

COOLANT REPORT

Sample Rating Trend





KANSAS/88/FD - EXCAVATOR 20.105C [KANSAS^88^FD - EXCAVATOR] Component Coolant Fluid

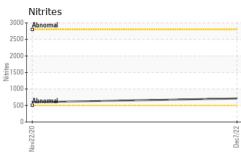


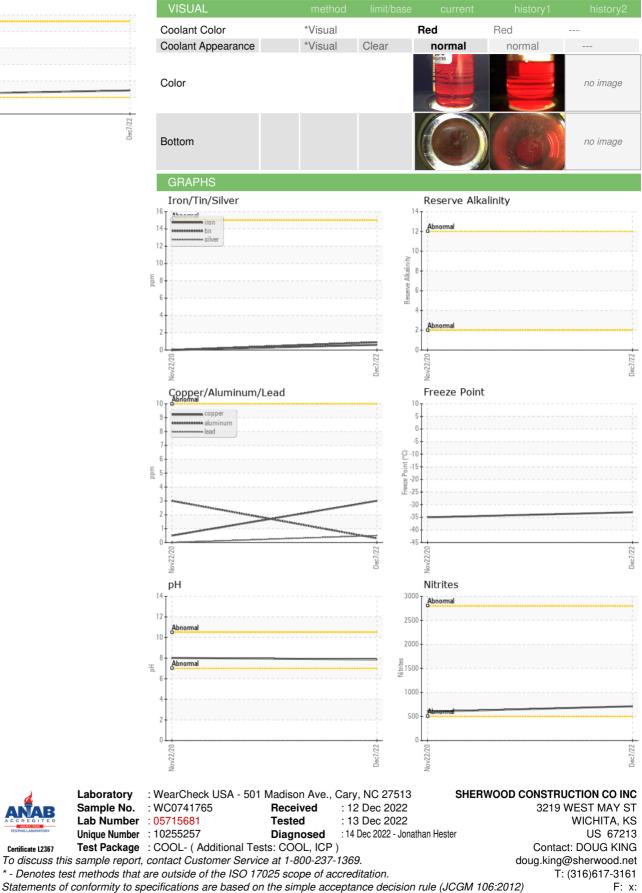
EXTENDED LIFE COOLANT (--- GAL)

