

Machine Id SIGNET VOLUNTEER Component Port Reduction Gear Fluid {not provided} (--- GAL)

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. Resample at the next service interval to monitor. 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.

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sample DateClient InfoI1 Apr 202401 Jan 202414 Dec 2023Machine AgehrsClient Info800978747709Oil AgehrsClient Info0091Filter AgehrsClient Info0091Oil ChangedClient InfoN/AN/AChangedFilter ChangedClient InfoN/AN/AChangedSample StatusClient InfoN/AN/AChangedIronppmASTM D5185>100<	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info800978747709Oil AgehrsClient Info091Filter AgehrsClient InfoN/AN/AChangedOil ChangedClient InfoN/AN/AChangedSample StatusClient InfoN/AN/AChangedIronppmASTM D5185m>150131813ChromiumppmASTM D5185m>100<1<1NickelppmASTM D5185m>100<10SilverppmASTM D5185m>25021LeadppmASTM D5185m>50232726TinppmASTM D5185m>50232726TinppmASTM D5185m>50232726TinppmASTM D5185m>50232726TinppmASTM D5185m>50000VanadiumppmASTM D5185m>50000VanadiumppmASTM D5185m>50000ValuevisualNONENONENONENONENONESiliconppmASTM D5185m>50000PotassiumppmASTM D5185m>50000PotassiumppmASTM D5185m>50000PotassiumppmASTM D5185m>6000 <td< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>MW0064097</th><th>MW0064147</th><th>MW0064064</th></td<>	Sample Number		Client Info		MW0064097	MW0064147	MW0064064
Oil AgehrsClient Info0091Filter AgehrsClient InfoN/AN/AChangedGil ChangedClient InfoN/AN/AChangedFilter ChangedClient InfoN/AN/AChangedSample StatusClient InfoN/AN/ANORMALIronppmASTM D5185m>100<1<1ChromiumppmASTM D5185m>100<1<1NickelppmASTM D5185m00<10SilverppmASTM D5185m01<1<1LeadppmASTM D5185m>1001<1<1CopperppmASTM D5185m>50232726TinppmASTM D5185m>50232726TinppmASTM D5185m>50000VanadiumppmASTM D5185m>50000WaterwC Method>0.1NONENONENONENONESiliconppmASTM D5185m>202<10WaterwC Method>0.1NORENONENONENONESiliconppmASTM D5185m>50000PotassiumppmASTM D5185m>202<10SiliconppmASTM D5185m>50000PotassiumppmASTM D5185m>500 <td< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>11 Apr 2024</th><th>01 Jan 2024</th><th>14 Dec 2023</th></td<>	Sample Date		Client Info		11 Apr 2024	01 Jan 2024	14 Dec 2023
Filter Age Oll ChangedNoClient Info0091Oll ChangedClient InfoN/AN/AChangedFilter ChangedClient InfoN/AN/AChangedSample StatusNORMALNORMALNORMALNORMALIronppmASTM D5185m>150131813ChromiumppmASTM D5185m>100<1<1NickelppmASTM D5185m>100<10TitaniumppmASTM D5185m>25021LeadppmASTM D5185m>50232726TinppmASTM D5185m>101<1<1CopperppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>50232726TinppmASTM D5185m>50232726Yellow Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>202<10PotassiumppmASTM D5185m>202<10SuliconppmASTM D5185m>202<10Debrisscalar*VisualNONE <th>Machine Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>8009</th> <th>7874</th> <th>7709</th>	Machine Age	hrs	Client Info		8009	7874	7709
Oil ChangedClient InfoN/AN/AChangedFilter ChangedClient InfoN/AN/ANASample StatusNORMALNORMALNORMALNORMALIronppmASTM D5185m>100<1<1NickelppmASTM D5185m>100<1<1NickelppmASTM D5185m>100<1<1NickelppmASTM D5185m>100<1<1NickelppmASTM D5185m>100000AtuminumppmASTM D5185m>25021LeadppmASTM D5185m>1001<1<1CopperppmASTM D5185m>100000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>10000VanadiumppmASTM D5185m>20232726TinppmASTM D5185m>202<10Vellow Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>202<10PotassiumppmASTM D5185m>202<10NoreNONENONENONENONENONENONEDebrisscalar*Visual <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th>0</th> <th>91</th>	Oil Age	hrs	Client Info		0	0	91
Filter Changed Sample Status Client Info N/A N/A N/A Changed NORMAL Iron ppm ASTM D5185m >150 13 18 13 Chromium ppm ASTM D5185m >10 0 <1 <1 Nickel ppm ASTM D5185m >10 0 <1 0 Silver ppm ASTM D5185m >25 0 2 1 Lead ppm ASTM D5185m >50 23 27 266 Tin ppm ASTM D5185m >10 0 <1 0 Vanadium ppm ASTM D5185m >50 23 27 266 Tin ppm ASTM D5185m >10 0 <1 0 Vanadium ppm ASTM D5185m >50 0 0 0 Vanadium ppm ASTM D5185m >50 0 0 0 Valeu wotat scalar "Visual NONE	Filter Age	hrs	Client Info		0	0	91
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Chromium ppm ASTM D5185m >10 0 <1	Sample Status				NORMAL	NORMAL	NORMAL
