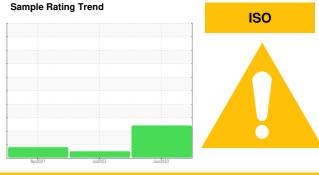


OIL ANALYSIS REPORT

Area Die Casting Production DCC7_Buhler Carat 105 Compact DCC7 (S/N 3050_175_232) Component Hydraulic System

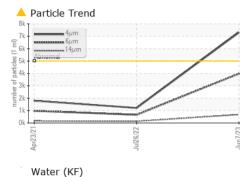
CHEM TREND HF 28 HYDRAULIC FLUID (--- GAL)

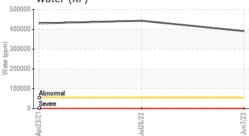
We recommend you service the filters on this service interval to monitor. Off Jun 2023 28.Jul 2022 28.Apr 2021 Machine Age hrs Client Info 0 0 0 We at land component a policiolable. Resample at the next service in throut of particulates present in the di. Chanaged File Client Info NA NA NA Contamination There is a high amount of particulates present in the di. Methods Client Info NA NA NA Fild Condition The part level of this fluid is within the acceptable imms in service. Nickel ppm AST/USISEm 20 0 0 0 0 Silver ppm AST/USISEm 20 0	DIAGNOSIS	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
service intravil nonhor. Ware Nice interval to monitor. Ware Nice on monitor. Nice on monitor. Ware Nice on monitor. Nice on monitor. Ware Nice on monitor. Nice on monitor. Nice on monitor. Nice on monitor. Ware Nice on monitor. Nice on	A Recommendation	Sample Number		Client Info		WC05867888	WC0701152	WC0567156
service interval to monitor. Oit Age Ins Client linio 0 0 0 Wear Oit Changed Client linio N/A N/A N/A N/A Contamination There is a high amount of particulates present in he oil. Normal Amount of particulates present	We recommend you service the filters on this	Sample Date		Client Info		07 Jun 2023	26 Jul 2022	23 Apr 2021
Wear Oil Age Oil Changed Oil Changed NA NA NA All component wear rates are normal. Oil Changed Client time NA NA NA Contamination There is a high amount of particulates present in he oil. Maxement of particulates present in he oil. Maxement of particulates present in he oil. Maxement of particulates present in he oil. NA NA NA Fuel d Condition The pi level of this fluid is within the acceptable for he in service. Maxement of particulates present in he oil. NA NA NA Nickel ppm ASTM DSISEs >20 0 0 0 Nickel ppm ASTM DSISEs >20 0 0 0 Aurinium ppm ASTM DSISEs >20 0 0 0 Aurinium ppm ASTM DSISEs >20 1 1 1 Aurinium ppm ASTM DSISEs >20 1 1 1 1 Aurinium ppm ASTM DSISEs 20 1 1 1 <td></td> <td>Machine Age</td> <td>hrs</td> <td>Client Info</td> <td></td> <td>0</td> <td>0</td> <td>0</td>		Machine Age	hrs	Client Info		0	0	0
All component wear rates are normal. Contamination Results ABIOCHMAL NORMAL ATTENTION There is a high amount of particulates present in the oil. Sample Status Imit base current history2	service interval to monitor.	Oil Age	hrs	Client Info		0	0	0
Contamination WEAR METALS motor history1 history2 There is high amount of particulates present in he oil. monocontrol monocontrol <t< td=""><td>Wear</td><td>Oil Changed</td><td></td><td>Client Info</td><td></td><td>N/A</td><td>N/A</td><td>N/A</td></t<>	Wear	Oil Changed		Client Info		N/A	N/A	N/A
There is a high amount of particulates present in the oil. Method LimitDess Current of Mistory 1 Mistory 2 Iron ppm ASTIL OSIStim >20 0 <1	All component wear rates are normal.	Sample Status				ABNORMAL	NORMAL	ATTENTION
Fluid Condition Chromium ppm ASTN D5185m >20 0 0 0 The pH level of this fluid is within the acceptable Nickel ppm ASTN D5185m 0 <1	Contamination There is a high amount of particulates present in	WEAR METALS		method	limit/base	current	history1	history2
The pH level of this fluid is within the acceptable for the inits. The condition of the ol is acceptable for	the oil.	Iron	ppm	ASTM D5185m	>20	0	0	<1
