

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

-	LINK-BELT 7151 (S/N 9895)
	Rear Differential
	GEAR OIL SAE 85W140 (GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

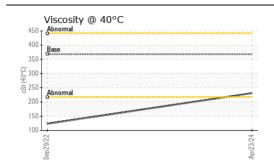
There is no indication of any contamination in the oil.

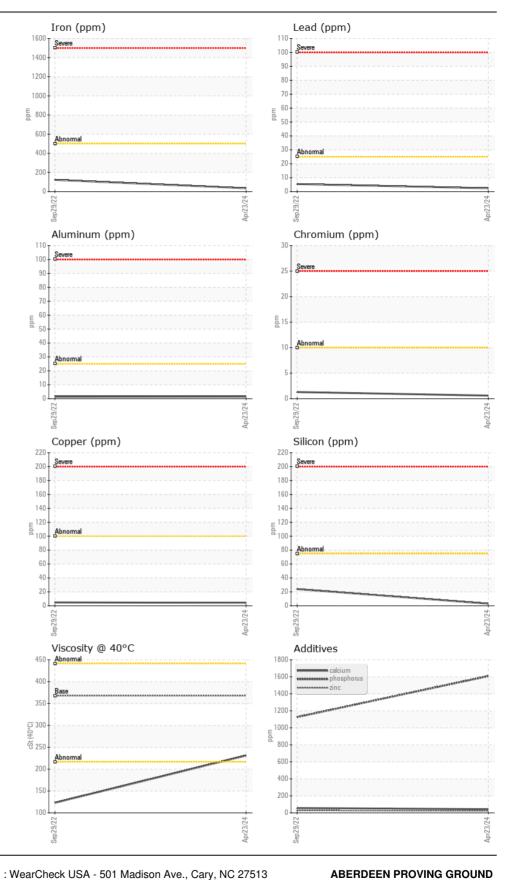
FLUID CONDITION

The condition of the oil is acceptable for the time in service.

