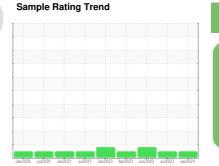


COOLANT REPORT





NORMAL

Fluid

DECM01BE (S/N ZBA01290) Component **Jacket Water Coolant**

CHEVRON HEAVY DUTY PF COOLANT (100 GAL)

Sample Number Client Info WC0732907 WC0732907 WC0732907 WC0732917 In dia Suitable for further service. moration Client Info 055062 05240 053012023 07Jun 2023 In metal levels are normal indicating no corrosion the cooling system. Normalinama Normalinam			-	Janzozo Ju	12020 Jan2021 Jul2021	3812023 Api2023 3012023 30121	IZ3 Janzuz4	
Sample Date Client Info 05 Jan 2024 06 Jul 2023 07 Jun 2023 Interal levels are normal indicating no corrosion Dil Age hrs Client Info 55652 5569 552 Doll Aconged NS Client Info 55565 5669 552 Doll Aconged Client Info 55565 5669 552 Doll Aconged Client Info 55565 5669 552 Doll Aconged Client Info NA Changed Not Changed Doll Aconged Client Info NSMAL NoRMAL NoRMAL <t< th=""><th>DIAGNOSIS</th><th>SAMPLE INFORM</th><th>MATION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>	DIAGNOSIS	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Direction Machine Age hrs Client Info 56062 52544 51906 Imetal levels are normal indicating no corrosion ontaminants NA Changed NICH NA Changed NORMAL NORMAL ABNORMAL sample Status Client Info N/A Changed NOC thanged NORMAL ABNORMAL ABNORMAL sopeling Cardition appeling Status NORMAL NORMAL ABNORMAL ABNORMAL <td>ecommendation</td> <td>Sample Number</td> <td></td> <td>Client Info</td> <td></td> <td>WC0732907</td> <td>WC0732927</td> <td>WC0732944</td>	ecommendation	Sample Number		Client Info		WC0732907	WC0732927	WC0732944
Immetal levels are normal indicating no corrosion the cooling system. Oil Age Inst Client Info S6568 50669 562 ontaminants nere is no indication of any contamination in the olant. Oil Age Client Info NA Changed Not Changed Sociant Condition ycol and nitrite levels are acceptable. The pH vel of this fluid is within the acceptable limits. PHYSICAL TEST RESULTS method Imit/base current Halory1 history2 Specific Gravity 'ASTM D123 1.061 1.059 1.065 PH Sale/90 'ASTM D123 1.061 1.059 1.065 PH Sale/90 'ASTM D123 1.061 1.052 9.00 Reserve Alkalinity Sale/90 'ASTM D123 1.061 1.052 9.00 Reserve Alkalinity Sale/90 'ASTM D123 1.061 1.052 9.00 Reserve Alkalinity Sale/90 'ASTM D123 1.061 1.052 2.00 2.41.5 Correcostorylate 'Markinin' ASTM D130 1.00 2 9 0 2.41.5 Carboxylate ppm ASTM D6130 1.00 2 2.64.15	he fluid is suitable for further service.	Sample Date		Client Info		05 Jan 2024	06 Jul 2023	07 Jun 2023
metal levels are normal indicating no corrosion the cooling system. Oil Age hrs Client Info 56568 50669 562 ontaminants ere is no indication of any contamination in the olart. Sample Status NotA NoRMAL NORMAL ABNORMAL Diant Condition ycol and intrifie levels are acceptable. The pH ele of this fluid is within the acceptable limits. Specific Gravity 'ASTM D1287 1.061 1.052 9.00 Specific Gravity 'ASTM D1287 1.05 6.395 9.73 0.02 Nith the acceptable limits. PH Sale 04 ASTM D1287 1.05 6.395 9.03 9.02 Nith the acceptable limits. PH Sale 04 ASTM D1287 1.05 6.395 9.02 9.00 Reserve Alkalinity Sale 03 'ASTM D1287 1.05 4.5.0 43.8 48.4 Total Dissolved Solids Carboxylate 263.5 230.5 241.5 Correction ppm ASTM D6130 100 25 211 254 Phosphorus ppm ASTM D6130 10 2 9 0 Gorrectore ppm ASTM D6130 <td>prrosion</td> <td>Machine Age</td> <td>hrs</td> <td>Client Info</td> <td></td> <td>56062</td> <td>52544</td> <td>51906</td>	prrosion	Machine Age	hrs	Client Info		56062	52544	51906