imits. The condition of the oil is acceptable for the ime in service. imits <	Fluid Condition	Chromium	ppm	ASTM D5185m	>20	0	0	0
silver ppm ASTM D5185m 0 1 1 Aluminum ppm ASTM D5185m >20 <1	The pH level of this fluid is within the acceptable	Nickel	ppm	ASTM D5185m	>20	0	<1	<1
Aluminum ppm AStructorization 20 1 0 -1 Lead ppm AStructorization 20 0 0 -1 Copper ppm AStructorization 20 -1 1 -1 Tin ppm AStructorization 20 -1 -1 -1 Antimony ppm AStructorization 20 -1 -1 -1 Antimony ppm AStructorization -1 3 -1 -1 Antimony ppm AStructorization -1 3 -1 -1 Antimony ppm AStructorization -1 3 -1 -1 Addition ppm AStructorization -1 3 -1 0 -1 0 -1 -1 0 -1 -1 0 -1 <td>limits. The condition of the oil is acceptable for the</td> <td>Titanium</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td>0</td> <td>0</td> <td>0</td>	limits. The condition of the oil is acceptable for the	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >20 0 0 <1	time in service.	Silver	ppm	ASTM D5185m		0	1	1
Copper ppm ASTM D5185m >20 <1 1 <1 Tin ppm ASTM D5185m >20 <1		Aluminum	ppm	ASTM D5185m	>20	<1	0	<1
TinppmASTM D5185n>20<1<1<1AntimonyppmASTM D5185n000<1		Lead	ppm	ASTM D5185m	>20	0	0	<1
Antimony ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 0 <1		Copper	ppm	ASTM D5185m	>20	<1	1	<1
Vanadium ppm ASTM DS165m 0 0 <1 Cadmium ppm ASTM DS165m current history1 history2 Boron ppm ASTM DS165m 0 0 3 Barium ppm ASTM DS165m 0 0 3 Boron ppm ASTM DS165m 0 0 3 Barium ppm ASTM DS165m 0 0 3 Molybdenum ppm ASTM DS165m 0 0 4 Magnesse ppm ASTM DS165m 0 0 1 1 Magnesium ppm ASTM DS165m 0 6 1 0 Phosphorus ppm ASTM DS165m 0 6 1 0 Suffur pm ASTM DS165m 1 1 4 1 Suffur ppm ASTM DS165m 1 1 0 1 Suffur pm ASTM DS165m 20 31 4.3.3 4.3.0 Suffur pm ASTM DS165m		Tin	ppm	ASTM D5185m	>20	<1	<1	<1
Cadmium ppm ASTM D5185m 1 3 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 3 Barium ppm ASTM D5185m 0 0 2 0 Manganese ppm ASTM D5185m 0 <1		Antimony	ppm	ASTM D5185m				0
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM 05185m 0 2 0 Barium ppm ASTM 05185m 0 2 0 Molybdenum ppm ASTM 05185m 0 0 <1		Vanadium	ppm	ASTM D5185m		0	0	<1
Boron ppm ASTM D5185m 0 0 3 Barium ppm ASTM D5185m 0 2 0 Molybdenum ppm ASTM D5185m 0 0 <1 Magnese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m <1 <1 <1 <1 Ocalacim ppm ASTM D5185m 0 6 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<		Cadmium	ppm	ASTM D5185m		<1	3	<1
Barium ppm ASTM D5185m 0 2 0 Molybdenum ppm ASTM D5185m 0 0 <1 Manganese ppm ASTM D5185m 1 <1 <1 Magnesium ppm ASTM D5185m 1 0 0 Calcium ppm ASTM D5185m 0 <1 0 0 Phosphorus ppm ASTM D5185m 0 6 1 14 1 Sulfur ppm ASTM D5185m 0 6 1 1 4 1 Sulfur ppm ASTM D5185m 0 6 1 1 4 1 Sulfur ppm ASTM D5185m 0 1 1 1 0 Sodium ppm ASTM D5185m 1 1 4 0 1 Vettor ppm ASTM D5185m >1 1 0 1 1 Sodium ppm ASTM D5185m >20 <1 0 <1 3 Potassium ppm <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>		ADDITIVES		method	limit/base	current	history1	history2
MolybdenumppmASTM D5185m00<1ManganesceppmASTM D5185m<1		Boron	ppm	ASTM D5185m		0	0	3
Maganese ppm ASTM D5185m <1		Barium	ppm	ASTM D5185m		0	2	0
MagnesiumppmASTM D5185m<100CalciumppmASTM D5185m0<1		Molybdenum	ppm	ASTM D5185m		0	0	<1
CalciumppmASTM D5185m0<10PhosphorusppmASTM D5185m061ZincppmASTM D5185m1141SulfurppmASTM D5185m1180CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>151<1		Manganese	ppm	ASTM D5185m		<1	<1	<1
PhosphorusppmASTM D5185m061ZincppmASTM D5185m1141SulfurppmASTM D5185m1180CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>151<1		Magnesium	ppm	ASTM D5185m		<1	0	0