Nickel ppm ASTM D5185m >10 0 0 0 Titanium ppm ASTM D5185m 0 <1 0 Silver ppm ASTM D5185m >25 0 2 1 Lead ppm ASTM D5185m >25 0 2 1 Copper ppm ASTM D5185m >500 23 27 26 Tin ppm ASTM D5185m >500 23 27 26 Tin ppm ASTM D5185m >10 0 <1 0 Vanadium ppm ASTM D5185m >10 0 0 0 0 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Silicon ppm ASTM D5185m >20 2 <1 0 Water wC Method >0.1 NEG	Iron	ppm	ASTM D5185m	>150	13	18	13
Nickel ppm ASTM D5185m >10 0 0 0 Titanium ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m >25 0 2 1 Lead ppm ASTM D5185m >250 23 27 26 Tin ppm ASTM D5185m >500 23 27 26 Tin ppm ASTM D5185m >10 0 <1 0 Vanadium ppm ASTM D5185m >10 0 0 0 0 Vanadium ppm ASTM D5185m >10 0 0 0 0 Vanadium ppm ASTM D5185m >10 0 0 0 0 Vanadium ppm ASTM D5185m >20 2 <1 0 0 Vater WC Method >0.1 NEG NONE NONE NONE Debris scalar V	Chromium		ASTM D5185m	>10	0	<1	<1
Titanium ppm ASTM D5185m 0 <1	Nickel		ASTM D5185m	>10	0	0	0
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 0 2 1 Lead ppm ASTM D5185m >100 1 <1 <1 Copper ppm ASTM D5185m >50 23 27 26 Tin ppm ASTM D5185m >10 0 <1 0 Vanadium ppm ASTM D5185m >10 0 0 0 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Silicon ppm ASTM D5185m >20 2 <1 0 Water WC Method >0.1 NEG NORE NORE NORE Debris scalar *Visual NORE NONE NORE NORML NORML Appearance scalar *Visual NORML <th>Titanium</th> <th></th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th><1</th> <th>0</th>	Titanium		ASTM D5185m		0	<1	0
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White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONENONESiliconppmASTM D5185m>500000PotassiumppmASTM D5185m>202<100WaterWC Method>0.1NEGNEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENORENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGSodiumppmASTM D5185m1000BoronppmASTM D5185m01000ManganeseppmASTM D5185m3433CalciumppmASTM D5185m281288275275PhosphorusppmASTM D5185m3626222SulfurppmASTM D5185m36264222SulfurppmASTM D5185m360.310.3033445Acid Number (AN)mg KOHgASTM D5185m3626	Tin	ppm	ASTM D5185m	>10	0	<1	0
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Emulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m100BoronppmASTM D5185m91315BariumppmASTM D5185m0100MolybdenumppmASTM D5185m0<100ManganeseppmASTM D5185m<100MagnesiumppmASTM D5185m<343CalciumppmASTM D5185m281288275PhosphorusppmASTM D5185m362622SulfurppmASTM D5185m362622SulfurppmASTM D5185m0.310.290.30					-		
Sodium ppm ASTM D5185m 1 0 0 Boron ppm ASTM D5185m 9 13 15 Barium ppm ASTM D5185m 0 10 0 Molybdenum ppm ASTM D5185m 0 <1 0 Manganese ppm ASTM D5185m <1 0 0 Magnesium ppm ASTM D5185m 3 4 3 Calcium ppm ASTM D5185m 281 288 275 Phosphorus ppm ASTM D5185m 36 26 22 Sulfur ppm ASTM D5185m 36450 6364 Acid Number (AN) mg KOH/g ASTM D8045 0.31 0.29 0.30					-		
Boron ppm ASTM D5185m 9 13 15 Barium ppm ASTM D5185m 0 10 0 Molybdenum ppm ASTM D5185m 0 <10 0 Manganese ppm ASTM D5185m <1 0 0 Magnesium ppm ASTM D5185m <1 0 0 Magnesium ppm ASTM D5185m 3 4 3 Calcium ppm ASTM D5185m 281 288 275 Phosphorus ppm ASTM D5185m 36 26 22 Zinc ppm ASTM D5185m 36 264 22 Sulfur ppm ASTM D5185m 0.31 0.29 0.30		Juaia	visual	20.1			
Barium ppm ASTM D5185m 0 10 0 Molybdenum ppm ASTM D5185m 0 <1	Sodium	ppm	ASTM D5185m		1	0	0
Molybdenum ppm ASTM D5185m 0 <1	Boron	ppm	ASTM D5185m		9	13	15
Manganese ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m		0	10	0
Magnesium ppm ASTM D5185m 3 4 3 Calcium ppm ASTM D5185m 281 288 275 Phosphorus ppm ASTM D5185m 270 323 294 Zinc ppm ASTM D5185m 36 26 22 Sulfur ppm ASTM D5185m 0.31 0.29 0.30	Molybdenum	ppm	ASTM D5185m		0	<1	0
Calcium ppm ASTM D5185m 281 288 275 Phosphorus ppm ASTM D5185m 270 323 294 Zinc ppm ASTM D5185m 36 26 22 Sulfur ppm ASTM D5185m 7375 6450 6364 Acid Number (AN) mg KOH/g ASTM D8045 0.31 0.29 0.30	Manganese	ppm	ASTM D5185m		<1	0	0
Phosphorus ppm ASTM D5185m 270 323 294 Zinc ppm ASTM D5185m 36 26 22 Sulfur ppm ASTM D5185m 7375 6450 6364 Acid Number (AN) mg KOH/g ASTM D8045 0.31 0.29 0.30	Magnesium	ppm	ASTM D5185m		3	4	3
Zinc ppm ASTM D5185m 36 26 22 Sulfur ppm ASTM D5185m 7375 6450 6364 Acid Number (AN) mg KOH/g ASTM D8045 0.31 0.29 0.30	Calcium	ppm	ASTM D5185m		281	288	275
Sulfur ppm ASTM D5185m 7375 6450 6364 Acid Number (AN) mg KOH/g ASTM D8045 0.31 0.29 0.30	Phosphorus	ppm	ASTM D5185m		270	323	294
Acid Number (AN) mg KOH/g ASTM D8045 0.31 0.29 0.30	Zinc	ppm	ASTM D5185m		36	26	22
	Sulfur	ppm	ASTM D5185m		7375	6450	6364
Visc @ 40°C cSt ASTM D445 96.4 95.7 96.5	Acid Number (AN)	mg KOH/g	ASTM D8045		0.31	0.29	0.30
	Visc @ 40°C	cSt	ASTM D445		96.4	95.7	96.5