Sample Status NORMAL NORMAL ABNORMAL are is no indication of any contamination in the olan. PHYSICAL TEST RESULTS method limit/base current historyl historyl yolant Condition yool and initrife levels are acceptable. The pH eld of this fluid is within the acceptable limits. Specific Gravity 'ASTM D1287 10.5 8.95 9.73 9.02 Nitrites pm AP632009 >8000 8000 45.0 43.8 48.4 Percentage Glycol % ASTM D1287 10.5 8.95 9.73 9.02 Percentage Glycol % ASTM D280 >8000 45.0 43.8 48.4 Percentage Glycol % ASTM D5130 10.5 45.0 43.8 48.4 Total Dissolved Solids Carboxylate imit/base current historyl historyl Silicon ppm ASTM D6130 1000 55 211 254 Phosphorus ppm ASTM D6130 100 2 9 0 Boron ppm ASTM D6130 10 1 -1 -1		Oil Age	hrs	Client Info		56568	50669	562
Perce is no indication of any contamination in the Jant. PHYSICAL TEST RESULTS method Imitbase current History1 history2 Specific Gravity 'ASTM D128' 1.061 1.059 1.065 PH Sae04/ ASTM D128' 1.061 1.059 1.065 PH Sae04/ ASTM D128' 1.051 8.955 9.73 9.02 Nitrites ppm AP-0532009 9800 976 1052 9000 Reserve Alkalinity Sae040' 'ASTM D128' 1.061 1.069 1.057 Reserve Alkalinity Sae040' 'ASTM D128' 10.5 8.956 9.73 9.02 Reserve Alkalinity Sae040' 'ASTM D128' 10.5 43.8 48.4 48.4 Freezing Point 'F ASTM D332 50 45.0 43.8 48.4 OCRROSION INHIBITORS method Imitbase current History1 History2 Silicon ppm ASTM D6130 100 5 21.1 254.4 Phosphorus ppm ASTM D6130 100 0	the cooling system.	Oil Changed		Client Info		N/A	Changed	Not Changd
Olant. PHYSICAL TEST RESULTS method minitodase current mistory mistory yol and nitrite levels are acceptable limits. Specific Gravity 'ASTM D123 1.061 1.059 1.065 yel and nitrite levels are acceptable limits. Specific Gravity 'ASTM D1237 10.5 8.95 9.73 9.02 Nitrites pp AP0632009 >800 976 1052 900 Reserve Alkalinity Xate 00 YASTM D1237 10.5 8.95 9.73 9.02 Percentage Glycol '% ASTM D0321 50 45.0 43.8 48.4 Freezing Point 'F ASTM D0321 50 45.0 43.8 48.4 Garboxylate in/a n/a in/a n/a fail CorROSION INHIBITORS method imit/base current History1 History1 Silicon ppm ASTM D6130 100 5 211 254 Phosphorus ppm ASTM D6130 10 0 0 <td>ontaminants</td> <td>Sample Status</td> <td></td> <td></td> <td></td> <td>NORMAL</td> <td>NORMAL</td> <td>ABNORMAL</td>	ontaminants	Sample Status				NORMAL	NORMAL	ABNORMAL
PH State 0-14 ASTM D1287 10.5 8.95 9.73 9.02 vel of this fluid is within the acceptable limits. Nitrites pm AP-033200 976 1052 900 Reserve Alkalinity State 0.01 ASTM D1237 10.5 8.95 9.73 9.02 Percentage Glycol % ASTM D3221 Percentage Glycol % ASTM D3321 50 43.0 43.4 48.4 Freezing Point *E ASTM D3221 37 -24 -19 -31 Total Dissolved Solids 263.5 230.5 241.5 67 663.5 211 254 Phosphorus ppm ASTM D6130 1000 55 211 254 Phosphorus ppm ASTM D6130 100 2 9 0 Boron ppm ASTM D6130 15 <1		PHYSICAL TEST F	RESULTS	s method	limit/base	current	history1	history2