TestUOMMethodLimit/hnCurrentHistory1History2Sample NumberClient InfoDC0021580DC0022746Sample DateClient InfoZ3 Apr 202429 Sep 2022Machine AgehrsClient InfoO0Filter AgehrsClient InfoO0Filter AgehrsClient InfoO0Filter AgehrsClient InfoChangedN/AGOI ChangedClient InfoChangedN/ASample StatusClient InfoChangedN/AChromiumppmASTM D5185>50035122NickelppmASTM D5185>10<1NickelppmASTM D5185>10<1SilverppmASTM D5185>2221SilverppmASTM D5185>212AuminumppmASTM D5185>1045VanadiumppmASTM D5185>104VanadiumppmASTM D5185>104VanadiumppmASTM D5185>20<12VanadiumppmASTM D5185>20<12VanadiumppmASTM D5185>20<12VanadiumppmASTM D5185>20<12	·/						
Sample DateClient Into23 Apr 202429 Sep 2022Machine AgehrsClient Into75907354Oil AgehrsClient Into00Filter AgehrsClient IntoCChangedNot ChangedOil ChangedClient IntoCChangedN/AFilter ChangedClient IntoCChangedN/ASample StatusClient IntoNot ChangedN/AIronppmASTM D5185>50035122ChromiumppmASTM D5185>10<10NickelppmASTM D5185>10<1SilverppmASTM D5185>2211AluminumppmASTM D5185>1041VanadiumppmASTM D5185>1041VanadiumppmASTM D5185>1041VanadiumppmASTM D5185>1041VanadiumppmASTM D5185>1041VanadiumppmASTM D5185>104121VanadiumppmASTM D5185>104121VanadiumppmASTM D5185>20<12VanadiumppmASTM D5185>20<12 </th <th>Test</th> <th>UOM</th> <th>Method</th> <th>Limit/Abn</th> <th>Current</th> <th>History1</th> <th>History2</th>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgeIrisClient InfoImage79907354Oil AgehrsClient Info00Filter AgehrsClient InfoChangedNot ChangedGil ChangedImageClient InfoChangedNAFilter ChangedImageClient InfoChangedNASample StatusImageASTM D5185m550035122IronppmASTM D5185m510<11NickelppmASTM D5185m510<1<1NickelppmASTM D5185m52021SilverppmASTM D5185m52521AluminumppmASTM D5185m52525LeadppmASTM D5185m51041<1VanadiumppmASTM D5185m51041<1VanadiumppmASTM D5185m52025SiliconppmASTM D5185m520412SiliconppmASTM D5185m520324SiliconppmASTM D5185m520324SiliconppmASTM D5185m520324SiliconppmASTM D5185m520324SiliconppmASTM D5185m520S3	Sample Number		Client Info		DC0021580	DC0022746	
Cli Age Filter AgeIrssClient Info00Filter AgeIrssClient Info00Oil ChangedClient InfoChangedN/AFilter Changed1Client InfoChangedN/ASample StatusNORMALABNORMALIronppmASTM D518s>50035122ChromiumppmASTM D518s>10<11NickelppmASTM D518s>10<10SilverppmASTM D518s>2521AluminumppmASTM D518s>2521LeadppmASTM D518s>10415VanduimppmASTM D518s>1041VanduimppmASTM D518s>1041VanduimppmASTM D518s>1041ValduimppmASTM D518s>10412ValduimppmASTM D518s>20<12ValduimppmASTM D518s>20<12SiliconppmASTM D518s>20<12SiliconppmASTM D518s>20<12SiliconppmASTM D518s>20<12Silicon<	Sample Date		Client Info		23 Apr 2024	29 Sep 2022	
Filter Age Oli Changedr.sClient Info00Gil ChangedClient InfoChangedNAC hangedFilter ChangedQClient InfoChangedN/ASample StatusviewNORMALABNORMALIronppmASTM D5185m>50035122IronppmASTM D5185m>10<11NickelppmASTM D5185m>10<10NickelppmASTM D5185m<10<10SilverppmASTM D5185m>2211AluminumppmASTM D5185m>21045AluminumppmASTM D5185m>10045VanadiumppmASTM D5185m>100<1<1VanadiumppmASTM D5185m>75324Vellow Metalscalar'VisualNONENONENONESiliconppmASTM D5185m>75324VaterwC Method>.2NEGNEGSiliconppmASTM D5185m>75324SiliconppmASTM D5185m>75324SoliconppmASTM D5185m>75324SoliconppmASTM D5185m>75324<	Machine Age	hrs	Client Info		7590	7354	
