



COMPONENT CONDITION SUMMARY





Ferrous Alloys

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RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the component make and model with your next sample.

PROBLEMATIC TEST RESULTS

mdd

Sample Status				ABNORMAL	SEVERE	
Iron	ppm	ASTM D5185(m)	>20	<mark>/</mark> 38	4 0	
Particles >4µm		ASTM D7647	>5000	<u> </u>	• 110451	
Particles >6µm		ASTM D7647	>1300	<u> </u>	938787	
Oil Cleanliness		ISO 4406 (c)	>19/17/14	^ 21/18/14	• 24/22/18	

Customer Id: GOONAP Sample No.: WC Lab Number: 02575157 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Kevin Marson +1 (289)291-4644 x4644 <u>Kevin.Marson@wearcheck.com</u>

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 <u>gloria.gonzalez@wearcheck.com</u>

RECOMMENDED A	CHONS			
Action	Status	Date	Done By	Description
Change Filter			?	We recommend you service the filters on this component.
Resample			?	We recommend an early resample to monitor this condition.
Alert			?	Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment.
Information Required			?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.

HISTORICAL DIAGNOSIS

03 Aug 2023 Diag: Kevin Marson



Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the component make and model with your next sample. Please provide more complete information on your next sample. Iron ppm levels are marginal. All other component wear rates are normal. There is a high amount of particulates (2 to 100 microns in size) present in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.





OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Machine Id CHYD 01 Component Hydraulic System Fluid NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample. Please specify the component make and model with your next sample.

A Wear

Iron ppm levels are marginal. All other component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		wc	WC	
Sample Date		Client Info		09 Aug 2023	03 Aug 2023	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ABNORMAL	SEVERE	
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		0	0	
Iron	ppm	ASTM D5185(m)	>20	<u> </u>	<u> </u>	
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	
Nickel	ppm	ASTM D5185(m)	>20	2	2	
Titanium	ppm	ASTM D5185(m)		0	0	
Silver	ppm	ASTM D5185(m)		<1	<1	
Aluminum	ppm	ASTM D5185(m)	>20	8	8	
Lead	ppm	ASTM D5185(m)	>20	18	17	
Copper	ppm	ASTM D5185(m)	>20	125	124	
Tin	ppm	ASTM D5185(m)	>20	<1	<1	
Antimony	ppm	ASTM D5185(m)		0	0	
Vanadium	ppm	ASTM D5185(m)		<1	<1	
Beryllium	ppm	ASTM D5185(m)		0	0	
Cadmium	ppm	ASTM D5185(m)		<1	<1	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<1	<1	
Barium	ppm	ASTM D5185(m)		<1	<1	
Molybdenum	ppm	ASTM D5185(m)		0	0	
Manganese	ppm	ASTM D5185(m)		<1	<1	
Magnesium	ppm	ASTM D5185(m)		18	19	
Calcium	ppm	ASTM D5185(m)		58	55	
Phosphorus	ppm	ASTM D5185(m)		725	746	
Zinc	ppm	ASTM D5185(m)		544	551	
Sulfur	ppm	ASTM D5185(m)		2205	2185	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	14	15	
Sodium	ppm	ASTM D5185(m)		4	6	
Potassium	ppm	ASTM D5185(m)	>20	1	2	
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	10053	110451	
Particles >6µm		ASTM D7647	>1300	<u> </u>	• 38787	
Particles >14µm		ASTM D7647	>160	90	2118	
Particles >21µm		ASTM D7647	>40	24	• 585	
Particles >38µm		ASTM D7647	>10	1	<u> </u>	
Particles >71µm		ASTM D7647	>3	1	1	
Oil Cleanliness		ISO 4406 (c)	>19/17/14	1 /18/14	• 24/22/18	



OIL ANALYSIS REPORT

Particle Trend 20k T			FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
00k - 4μm 6μm			Acid Number (AN)	mg KOH/g	ASTM D974*		0.71	0.83	
0k -			VISUAL		method	limit/base	current	history1	history2
(-			White Metal	scalar	Visual*	NONE	NONE	NONE	
A CAMPAGEMENT OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER			Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
Abnormal		Contract of the Designation of t	Precipitate	scalar	Visual*	NONE	NONE	NONE	
53		23	Silt	scalar	Visual*	NONE	NONE	NONE	
Aug3/		Aug9/	Debris	scalar	Visual*	NONE	NONE	VLITE	
			Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
PQ			Appearance	scalar	Visual*	NORML	NORML	NORML	
Smian			Odor	scalar	Visual*	NORML	NORML	NORML	
detere			Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	
			Free Water	scalar	Visual*		NEG	NEG	
Abnormal					method	limit/base	current	history1	history
				0°t		iiiiii/base	64.6	64.6	Thistoryz
				CSI	ASTM D7219(III)		04.0	04.0	
z/c₿n₩		Aug9/2	SAMPLE IMAGE	S	method	limit/base	current	history1	history2
Ferrous Alloys			Color						no image
iron chromium nickel									
			Bottom						no image
			GRAPHS						
ug3/2			Ferrous Alloys			491 520	Particle Count		-7
A			30 iron			431,520	1		T ²
Acid Number			E 20 - nickel			122,880	Severe		-2
			10-			30,720	1		-2
						₩ = 7,680	Abnormal		-2
3-			ug 3/2			1,920 nd 1,920			-1
			⊲			A cles (p			
			Non-ferrous Meta	ls		10 480		8	
			copper			រត្ត 120	1-		-1
23			tin			a 30	+		-1
Aug3			50			8			+1
						23			
Viscosity @ 40°	°C		Aug3/			/6Bny			
			Viscosity @ 40°C			0	4μ 6μ	14µ 21µ	38µ 71µ
			⁷⁰ T			<u></u> <u></u> <u></u>	Acid Number		
		ž	60			HOX R			
			50 Abnormal			<u>آن</u> ي 0.5			
Abnormal		c	40 Abnormal			Numb			
o .			30			0.0 qcid			
13/23			Aug3/2			Aug9/2	Aug 3/2		
	CALA Law Market Market ISO 17025:2017	Laboratory Sample No. Lab Number	: WearCheck - C8-11 : WC : 02575157	175 Appleb Received Diagnose	oy Line, Bur : 10 d : 11	lington, ON L Aug 2023 Aug 2023	7L 5H9	Good 388 GOO I	year Napan DYEAR RO/ NAPANEE, (
	Accredited Laboratory	Unique Number	: 5620208	Diagnosti	cian : Ke	vin Marson		2	CA K7R 3
		Test Package	: IND 2 (Additional T	ests: PQ)				Cont	act: Grea All
	To discuss this	ie cample roport	contact Customor Son	vice at 1 or	10-268 212	1		area allon	andvoar or
	To discuss thi Test denoted	is sample report, c (*) outside scope	contact Customer Serv	vice at 1-80)0-268-213 dified (e) ta	1. ested at extern	nal lab	greg.allen@	goodyear.cc

Contact/Location: Greg Allen - GOONAP