Sample DateClient Info07 Dec 202222 Nov 2020CorrosionMachine AgehrsClient Info26620All metal levels are normal indicating no corrosion in the cooling system.Oil AgehrsClient Info26620Oil AgehrsClient InfoNot ChangdOil ChangedOil ChangedClient InfoNot ChangdOil ChangedClient InfoNot ChangdOil ChangedClient InfoNORMALNORMALSample StatusImit/basecurrenthistory1history2Specific Gravity*ASTM D12981.066PHScale 0:14ASTM D12877.878.02NitritesppmAP-053:2009712600	DIAGNOSIS	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Corrosion Machine Age hrs Client Info 2662 0	Recommendation	Sample Number		Client Info		WC0741765	WC0453716	
Minetal levels are normal indicating no corrosion in the cooling system. Oil Aage Net Inflo 2662 0 Coltanged Client Inflo Not Changed Not Changed Did Age Client Inflo Not Changed Not Changed There is no indication of any contamination in the colant. Sample Status Not Changed Not Changed Specific Gravity 'ASTM D1238 1.066 PH Sam6V4 ASTM D1238 1.066 Not Kenzeptable. The pH level of this fluid is within the acceptable limits. Same Value (Same Valu	The fluid is suitable for further service.	Sample Date		Client Info		07 Dec 2022	22 Nov 2020	
n the cooling system. Oil Changed Client Info Not Changed Not Changed Sample Status Inter is no indication of any contamination in the colent. PHYSICAL TEST RESULTS method init/base current history history Scalar Specific Gravity 'ASTM D128 1.066 PHYSICAL TEST RESULTS method init/base current history Northe carcoxylate limits. Specific Gravity 'ASTM D128 1.066 Precentage Glycol YastM D322 7.87 8.02 Precentage Glycol YastM D322 49.1 49	Corrosion	Machine Age	hrs	Client Info		2662	0	
Sample Status NORMAL NORMAL NORMAL	All metal levels are normal indicating no corrosion		hrs	Client Info		2662	0	
There is no indication of any contamination in the colant. PHYSICAL TEST RESULTS method limit/base current history1 history1 Colonant. The carboxylate level of this fluid is acceptable. The plevel of this fluid is acceptable limits. Specific Gravity 'ASTM D1287 7.87 8.02 PH StaleVI ASTM D1287 7.87 8.02 PH StaleVI ASTM D1287 7.87 8.02 PH StaleVI ASTM D1287 PH StaleVI ASTM D1287 PH StaleVI ASTM D1230 49.1 49 Precentage Glycol % ASTM D3231 49.1 49 Precentage Glycol % ASTM D3231 49.1 49 Carboxylate Imit/bass current history1	in the cooling system.	Oil Changed		Client Info		•	Not Changd	
Sociant. PHYSICAL TEST RESULTS Method Imitbase Current Instory1 Instory2 Specific Gravity YSTM D1238 1.066 hip carboxystate level of this fluid sacceptable. The pH level of this fluid Secific Gravity YSTM D123 7.87 8.02 hip carboxystate pp AP 0532009 7.12 600 Nitrites ppm AP 0532009 7.12 600 Percentage Glociol % ASTM D1237 -33 -35 Percentage Glociol % ASTM D3321 -33 -35 Carboxylate psss pass pass pass Socion ppm ASTM D6130 134 80 Corboxylate pm ASTM D6130 10 -1 Socion ppm ASTM D6130 10 1	Contaminants	Sample Status				NORMAL	NORMAL	
PH Scale 0.11 ASTM D1287 7.87 8.02 Pbc earboxylate level of this fluid is within the acceptable. The pH level of this fluid s within the acceptable limits. Ph AP.052.009 712 600 Percentage Glycol % AP.052.009 712 600 Percentage Glycol % ASTM D321 Percentage Glycol % ASTM D321 49.1 49 Percentage Glycol % ASTM D321 -33 -35 Prezentage Glycol % ASTM D6130 22 6 Phosphorus ppm ASTM D6130 134 80 Phosphorus ppm ASTM D6130 1020 460 QORROSION method limit/base current history1 history2 Iron ppm ASTM D6130 >10 <1 0 QORPC ppm ASTM D6130 >10 <1 0 A	There is no indication of any contamination in the coolant.	PHYSICAL TEST F	RESULTS	s method	limit/base	current	history1	history2
The carboxylate level of this fluid is acceptable. The pH level of this fluid is acceptable limits. PH Stale014 ATM D1287 7.87 8.02 Nitrites ppm AP-033200 712 600 Swithin the acceptable limits. Stale0014 Stale0014 Stale014 AP-033200 712 600 Percentage Glycol % ASTM D0321 49.1 49 Percentage Glycol % ASTM D0321 49.1 49 Total Dissolved Solids Total Dissolved Solids Stale.014 101 23 -33 CORROSION INHIBITORS method Imit/base current history2 6 Silicon ppm ASTM D6130 134 80 6 Phosphorus ppm ASTM D6130 -10 0 6 Molydenum ppm ASTM D6130 -10 0 Adminum ppm ASTM D6130 -10 1 0	Coolant Condition	Specific Gravity		*ASTM D1298		1.066		
Swithin the acceptable limits. Reserve Alkalinity State 0.20 'ASTM D1121 Percentage Glycol % ASTM D3321 49.1 49.0 Freezing Point °F ASTM D3321 -33 -35 Total Dissoved Solids 364.5 380.0 Carboxylate ! imit/base current historyl historyl Silicon ppm ASTM D6130 22 6 Phosphorus ppm ASTM D6130 6 5 Boron ppm ASTM D6130 6 5 Molyddenum ppm ASTM D6130 5 1 0 Auminum ppm ASTM D6130 >10 3 Auminum ppm ASTM D6130 >10 3 Auminum ppm ASTM D6130 >10 3 Copper	The carboxylate level of this fluid is acceptable. The	pН	Scale 0-14	ASTM D1287		7.87	8.02	