Zinc ppm ASTM D5185m 1 14 1 Sulfur ppm ASTM D5185m 11 8 0 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >15 1 <1		Calcium	ppm	ASTM D5185m		0	<1	0
SulfurppmASTM D5185m1180CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>151<1		Phosphorus	ppm	ASTM D5185m		0	6	1
Methodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>151<1		Zinc	ppm	ASTM D5185m		1	14	1
Silicon ppm ASTM D5185m >15 1 <1		Sulfur	ppm	ASTM D5185m		11	8	0
Sodium ppm ASTM D5185m 0 0 1 Potassium ppm ASTM D5185m >20 <1 0 <1 Water % ASTM D6304 >55 39.1 44.3 43.0 ppm Water ppm ASTM D6304 >5500 391000 443000 430000 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 7308 1211 1799 Particles >6µm ASTM D7647 >1300 39810 6600 980 Particles >14µm ASTM D7647 >160 678 138 167 Particles >21µm ASTM D7647 >100 228 38 56 Particles >38µm ASTM D7647 >10 355 6 9 Particles >71µm ASTM D7647 >3 4 1 1		CONTAMINANTS	S	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 0 0 1 Potassium ppm ASTM D5185m >20 <1		Silicon	ppm	ASTM D5185m	>15	1	<1	0
Water % ASTM D6304 >55 39.1 44.3 43.0 ppm Water ppm ASTM D6304 >5500 391000 443000 430000 FLUID CLEANLINESS method limit/base current history1 history2 Particles >4µm ASTM D7647 >5000 7308 1211 1799 Particles >6µm ASTM D7647 >1300 3981 660 980 Particles >14µm ASTM D7647 >160 678 138 167 Particles >21µm ASTM D7647 >40 228 38 56 Particles >38µm ASTM D7647 >10 35 6 9 Particles >71µm ASTM D7647 >3 4 1 1		Sodium	ppm	ASTM D5185m		0	0	1
ppm WaterppmASTM D6304>55000 391000 443000 430000 FLUID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >4µmASTM D7647>5000 7308 12111799Particles >6µmASTM D7647>1300 3981 6600980Particles >14µmASTM D7647>1600 678 1380167Particles >21µmASTM D7647>40 228 3856Particles >38µmASTM D7647>10 35 69Particles >71µmASTM D7647>3 4 11		Potassium	ppm	ASTM D5185m	>20	<1	0	<1
ppm WaterppmASTM D6304>55000 391000 443000 430000 FLUID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >4µmASTM D7647>5000 7308 12111799Particles >6µmASTM D7647>1300 3981 6600980Particles >14µmASTM D7647>1600 678 1380167Particles >21µmASTM D7647>40 228 3856Particles >38µmASTM D7647>10 35 69Particles >71µmASTM D7647>3 4 11		Water	%	ASTM D6304	>55	39.1	44.3	43.0
Particles >4µmASTM D7647>5000730812111799Particles >6µmASTM D7647>1300 \land 3981660980Particles >14µmASTM D7647>160678138167Particles >21µmASTM D7647>40 \land 2283856Particles >38µmASTM D7647>10 \land 3569Particles >71µmASTM D7647>3411		ppm Water	ppm	ASTM D6304	>55000	391000	443000	430000
Particles >6µmASTM D7647>1300 $\widehat{\ }$ 3981660980Particles >14µmASTM D7647>160 $\widehat{\ }$ 678138167Particles >21µmASTM D7647>40 $\widehat{\ }$ 2283856Particles >38µmASTM D7647>10 $\widehat{\ }$ 3569Particles >71µmASTM D7647>3 $\widehat{\ }$ 4011		FLUID CLEANLIN	VESS	method	limit/base	current	history1	history2
Particles >6µmASTM D7647>1300 $\widehat{\ }$ 3981660980Particles >14µmASTM D7647>160 $\widehat{\ }$ 678138167Particles >21µmASTM D7647>40 $\widehat{\ }$ 2283856Particles >38µmASTM D7647>10 $\widehat{\ }$ 3569Particles >71µmASTM D7647>3 $\widehat{\ }$ 4011		Particles >4µm		ASTM D7647	>5000	7308	1211	1799
Particles >14µmASTM D7647>160 \land 678138167Particles >21µmASTM D7647>40 \land 2283856Particles >38µmASTM D7647>10 \land 3569Particles >71µmASTM D7647>3411		Particles >6µm		ASTM D7647	>1300			980
Particles >21 μ mASTM D7647>40 228 3856Particles >38 μ mASTM D7647>10 35 69Particles >71 μ mASTM D7647>3 4 11								
Particles >38μm ASTM D7647 >10 ▲ 35 6 9 Particles >71μm ASTM D7647 >3 4 1 1								-
Particles >71μm ASTM D7647 >3 4 1 1								-
							1	
		Oil Cleanliness					17/17/14	18/17/15