Cli Changed Filter ChangedClient InfoChanged ChangedNot Changed N/AFilter Changed Sample StatusClient InfoChangedN/AIronppmASTM D5185m>50035122ChromiumppmASTM D5185m>10<11NickelppmASTM D5185m>10<10NickelppmASTM D5185m>10<10SilverppmASTM D5185m>225AluminumppmASTM D5185m>2525LeadppmASTM D5185m>10045VanadiumppmASTM D5185m>10<10VanadiumppmASTM D5185m>10<10Vellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>75324VaterwC Method>2NGESiliconkscalar*VisualNONENONENONESiliconppmASTM D5185m>75324SiliconppmASTM D5185m>21SiliconppmASTM D5185m>2NONESoliconppmASTM D5185m>21Soliconscalar*VisualNORENORE	Oil Age	hrs	Client Info		0	0	
Filter Changed Sample StatusClient InfoChanged N/AN/ASample StatusClient InfoNORMALABNORMALIronppmASTM D5185m>50035122ChromiumppmASTM D5185m>10<11NickelppmASTM D5185m>10<10TitaniumppmASTM D5185m>10<10SilverppmASTM D5185m>2221AluminumppmASTM D5185m>22525CopperppmASTM D5185m>100455VanadiumppmASTM D5185m>100<1<1VanadiumppmASTM D5185m>10<10VanadiumppmASTM D5185m>10<10VanadiumppmASTM D5185m>75324Vellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>20<12SiliconppmASTM D5185m>20<12SiliconppmASTM D5185m>20<12SiliconppmASTM D5185m>20<12SiliconppmASTM D5185m>20<1<Sodar*VisualNONENORENO	Filter Age	hrs	Client Info		0	0	
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Iron ppm ASTM D5185m >500 35 122 Chromium ppm ASTM D5185m >10 <1 1 Nickel ppm ASTM D5185m >10 <1 0 Titanium ppm ASTM D5185m >10 <1 1 Silver ppm ASTM D5185m >25 2 1 Aluminum ppm ASTM D5185m >25 2 5 Lead ppm ASTM D5185m >25 2 5 Copper ppm ASTM D5185m >100 4 5 Vanadium ppm ASTM D5185m >10 <1 0 Vanadium ppm ASTM D5185m >10 <1 0 Vanadium ppm ASTM D5185m >75 3 24 Vanadium ppm ASTM D5185m >20	Filter Changed		Client Info		Changed	N/A	
ChromiumppmASTM D5185m>10<1	Sample Status				NORMAL	ABNORMAL	
ChromiumppmASTM D5185m>10<1							
NickelppmASTM D518sm>10<1	-						
TitaniumppmASTM D5185mIIIIISilverppmASTM D5185m>2521IIAluminumppmASTM D5185m>2525IILeadppmASTM D5185m>2025IICopperppmASTM D5185m>100IIIIITinppmASTM D5185m>10IIIIIVanadiumppmASTM D5185m>10IIIIIVanadiumppmASTM D5185m>10IIIIIYellow Metalscalar*VisualNONENONENONEIIIIYellow Metalscalar*VisualNONEII2IIIIYellow Metalscalar*VisualNONENONENONEIII <t< th=""><th></th><th>ppm</th><th></th><th></th><th></th><th></th><th></th></t<>		ppm					
SilverppmASTM D5185m>2500AluminumppmASTM D5185m>2521LeadppmASTM D5185m>225CopperppmASTM D5185m>10045TinppmASTM D5185m>100<1<1VanadiumppmASTM D5185m>100<10White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>75324PotassiumppmASTM D5185m>20<12Silitscalar*VisualNONEILGHTNONESilitscalar*VisualNONENONESand/Dirtscalar*VisualNORENORENOREAppearancescalar*VisualNORMNORMLNORMLGodrscalar*VisualNOR229204BoronppmASTM D5185m20000MarganeseppmASTM D5185m121<1<MarganeseppmASTM D5185m1504357MarganesimppmASTM D5185m1504357Marganesimppm <th></th> <th></th> <th></th> <th>>10</th> <th></th> <th></th> <th></th>				>10			
Aluminum ppm ASTM D5185m >25 2 1 Lead ppm ASTM D5185m >25 2 5 Copper ppm ASTM D5185m >100 4 5 Tin ppm ASTM D5185m >100 <1 <1 Vanadium ppm ASTM D5185m >100 <1 0 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Silicon ppm ASTM D5185m >75 3 24 Vater WC Method >.20 <1 2 Silit scalar *Visual NORE NORE Debris scalar *Visual NORM NORML Appearance scalar *Visual NORML NORML		ppm					
LeadppmASTM D5185m>2525CopperppmASTM D5185m>10045TinppmASTM D5185m>10<1<1VanadiumppmASTM D5185m>10<10White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>75324PotassiumppmASTM D5185m>20<12WaterWC Method>.2NEGNEGSilitscalar*VisualNONENONEMODERSand/Dirtscalar*VisualNONENONEMODERAppearancescalar*VisualNORMNORMLNORMLGodorscalar*VisualNORMNORMLNORMLAppearancescalar*VisualNORMNORMLNORMLSodiumppmASTM D5185m2000BariumppmASTM D5185m20000MaganeseppmASTM D5185m121<1MagnesiumppmASTM D5185m121<1MagnesiumppmASTM D5185m1504357MagnesiumppmASTM D5185m150<							