Percentage Glycol%ASTM D332149.149Freezing Point*FASTM D3321-33-35Total Dissolved Solids364.5388.0Carboxylate110passpassCORROSION INHIBITORSmethod1mit/basecurrenthistory2SiliconppmASTM D6130226PhosphorusppmASTM D613065BoronppmASTM D613065MolybdenumppmASTM D613010204600IronppmASTM D6130-15<10AluminumppmASTM D6130>10<13CopperppmASTM D6130>10<10LeadppmASTM D6130>10<10TinppmASTM D6130>10<10ContrAMINANTsmethodImit/basecurrenthistory1history2ChlorineppmASTM D6130137CARRIER SALTsmethodImit/basecurrenthistory1history2SodiumppmASTM D6130131742CARRIER SALTsmethodImit/basecurrenthistory1history2ColorineppmASTM D6130131742CARRIER SALTsmethodImit/basecurrenthi	glycol level is acceptable. The pH level of this fluid is within the acceptable limits.	Nitrites	ppm	AP-053:2009		712	600	
Freezing Point°FASTM D3321-33-35Total Dissolved Solids364.5388.0CarboxylateImit/basepasspassCORROSION INHIBITORSmethodimit/basecurrenthistory1history2SiliconppmASTM D6130226PhosphorusppmASTM D613013480BoronppmASTM D61301020460MolybdenumppmASTM D61301020460CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130<>15<10AluminumppmASTM D6130<>103<1QopperppmASTM D6130<>103<1IronppmASTM D6130<>10<10ZincppmASTM D6130<>10<10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChorineppmASTM D6130137CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D61301911742PotassiumppmASTM D61301911742SCALE POTENTILImethodlimit/basecurrenthistory1history2CalciumppmASTM D61301911742 </th <th>Reserve Alkalinity</th> <th>Scale 0-20</th> <th>*ASTM D1121</th> <th></th> <th></th> <th></th> <th></th>		Reserve Alkalinity	Scale 0-20	*ASTM D1121				
Total Dissolved Solids364.5388.0CarboxylateIIpasspassCORROSION INHIBITORSmethodlimit/basecurrenthistory1history2SiliconppmASTM D613013480PhosphorusppmASTM D613013480BoronppmASTM D61301120460MolybdenumppmASTM D61301020460CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<10AluminumppmASTM D6130>10<13CopperppmASTM D6130>10<10TinppmASTM D6130>10<10ZineppmASTM D6130>10<10CONTAMINANTmethodlimit/basecurrenthistory1history2ChorineppmASTM D6130137CARRIER SALTSmethodlimit/basecurrenthistory1SodiumppmASTM D613056653056PotassiumppmASTM D613011911742SodiumppmASTM D6130imit/basecurrenthistory1PotassiumppmASTM D6130100ColumnppmASTM D61301 <td< th=""><th></th><th></th><th>%</th><th></th><th></th><th>-</th><th>49</th><th></th></td<>			%			-	49	
CarboxylateImitpasspassCORROSION INHIBITORSmethodlimit/basscurrenthistory1SiliconppmASTM D6130226PhosphorusppmASTM D613013480BoronppmASTM D613065MolybdenumppmASTM D61301020460CORROSIONmethodlimit/basscurrenthistory1history2IronppmASTM D6130>15<10AuminumppmASTM D6130>10<13CopperppmASTM D6130>10<10LeadppmASTM D6130>10<10ZincppmASTM D6130>10<10ContAMINANTSmethodlimit/basscurrenthistory1history2ChorineppmASTM D6130137CARRIER SALTSmethodlimit/basscurrenthistory1history2SodiumppmASTM D61301911742SCALE POTENTILImethodlimit/basscurrenthistory1history2CalciumppmASTM D6130currenthistory1history2ColumppmASTM D61301911742ColumppmASTM D6130currenthistory1history2ColumppmASTM D61301		Freezing Point	°F	ASTM D3321		-33	-35	
CORROSION INHIBITORSmethodlimit/basecurrenthistory1history2SiliconppmASTM D6130226PhosphorusppmASTM D613013480BoronppmASTM D613065MolybdenumppmASTM D61301020460CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<10AluminumppmASTM D6130>10<13CopperppmASTM D6130>10<10LeadppmASTM D6130>10<10TinppmASTM D6130>10<10ZincppmASTM D6130>10<10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D6130137CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D613056653056PotassiumppmASTM D61301911742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130100SCALE POTENTIALmethodlimit/basecurrenthistory2		Total Dissolved Solids				364.5	388.0	
SiliconppmASTM D6130226PhosphorusppmASTM D613013480BoronppmASTM D613065MolybdenumppmASTM D61301020460CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130<>15<10AluminumppmASTM D6130<>10<13CopperppmASTM D6130<>10<10LeadppmASTM D6130<>10<10ZincppmASTM D6130<>10<10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D6130<<10137CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D613056653056PotassiumppmASTM D6130131742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130131742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D61301311042PotassiumppmASTM D61301311042ColumppmASTM D61301311042		Carboxylate				pass	pass	
