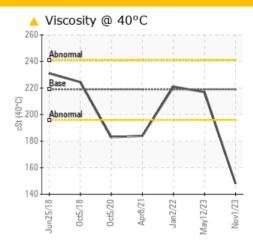


COMPONENT CONDITION SUMMARY









RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

THODELMATIOT		00110				
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>20	🔺 127	33	23
Particles >4µm		ASTM D7647	>5000	164022	1 6901	6 51534
Particles >6µm		ASTM D7647	>1300	<u> </u>	1082	A 3918
Particles >14µm		ASTM D7647	>160	🔺 5255	46	69
Particles >21µm		ASTM D7647	>40	<u> </u>	11	15
Oil Cleanliness		ISO 4406 (c)	>19/17/14	4 25/24/20	🔺 21/17/13	🔺 23/19/13
Visc @ 40°C	cSt	ASTM D445	219	<u> </u>	217	221

Customer Id: HORFREWC Sample No.: WC0856085 Lab Number: 06010734 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED AC	TIONS	NS			
Action	Status	Date	Done By	Description	
Change Filter			?	We recommend you service the filters on this component.	

HISTORICAL DIAGNOSIS



12 May 2023 Diag: Doug Bogart

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 6 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



view report

02 Jan 2022 Diag: Angela Borella



We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

08 Apr 2021 Diag: Doug Bogart

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. The iron level is abnormal. Moderate concentration of visible dirt/debris present in the oil. The oil viscosity is lower than normal. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.







OIL ANALYSIS REPORT

Area **PROCESSING** Machine Id **FB05432 - VISCERA PAN** Component

Hydraulic System

PETRO CANADA SYNDURO SHB ISO 220 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

📥 Wear

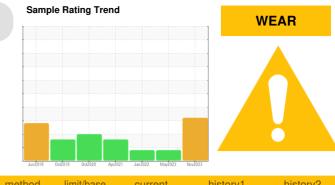
The iron level is abnormal. All other component wear rates are normal.

Contamination

There is a high amount of particulates present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within ISO 150 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.