Copper ppm ASTM D5185m >100 4 5 Tin ppm ASTM D5185m >10 <1 <1 Vanadium ppm ASTM D5185m >10 <1 0 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Silicon ppm ASTM D5185m >75 3 24 Potassium ppm ASTM D5185m >20 <1 2 Water WC Method >.2 NEG NEG Sand/Dirt scalar *Visual NONE NONE MODER Appearance scalar *Visual NORM NORML NORML Godr scalar *Visual NORM NORML NORML Godr scalar *Visual <		ppm					
Tin ppm ASTM D5185m >10 <1		ppm					
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White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>75324PotassiumppmASTM D5185m>20<12WaterWC Method>.2NEGNEGSiltscalar*VisualNONELIGHTNONEDebrisscalar*VisualNONENONEMODERSand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMNORMLNORMLOdorscalar*VisualNORMNORMLNORMLSodiumppmASTM D5185m2000BariumppmASTM D5185m20000ManganeseppmASTM D5185m121<1MagnesiumppmASTM D5185m124<1ManganesiumppmASTM D5185m1504357PhosphorusppmASTM D5185m1252427SulfurppmASTM D5185m1252427SulfurppmASTM D5185m1252427SulfurppmASTM D5185m1252427Sulf	Tin	ppm	ASTM D5185m	>10	<1	<1	
Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>75324PotassiumppmASTM D5185m>20<12WaterWC Method>.2NEGNEGSiltscalar*VisualNONELIGHTNONEDebrisscalar*VisualNONENONEMODERSand/Dirtscalar*VisualNONENONEMODERAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m200BariumppmASTM D5185m2000ManganeseppmASTM D5185m121MagnesiumppmASTM D5185m124357MagnesiumppmASTM D5185m1504357PhosphorusppmASTM D5185m1261126MagnesiumppmASTM D5185m1252427PhosphorusppmASTM D5185m1252427SulfurppmASTM D5185m1252429818	Vanadium	ppm	ASTM D5185m		<1	0	
SiliconppmASTM D5185m>75324PotassiumppmASTM D5185m>20<12WaterWC Method>.2NEGNEGSiltscalar*VisualNONELIGHTNONEDebrisscalar*VisualNONENONEMODERSand/Dirtscalar*VisualNONENONEMODERAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m2.2NEGNEGBoronppmASTM D5185m2000BariumppmASTM D5185m121<1<ManganeseppmASTM D5185m121<1<MangensiumppmASTM D5185m1504357PhosphorusppmASTM D5185m165016081126ZincppmASTM D5185m1252427SulfurppmASTM D5185m1252429818	White Metal	scalar	*Visual	NONE	NONE	NONE	
PotassiumppmASTM D5185m>20<1	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
WaterWC Method>.2NEGNEGSiltscalar*VisualNONELIGHTNONEDebrisscalar*VisualNONENONEMODERSand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m400229204BariumppmASTM D5185m121<1ManganeseppmASTM D5185m121<MagnesiumppmASTM D5185m124357PhosphorusppmASTM D5185m165016081126ZincppmASTM D5185m1252427SulfurppmASTM D5185m225002362029818	Silicon	ppm	ASTM D5185m	>75	3	24	
Siltscalar*VisualNONELIGHTNONEDebrisscalar*VisualNONENONEMODERSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m400229204BariumppmASTM D5185m20000MalganeseppmASTM D5185m121<1MagnesiumppmASTM D5185m124357PhosphorusppmASTM D5185m165016081126ZincppmASTM D5185m1252427SulfurppmASTM D5185m225002362029818	Potassium	ppm	ASTM D5185m	>20	<1	2	
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Sand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m400229204BoronppmASTM D5185m20000BariumppmASTM D5185m121<1MalganeseppmASTM D5185m12315MagnesiumppmASTM D5185m1243577PhosphorusppmASTM D5185m165016081126ZincppmASTM D5185m1252427SulfurppmASTM D5185m225002362029818	Silt	scalar	*Visual	NONE	LIGHT	NONE	