PhosphorusppmASTM D613013480BoronppmASTM D613065MolybdenumppmASTM D613010204600CORROSIONmethodimit/basecurrenthistory1history2IronppmASTM D6130<>15<10AluminumppmASTM D6130<>10<13CopperppmASTM D6130<>103<1LeadppmASTM D6130<>10<10TinppmASTM D6130<>10<10ZincppmASTM D6130<>10<10CONTAMINANTSmethodimit/basecurrenthistory1history2ChlorineppmASTM D613056653056SodiumppmASTM D6130566553056PotassiumppmASTM D61301911742SCALE POTENTILmethodimit/basecurrenthistory1history2CalciumppmASTM D6130-1911742		CORROSION INF	IIBITORS	6 method	limit/base	current	history1	history2
BoronppmASTM D613065MolybdenumppmASTM D61301020460CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130<>15<10AluminumppmASTM D6130<>10<13CopperppmASTM D6130<>10<10LeadppmASTM D6130<>10<10TinppmASTM D6130<>10<10ZincppmASTM D6130<>10<10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D6130137SodiumppmASTM D613056653056PotassiumppmASTM D61301911742SCALE POTENTILImethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<10ppmASTM D6130<11911742ScalueppmASTM D6130<10PotassiumppmASTM D6130<10ScalueppmASTM D6130<10PotassiumppmASTM D6130<10ScalueppmASTM D6130<10PotassiumppmASTM D6130<1 <td< th=""><th></th><th>Silicon</th><th>ppm</th><th>ASTM D6130</th><th></th><th>22</th><th>6</th><th></th></td<>		Silicon	ppm	ASTM D6130		22	6	
MolybdenumppmASTM D61301020460CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<10AluminumppmASTM D6130>10<13CopperppmASTM D6130>103<1LeadppmASTM D6130>10<10TinppmASTM D6130>10<10ZincppmASTM D6130>10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D6130137SodiumppmASTM D6130110SodiumppmASTM D61301911742SCALE POTENTILmethodlimit/basecurrenthistory1history2CalciumppmASTM D613010ppmASTM D61301101742SCALE POTENTILmethodlimit/basecurrenthistory1history2CalciumppmASTM D613010ppmASTM D61301101742NotassiumppmASTM D613010SCALE POTENTILmethodlimit/basecurrenthistory1history1CalciumppmASTM D6130<< </th <th></th> <th>Phosphorus</th> <th>ppm</th> <th>ASTM D6130</th> <th></th> <th>134</th> <th>80</th> <th></th>		Phosphorus	ppm	ASTM D6130		134	80	
CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<10AluminumppmASTM D6130>10<13CopperppmASTM D6130>103<1LeadppmASTM D6130>10<10TinppmASTM D6130>10<10ZincppmASTM D6130>10<10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D613056653056SodiumppmASTM D613056653056PotassiumppmASTM D61301911742SCALE POTENTI-Lmethodlimit/basecurrenthistory1history2CalciumppmASTM D61301010ppmASTM D61301911742CalciumppmASTM D6130-10CalciumppmASTM D6130-10CalciumppmASTM D6130-10CalciumppmASTM D6130-1010CalciumppmASTM D6130-1010CalciumppmASTM D6130-1010CalciumppmASTM D6130 <th></th> <th>Boron</th> <th>ppm</th> <th>ASTM D6130</th> <th></th> <th>6</th> <th>5</th> <th></th>		Boron	ppm	ASTM D6130		6	5	
IronppmASTM D6130<>15<1		Molybdenum	ppm	ASTM D6130		1020	460	
AluminumppmASTM D6130>10<1		CORROSION		method	limit/base	current	history1	history2
CopperppmASTM D6130>103<1		Iron	ppm	ASTM D6130	>15	<1	0	
LeadppmASTM D6130>10<1		Aluminum	ppm	ASTM D6130	>10	<1	3	
TinppmASTM D6130>10<1		Copper	ppm	ASTM D6130	>10	3	<1	
ZincppmASTM D613010CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D6130137CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D6130566553056PotassiumppmASTM D61301911742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<10		Lead	ppm	ASTM D6130	>10	<1	0	
CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D6130137CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D613056653056PotassiumppmASTM D61301911742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<10		Tin	ppm		>10	<1	0	
ChlorineppmASTM D6130137CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D613056653056PotassiumppmASTM D61301911742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<10		Zinc	ppm	ASTM D6130		1	0	
CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D613056653056PotassiumppmASTM D61301911742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<10		CONTAMINANTS	6	method	limit/base	current	history1	history2
SodiumppmASTM D613056653056PotassiumppmASTM D61301911742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<1		Chlorine	ppm	ASTM D6130		13	7	
PotassiumppmASTM D61301911742SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<1			3	method	limit/base	current	history1	history2
SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D6130<1		Sodium	ppm	ASTM D6130		5665	3056	
Calcium ppm ASTM D6130 <1		Potassium	ppm	ASTM D6130		1911	742	
		SCALE POTENT	IAL	method	limit/base	current	history1	history2
Magnesium ppm ASTM D6130 1 0		Calcium	ppm	ASTM D6130		<1	0	
		Magnesium		ASTM D6130		1	0	



COOLANT REPORT





Certificate L2367