WEAR

CONTAMINATION

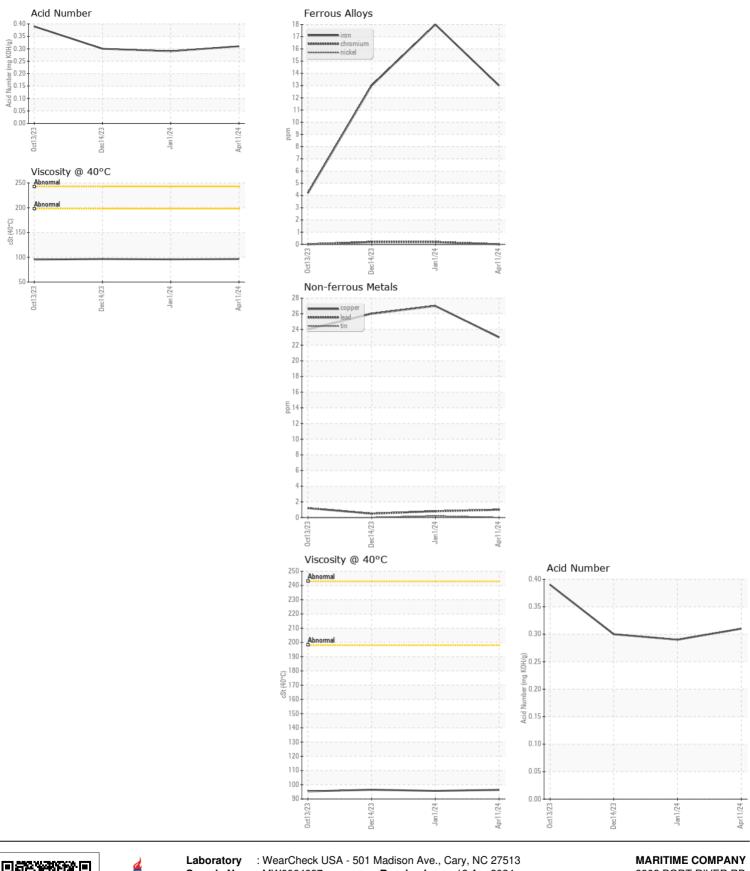
FLUID CONDITION

NORMAL

NORMAL

NORMAL

Contact/Location: MARK KOPSZYWA - COLPAS



MARITIME COMPANY Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : MW0064097 Received 3802 PORT RIVER RD : 18 Apr 2024 Lab Number : 06153241 Tested : 19 Apr 2024 PASCAGOULA, MS Diagnosed Unique Number : 10983319 : 19 Apr 2024 - Wes Davis US 39567 Test Package : MAR 2 Contact: MARK KOPSZYWA Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. mark.kopszywa@signetmaritime.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (228)769-0629

Contact/Location: MARK KOPSZYWA - COLPAS Page 2 of 2