Sample DateClient InfoO1 Nov 202312 May 202302 Jan 2022Machine AgemthsClient Info000Oil AgemthsClient Info000Oil ChangedClient InfoN/AN/AN/ASample StatusImageImageN/AN/ACONTAMINATIONmethodlimit/basecurrenthistory1VaterWC Method>0.05NEGNEGWEAR METALSmethodlimit/basecurrenthistory1NickelppmASTM D5185m>20123323ChromiumppmASTM D5185m>20100NickelppmASTM D5185m>20100SilverppmASTM D5185m>20000AluminumppmASTM D5185m>20200CopperppmASTM D5185m>20200AntimonyppmASTM D5185m>20200AntimonyppmASTM D5185m>20200AntimonyppmASTM D5185m>20200AntimonyppmASTM D5185m>20<100AntimonyppmASTM D5185m<20<100AntimonyppmASTM D5185m<20<100AntimonyppmASTM D5185m<1000Ant	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age mths Client Info 0 0 0 Oil Age mths Client Info N/A N/A N/A Sample Status Imit Mathian Control MtA ABNORMAL ABNORMAL ABNORMAL CONTAMINATION method Imit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m >20 0 0 0 Cadmium ppm ASTM D5185m >20 2 0 0 Copper ppm ASTM D5185m >20 2 0 0 Adminum ppm ASTM D5185m >20 2 0 0 <t< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>WC0856085</th><th>WC0481367</th><th>WC0638913</th></t<>	Sample Number		Client Info		WC0856085	WC0481367	WC0638913
Oil Age mths Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Image Image current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limi/base current history1 history2 Iron ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 1 0 0 Silver ppm ASTM D5185m >20 1 0 0 Itanium ppm ASTM D5185m >20 <1	Sample Date		Client Info		01 Nov 2023	12 May 2023	02 Jan 2022
Oil Changed Sample Status Client Info N/A N/A N/A ABNORMAL ABNORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 127 33 23 Chromium ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 1 <1 0 Silver ppm ASTM D5185m >20 0 0 0 Aluminum ppm ASTM D5185m >20 21 <1 0 Lead ppm ASTM D5185m >20 21 0 0 Antimony ppm ASTM D5185m <20 21 0 0	Machine Age	mths	Client Info		0	0	0
Sample Status ABNORMAL ABNORMAL ABNORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 ▲ 127 33 23 Chromium ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 1 0 0 Aluminum ppm ASTM D5185m >20 21 <1	Oil Age	mths	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.05 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Nickel ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m 20 21 <1	Oil Changed		Client Info		N/A	N/A	N/A
Water WC Method >0.05 NEG NEG NEG NEG WEAR METALS method limil/base current history1 history2 Iron ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Titanium ppm ASTM D5185m 20 1 0 0 Silver ppm ASTM D5185m 20 41 <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 1 0 0 Chromium ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Titanium ppm ASTM D5185m >20 <1 <1 0 Silver ppm ASTM D5185m >20 <1 <1 0 Lead ppm ASTM D5185m >20 <1 0 0 Copper ppm ASTM D5185m >20 <1 0 0 Antimony ppm ASTM D5185m >20 <1 0 0 Antimony ppm ASTM D5185m >20 <1 0 0 Antimony ppm ASTM D5185m >20 <1 0 0 Cadmium ppm ASTM D5185m 5.0 0 2 <th>CONTAMINATION</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINATION		method	limit/base	current	history1	history2
Iron ppm ASTM D5185m >20 ▲ 127 33 23 Chromium ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >20 <1 <1 0 Lead ppm ASTM D5185m >20 <1 <1 0 Copper ppm ASTM D5185m >20 2 0 0 Tin ppm ASTM D5185m >20 2 0 0 Antimony ppm ASTM D5185m >20 2 0 0 Cadmium ppm ASTM D5185m >20 <1 0 0 ASTM D5185m <1 0 0 0 0 Astm D5185m 5.0 0 0 0 0 0 <th>Water</th> <th></th> <th>WC Method</th> <th>>0.05</th> <th>NEG</th> <th>NEG</th> <th>NEG</th>	Water		WC Method	>0.05	NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 1 0 0 Nickel ppm ASTM D5185m >20 0 0 0 Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >20 <1 <1 0 Lead ppm ASTM D5185m >20 2 0 0 0 Copper ppm ASTM D5185m >20 <1 0 0 0 Attimony ppm ASTM D5185m >20 21 0 0 0 Attimony ppm ASTM D5185m >20 <1 0 0 0 Cadmium ppm ASTM D5185m >20 <1 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5.0 0 0 0 Magnesesum ppm	WEAR METALS		method	limit/base	current	history1	history2
NickelppmASTM D5185m>20000TitaniumppmASTM D5185m<1	Iron	ppm	ASTM D5185m	>20	<u> </u>	33	23
Titanium ppm ASTM D5185m <1 <1 <1 0 Silver ppm ASTM D5185m >20 <1 <1 0 0 Aluminum ppm ASTM D5185m >20 <1 <1 0 0 Lead ppm ASTM D5185m >20 20 0 0 0 Copper ppm ASTM D5185m >20 21 0 0 Tin ppm ASTM D5185m >20 <1 0 0 Antimony ppm ASTM D5185m >20 <1 0 0 Vanadium ppm ASTM D5185m >20 <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5.0 0 0 0 Magnesium ppm ASTM D5185m 5.0 0 <1 <1 Magnesium ppm ASTM D5185m<	Chromium	ppm	ASTM D5185m	>20	1	0	0
SilverppmASTM D5185m000AluminumppmASTM D5185m>20<1	Nickel	ppm	ASTM D5185m	>20	0	0	0
Aluminum ppm ASTM D5185m >20 <1 <1 0 Lead ppm ASTM D5185m >20 0 0 0 Copper ppm ASTM D5185m >20 2 0 0 Tin ppm ASTM D5185m >20 <1	Titanium	ppm	ASTM D5185m		<1	<1	0
Lead ppm ASTM D5185m >20 0 0 0 Copper ppm ASTM D5185m >20 2 0 0 Tin ppm ASTM D5185m >20 <1	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >20 2 0 0 Tin ppm ASTM D5185m >20 <1	Aluminum	ppm	ASTM D5185m	>20	<1	<1	0