yeol and nitrite levels are acceptable. The pH Stale 0:14 ASTM 01237 10.5 8.95 9.73 9.02 Nitries pm PP-0352009 >800 976 1052 900 Percentage Gilycol % ASTM 01121 Percentage Gilycol % ASTM 01321 60 43.8 48.4 Freezing Point *F ASTM 01321 672 241.5 230.5 241.5 Carboxylate Imit/base current n/a fail fail CORROSION INHIBITORS method imit/base current historyl fail Silicon ppm ASTM 06130 100 55 211 254 Boron ppm ASTM 06130 100 28 57 684 Molybdenum ppm ASTM 06130 10 28 56 442 CORROSION method imit/base current historyl historyl Molybdenum ppm ASTM 06130 11 <1	oolant Condition	Specific Gravity		*ASTM D1298		1.061	1.059	1.065
Nitrites ppm AP-963.209 >800 976 1052 900 Reserve Alkalinity Scate20 ASTM D0321 50 45.00 43.8 48.4 Precentage Glycol % ASTM D0321 5.0 45.00 43.8 48.4 Precentage Glycol % ASTM D0321 3.7 -24 -19 -31 Total Dissolved Solids Total Dissolved Solids init n/a fail CORROSION INHIBITORS method imit/base current history1 history2 Silicon ppm ASTM D6130 1000 55 211 254 Phosphorus ppm ASTM D6130 100 28 571 684 Molyddenum ppm ASTM D6130 10 28 571 684 Molyddenum ppm ASTM D6130 515 <1		рН	Scale 0-14	ASTM D1287	10.5	8.95	9.73	9.02
Percentage Giycol % ASTM D3321 50 45.0 43.8 48.4 Freezing Point *F ASTM D3321 -37 -24 -19 -31 Total Dissolved Solids 263.5 230.5 241.5 Gatboxylate n/a fail Corboxylate n n/a n/a fail istory2 Silicon ppm ASTM D6130 1000 55 211 254 Phosphorus ppm ASTM D6130 1000 55 211 254 Boron ppm ASTM D6130 1000 284 571 684 Molybdenum ppm ASTM D6130 185 366 442 CORROSION method imit/base current history1 history2 Iron ppm ASTM D6130 >15 <1	level of this fluid is within the acceptable limits.	Nitrites	ppm	AP-053:2009	>800	976	1052	900
Freezing Point °F ASTM D321 -37 -24 -19 -31 Total Dissolved Solids 263.5 230.5 241.5 Carboxylate n/a n/a fail CORROSION INHIBITORS method limit/base current history1 Silicon ppm ASTM D6130 1000 55 211 254 Phosphorus ppm ASTM D6130 0 2 9 0 Boron ppm ASTM D6130 0 284 571 684 Molybdenum ppm ASTM D6130 185 366 442 CORROSION method limit/base current history1 history2 Iron ppm ASTM D6130 >15 <1		Reserve Alkalinity	Scale 0-20	*ASTM D1121				
Total Dissolved Solids283.5230.5241.5Carboxylaten/afailCORROSION INHIBITORSmethodlimit/basecurrenthistory1SiliconppmASTM D6130100055211254PhosphorusppmASTM D61300290BoronppmASTM D61300284571684MolybdenumppmASTM D6130185366442CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<1		Percentage Glycol	%	ASTM D3321	50	45.0	43.8	48.4
Carboxylaten/an/afailCORROSION INHIBITORSmethodlimit/basecurrenthistory1history2SiliconppmASTM D6130100055211254PhosphorusppmASTM D61300290BoronppmASTM D61300284571684MolybdenumppmASTM D6130185366442CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<1		Freezing Point	°F	ASTM D3321	-37	-24	-19	-31
CORROSION INHIBITORS methodlimit/basecurrenthistory1history2SiliconppmASTM D6130100055211254PhosphorusppmASTM D61300290BoronppmASTM D6130284571684MolybdenumppmASTM D61301853664422CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<1		Total Dissolved Solids				263.5	230.5	241.5
Silicon ppm ASTM D6130 1000 55 211 254 Phosphorus ppm ASTM D6130 0 2 9 0 Boron ppm ASTM D6130 284 571 684 Molybdenum ppm ASTM D6130 185 366 442 CORROSION method limit/base current history1 history2 Iron ppm ASTM D6130 >15 <1		Carboxylate				n/a	n/a	fail