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m20204BoronppmASTM D5185m20000BariumppmASTM D5185m20000MolybdenumppmASTM D5185m121<1ManganeseppmASTM D5185m1243577CalciumppmASTM D5185m150433577PhosphorusppmASTM D5185m12516081126ZincppmASTM D5185m1252427SulfurppmASTM D5185m225002362029818	Debris	scalar	*Visual	NONE	NONE	🔺 MODER	
Odorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m20204BoronppmASTM D5185m20000BariumppmASTM D5185m20000MolybdenumppmASTM D5185m121<1<1ManganeseppmASTM D5185m124315MagnesiumppmASTM D5185m15043577PhosphorusppmASTM D5185m165016081126ZincppmASTM D5185m1252427SulfurppmASTM D5185m25002362029818	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m28BoronppmASTM D5185m400229204BariumppmASTM D5185m20000MolybdenumppmASTM D5185m121<1<1ManganeseppmASTM D5185m124<1MagnesiumppmASTM D5185m124<1CalciumppmASTM D5185m15043577PhosphorusppmASTM D5185m165016081126ZincppmASTM D5185m1252427SulfurppmASTM D5185m225002362029818	Appearance	scalar	*Visual	NORML	NORML	NORML	
Sodium ppm ASTM D5185m 2 8 Boron ppm ASTM D5185m 400 229 204 Barium ppm ASTM D5185m 200 0 0 Molybdenum ppm ASTM D5185m 200 0 0 Manganese ppm ASTM D5185m 12 1 <1 Magnesium ppm ASTM D5185m 12 4 <1 Calcium ppm ASTM D5185m 150 43 577 Phosphorus ppm ASTM D5185m 1650 1608 1126 Zinc ppm ASTM D5185m 125 24 277 Sulfur ppm ASTM D5185m 2500 23620 29818	Odor	scalar	*Visual	NORML	NORML	NORML	
Boron ppm ASTM D5185m 400 229 204 Barium ppm ASTM D5185m 200 0 0 Molybdenum ppm ASTM D5185m 12 1 <1 Manganese ppm ASTM D5185m 12 3 15 Magnesium ppm ASTM D5185m 12 4 <1 Calcium ppm ASTM D5185m 12 43 57 Phosphorus ppm ASTM D5185m 1650 1608 1126 Zinc ppm ASTM D5185m 125 24 27 Sulfur ppm ASTM D5185m 22500 23620 29818	Emulsified Water	scalar	*Visual	>.2	NEG	NEG	
Barium ppm ASTM D5185m 200 0 0 Molybdenum ppm ASTM D5185m 12 1 <1 Manganese ppm ASTM D5185m 12 1 <1 Magnesium ppm ASTM D5185m 12 4 <1 Calcium ppm ASTM D5185m 12 43 57 Phosphorus ppm ASTM D5185m 1650 1608 1126 Zinc ppm ASTM D5185m 125 24 27 Sulfur ppm ASTM D5185m 22500 23620 29818	Sodium	ppm	ASTM D5185m		2	8	
Molybdenum ppm ASTM D5185m 12 1 <1	Boron	ppm	ASTM D5185m	400	229	204	
Manganese ppm ASTM D5185m 3 15 Magnesium ppm ASTM D5185m 12 4 <1	Barium	ppm	ASTM D5185m	200	0	0	
Magnesium ppm ASTM D5185m 12 4 <1	Molybdenum	ppm	ASTM D5185m	12	1	<1	
Calcium ppm ASTM D5185m 150 43 57 Phosphorus ppm ASTM D5185m 1650 1608 1126 Zinc ppm ASTM D5185m 125 24 27 Sulfur ppm ASTM D5185m 22500 23620 29818	Manganese	ppm	ASTM D5185m		3	15	
Phosphorus ppm ASTM D5185m 1650 1608 1126 Zinc ppm ASTM D5185m 125 24 27 Sulfur ppm ASTM D5185m 22500 23620 29818	Magnesium	ppm	ASTM D5185m	12	4	<1	
Zinc ppm ASTM D5185m 125 24 27 Sulfur ppm ASTM D5185m 22500 23620 29818	Calcium	ppm	ASTM D5185m	150	43	57	
Sulfur ppm ASTM D5185m 22500 23620 29818	Phosphorus	ppm	ASTM D5185m	1650	1608	1126	
	Zinc	ppm	ASTM D5185m	125	24	27	
	Sulfur	maa	ASTM D5185m	22500	23620	29818	
		10 10			20020	20010	

Contact/Location: TONY DAVIS - CRAABEMD







Lab Number : 06158598 ABERDEEN, MD Tested : 25 Apr 2024 Unique Number : 10994021 : 25 Apr 2024 - Wes Davis Diagnosed Test Package : MOB 1 Contact: TONY DAVIS Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. tdavis@vacraneworks.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (410)688-1725 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Received

: 23 Apr 2024

Laboratory

Sample No.

: DC0021580

Contact/Location: TONY DAVIS - CRAABEMD Page 2 of 2

6721 RARITON AVENUE

US 21005

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