Tin ppm ASTM D5185m >20 <1 0 0 Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 5.0 0 0 0 2 Barium ppm ASTM D5185m 5.0 0 0 0 0 Molybdenum ppm ASTM D5185m 5.0 0 0 0 0 Magnesium ppm ASTM D5185m 5.0 0 0 0 0 Calcium ppm ASTM D5185m 5.0 0 0 1 3 Sulfur ppm ASTM D5185m 5.0 0 0 1 3 Sodium ppm ASTM D5185m 5.0 0 0 1 3 Stlicon ppm ASTM	Lead	ppm	ASTM D5185m	>20	0	0	0
Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>20	2	0	0
VanadiumppmASTM D5185m<100CadmiumppmASTM D5185mImit/basecurrenthistory1history2ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m6902BariumppmASTM D5185m5.0000MolybdenumppmASTM D5185m5.0000MagnesiumppmASTM D5185m5.0000CalciumppmASTM D5185m5.0000PhosphorusppmASTM D5185m5.00011PhosphorusppmASTM D5185m1007083900396ZincppmASTM D5185m100173351250918CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>151113SodiumppmASTM D5185m>202<10PtuID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >6µmASTM D5185m>2001640221690151534Particles >6µmASTM D5185m>31301640221690151534Particles >6µmASTM D7647>130010359310823918	Tin	ppm	ASTM D5185m	>20	<1	0	0
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 69 0 2 Barium ppm ASTM D5185m 5.0 0 0 0 Molybdenum ppm ASTM D5185m <.1 0 0 Magnesium ppm ASTM D5185m 5.0 0 0 0 Magnesium ppm ASTM D5185m 5.0 0 0 0 Magnesium ppm ASTM D5185m 5.0 0 0 0 Calcium ppm ASTM D5185m 5.0 0 0 11 Phosphorus ppm ASTM D5185m 100 708 390 396 Zinc ppm ASTM D5185m 100 17335 1250 918 CONTAMINANTS method limit/base current history1 history2	Antimony	ppm	ASTM D5185m				0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 69 0 2 Barium ppm ASTM D5185m 5.0 0 0 0 Molybdenum ppm ASTM D5185m 5.0 0 0 0 Manganese ppm ASTM D5185m 5.0 0 0 0 Magnesium ppm ASTM D5185m 5.0 0 0 0 Calcium ppm ASTM D5185m 5.0 0 <1	Vanadium	ppm	ASTM D5185m		<1	0	0
Boron ppm ASTM D5185m 69 0 2 Barium ppm ASTM D5185m 5.0 0 0 0 Molybdenum ppm ASTM D5185m 5.0 0 0 0 Manganese ppm ASTM D5185m 2 <1	Cadmium	ppm	ASTM D5185m		<1	0	0
Barium ppm ASTM D5185m 5.0 0 0 0 Molybdenum ppm ASTM D5185m <1 0 0 Manganese ppm ASTM D5185m 2 <1 <1 Magnesium ppm ASTM D5185m 5.0 0 0 0 Calcium ppm ASTM D5185m 5.0 5 0 <1 Phosphorus ppm ASTM D5185m 5.0 5 0 <1 Slifur ppm ASTM D5185m 100 708 390 396 Zinc ppm ASTM D5185m 1900 17335 1250 918 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m >20 2 <1 0 FLUID CLEANLINESS method limit/base current history1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m <1 0 0 Manganese ppm ASTM D5185m 2 <1 <1 Magnesium ppm ASTM D5185m 5.0 0 0 0 Calcium ppm ASTM D5185m 5.0 0 0 0 0 Calcium ppm ASTM D5185m 5.0 5 0 <1 Phosphorus ppm ASTM D5185m 100 708 390 396 Zinc ppm ASTM D5185m 100 708 390 396 Sulfur ppm ASTM D5185m 1900 17335 1250 918 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m >20 2 <1 0 FLUID CLEANLINESS method limit/base current hi	Boron	ppm	ASTM D5185m		69	0	2
Manganese ppm ASTM D5185m 2 <1 <1 Magnesium ppm ASTM D5185m 5.0 0 0 0 Calcium ppm ASTM D5185m 5.0 5 0 <1	Barium	ppm	ASTM D5185m	5.0	0	0	0
Magnesium ppm ASTM D5185m 5.0 0 0 0 Calcium ppm ASTM D5185m 5.0 5 0 <1	Molybdenum	ppm	ASTM D5185m		<1	0	0
Calcium ppm ASTM D5185m 5.0 5 0 <1 Phosphorus ppm ASTM D5185m 100 708 390 396 Zinc ppm ASTM D5185m 5.0 0 0 1 Sulfur ppm ASTM D5185m 1900 17335 1250 918 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m >20 2 <1	Manganese	ppm	ASTM D5185m		2	<1	<1
Phosphorus ppm ASTM D5185m 100 708 390 396 Zinc ppm ASTM D5185m 5.0 0 0 1 Sulfur ppm ASTM D5185m 1900 17335 1250 918 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m >20 2 <1 0 Potassium ppm ASTM D5185m >20 2 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 164022 16901 51534 Particles >6µm ASTM D7647 >1300 103593 1082 3918	Magnesium	ppm	ASTM D5185m	5.0	0	0	0
Zinc ppm ASTM D5185m 5.0 0 0 1 Sulfur ppm ASTM D5185m 1900 17335 1250 918 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m >20 2 <1	Calcium	ppm	ASTM D5185m	5.0	5	0	<1
Zinc ppm ASTM D5185m 5.0 0 0 1 Sulfur ppm ASTM D5185m 1900 17335 1250 918 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m >20 2 <1	Phosphorus	ppm	ASTM D5185m	100	708	390	396
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m >15 11 1 3 Potassium ppm ASTM D5185m >20 2 <1			ASTM D5185m	5.0	0	0	1
Silicon ppm ASTM D5185m >15 11 1 3 Sodium ppm ASTM D5185m 2 <1 0 Potassium ppm ASTM D5185m >20 2 <1 0 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 164022 16901 51534 Particles >6µm ASTM D7647 >1300 103593 1082 3918	Sulfur	ppm	ASTM D5185m	1900	17335	1250	918
Sodium ppm ASTM D5185m 2 <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 <1	Silicon		ASTM D5185m	>15	11	1	3
FLUID CLEANLINESS method limit/base current history1 history2 Particles >4μm ASTM D7647 >5000 ▲ 164022 ▲ 16901 ▲ 51534 Particles >6μm ASTM D7647 >1300 ▲ 103593 1082 ▲ 3918	Sodium	ppm	ASTM D5185m		2	<1	0
Particles >4μm ASTM D7647 >5000 ▲ 164022 ▲ 16901 ▲ 51534 Particles >6μm ASTM D7647 >1300 ▲ 103593 1082 ▲ 3918	Potassium	ppm	ASTM D5185m	>20	2	<1	0
Particles >6μm ASTM D7647 >1300 ▲ 103593 1082 ▲ 3918	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
	Particles >4µm		ASTM D7647	>5000	164022	1 6901	51534
Particles >14μm ASTM D7647 >160 🔺 5255 46 69	Particles >6µm		ASTM D7647	>1300	<u> </u>	1082	A 3918
	Particles >14µm		ASTM D7647	>160	6 5255	46	69