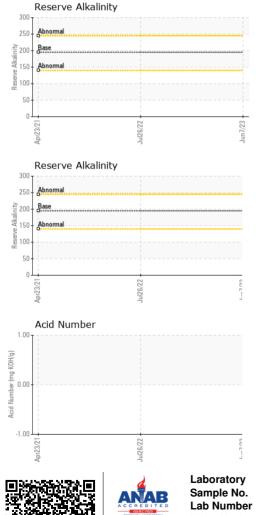




OIL ANALYSIS REPORT





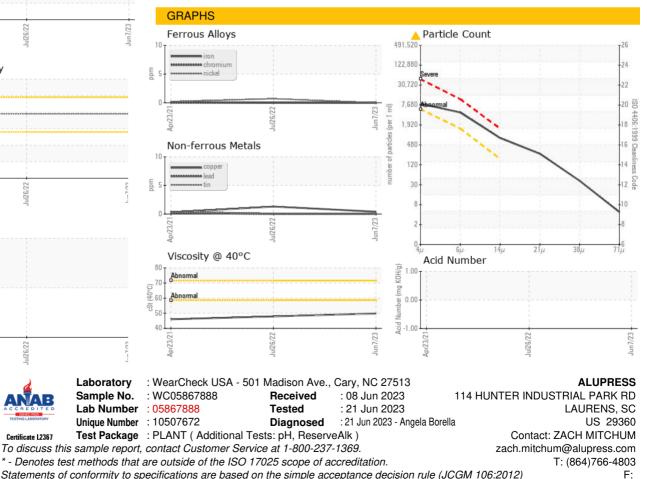


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>55	0.2%	0.2%	0.2%
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
рН	Scale 0-14	ASTM D1287		9.00	9.00	10.0
Visc @ 40°C	cSt	ASTM D445		49.8	47.9	46.0
SAMPLE IMAGES	S	method	limit/base	current	history1	history2



Bottom

Color



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

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Submitted By: ZACH MITCHUM

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