Phosphorus ppm ASTM D6130 0 2 9 0 Boron ppm ASTM D6130 284 571 684 Molybdenum ppm ASTM D6130 185 366 442 CORROSION method limit/base current history1 history2 Iron ppm ASTM D6130<>15 <1 1 <1 Aluminum ppm ASTM D6130<>10 0 0 0 Copper ppm ASTM D6130<>10 1 <1 <1 Lead ppm ASTM D6130<>10 1 <1 <1 Lead ppm ASTM D6130<>10 1 <1 0 Zinc ppm ASTM D6130<>10 1 <1 0 CONTAMINANTS method limit/base current history1 history2 Chlorine ppm ASTM D6130 13 26 0 CARRIER SALTS method limit/base current history1 history2 Sodium ppm ASTM D6130 14 <t< td=""><td></td><td>CORROSION INF</td><td>IIBITORS</td><td>method</td><td>limit/base</td><td>current</td><td>history1</td><td>history2</td></t<>		CORROSION INF	IIBITORS	method	limit/base	current	history1	history2
BoronppmASTM D6130284571684MolybdenumppmASTM D6130185366442CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<1		Silicon	ppm	ASTM D6130	1000	55	211	254
MolybdenumppmASTM D6130185366442CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130<>15<1		Phosphorus	ppm	ASTM D6130	0	2	9	0
CORROSIONmethodlimit/basecurrenthistory1history2IronppmASTM D6130>15<1		Boron	ppm	ASTM D6130		284	571	684
Iron ppm ASTM D6130 >15 <1		Molybdenum	ppm	ASTM D6130		185	366	442
AluminumppmASTM D6130>1000CopperppmASTM D6130>101<1		CORROSION		method	limit/base	current	history1	history2
AluminumppmASTM D6130>1000CopperppmASTM D6130>101<1		Iron	maa	ASTM D6130	>15	<1	1	<1
CopperppmASTM D6130>101<1<1<1LeadppmASTM D6130>101<1		Aluminum		ASTM D6130	>10	0		
LeadppmASTM D6130>101<10TinppmASTM D6130>102<1		Copper				1	<1	<1
ZincppmASTM D61300<10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D613013260CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D6130174530583398PotassiumppmASTM D6130141800SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D613015<1				ASTM D6130	>10	1	<1	0
ZincppmASTM D61300<10CONTAMINANTSmethodlimit/basecurrenthistory1history2ChlorineppmASTM D613013260CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D6130174530583398PotassiumppmASTM D6130141800SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D613015<1		Tin				2	<1	0
ChlorineppmASTM D613013260CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D6130174530583398PotassiumppmASTM D6130141800SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D613015<1		Zinc						
CARRIER SALTSmethodlimit/basecurrenthistory1history2SodiumppmASTM D6130174530583398PotassiumppmASTM D6130141800SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D613015<1		CONTAMINANTS	6	method	limit/base	current	history1	history2
SodiumppmASTM D6130174530583398PotassiumppmASTM D6130141800SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D613015<1		Chlorine	ppm	ASTM D6130		13	26	0
PotassiumppmASTM D6130141800SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D613015<1		CARRIER SALTS	\$	method	limit/base	current	history1	history2
PotassiumppmASTM D6130141800SCALE POTENTIALmethodlimit/basecurrenthistory1history2CalciumppmASTM D613015<1		Sodium	ppm	ASTM D6130		1745	3058	3398
Calcium ppm ASTM D6130 1 5 <1		Potassium		ASTM D6130		14	180	0
		SCALE POTENT	IAL	method	limit/base	current	history1	history2
		Calcium	maa	ASTM D6130		1	5	<1
		Magnesium	ppm	ASTM D6130		1	<1	0



COOLANT REPORT