Particles >21µm

Particles >38µm

Particles >71µm

Oil Cleanliness

11

0

0

▲ 21/17/13

15

0

0

▲ 23/19/13

485

0

0

ISO 4406 (c) >19/17/14 A 25/24/20

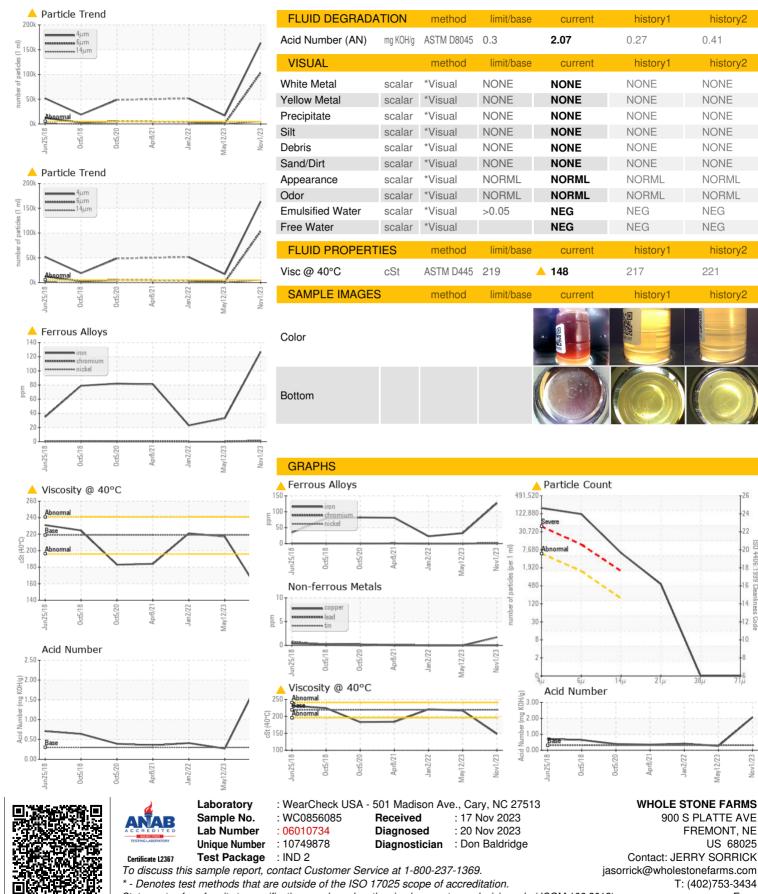
ASTM D7647 >40

ASTM D7647 >10

ASTM D7647 >3



OIL ANALYSIS REPORT



F: x:

-20

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