

Machine Id **R&M DD-5-29 C0144 (S/N 1695709506)** Hoisting Gearbox Fluid

{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. 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.

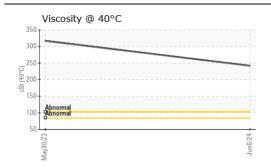
FLUID CONDITION

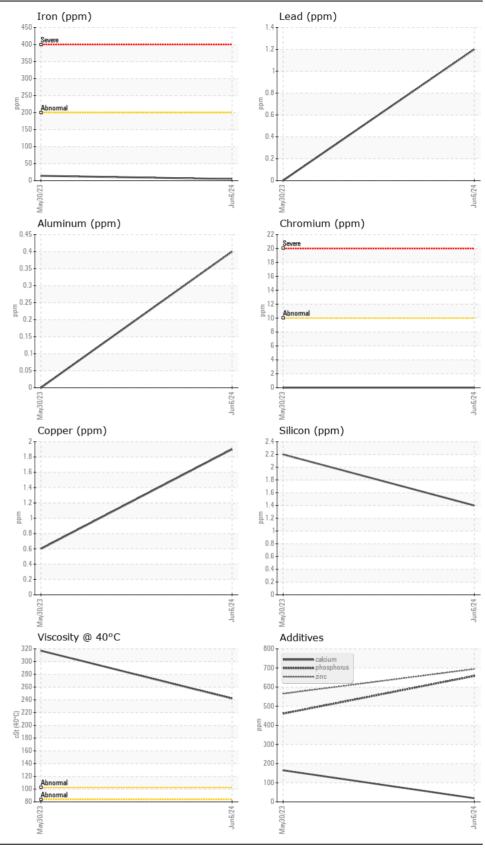
The condition of the oil is acceptable for the time in service.

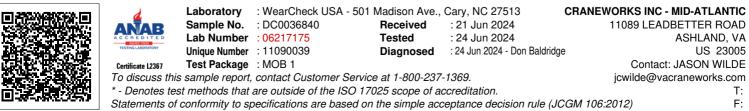
TestUOMMethodLimit/AbCurrentHistory1History2Sample NumberClient Info00C0029168Sample DateClient Info00Machine AgehrsClient Info00Filter AgehrsClient Info00Filter AgehrsClient InfoN/ANot ChangeFilter AngedClient InfoN/ANot ChangeFilter ChangedClient InfoN/ANot ChangeFilter ChangedClient InfoN/ANot ChangeSample StatusNORMALIronppmASTM D5185m>100NickelppmASTM D5185m>100NickelppmASTM D5185m00SilverppmASTM D5185m10IrinppmASTM D5185m10VanadiumppmASTM D5185m10VanaduumppmASTM D5185m12VanaduumppmASTM D5185m12VanaduumppmASTM D5185m12VanaduumppmASTM D5185m12VanaduumppmASTM D5185m12VanaduumppmASTM D5185m12Vanaduumpp							
Sample DateClient Info06 Jun 202430 May 2023Machine AgehrsClient Info00Oil AgehrsClient Info00Filter AgehrsClient InfoN/ANot ChangdOil ChangedClient InfoN/ANot ChangdFilter ChangedClient InfoN/ANot ChangdFilter ChangedClient InfoN/ANot ChangdSample StatusVN/ANot ChangdIronppmASTM D5185>200414ChromiumppmASTM D5185>1000NickelppmASTM D5185>10c10SilverppmASTM D5185I00AluminumppmASTM D5185I0LeadppmASTM D5185I0VanadiumppmASTM D5185I0VanadiumppmASTM D5185I0VanadiumppmASTM D5185I0VanadiumppmASTM D5185I0VanadiumppmASTM D5185I10VanadiumppmASTM D5185IIVanadiumppmASTM D5185II <td< th=""><th>Test</th><th>UOM</th><th>Method</th><th>Limit/Abn</th><th>Current</th><th>History1</th><th>History2</th></td<>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age hrs Client Info 0 0 Oil Age hrs Client Info 0 0 Filter Age hrs Client Info N/A Not Changd Oil Changed Client Info N/A Not Changd Filter Changed Client Info N/A Not Changd Sample Status VIA Not Changd Iron ppm ASTM D5185m >200 4 14 Noreiman ppm ASTM D5185m >10 0 Nickel ppm ASTM D5185m 1 0 Silver ppm ASTM D5185m 1 0 Aluminum ppm ASTM D5185m <1 0 Vanadium ppm ASTM D5185m <1 0 Yatlob Astm D5185m scalar Yisual NONE NONE	Sample Number		Client Info		DC0036840	DC0029168	
Oil Age Filter AgehrsClient Info00Filter AgehrsClient InfoN/ANot ChangdOil ChangedClient InfoN/ANot ChangdFilter ChangedQClient InfoN/ANot ChangdSample StatusNORMALNORMALNORMALIronppmASTM D5185m>200414ChromiumppmASTM D5185m>10Q0NickelppmASTM D5185m10QSilverppmASTM D5185mQQAluminumppmASTM D5185mQQAgadiumppmASTM D5185mQQVanaduiumppmASTM D5185mQQValaduiumppmASTM D5185mQQValoduiumppmASTM D5185mQQValoduiumppmASTM D5185mS203QValoduiumppmASTM D5185mS203QValoduiumppmASTM D5185mS203QSiliconppmASTM D5185mS203QSiliconppmASTM D5185mS203QSiliconppmASTM D5185mS20S2Silicon<	Sample Date		Client Info		06 Jun 2024	30 May 2023	
Filter Age hrs Client Info 0 0 Filter Changed Client Info N/A Not Changd Sample Status Client Info N/A Not Changd Iron ppm ASTM D5185m >200 4 14 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >10 0 Nickel ppm ASTM D5185m 1 0 Aluminum ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m 1 0 Vanadium ppm ASTM D5185m 1 0 Vanadium ppm ASTM D5185m 1 2 Valadium ppm ASTM D5185m 520 3 0	Machine Age	hrs	Client Info		0	0	
Oil Changed Filter ChangedClient InfoN/ANot ChangdFilter ChangedClient InfoN/ANot ChangdSample StatusNORMALNORMALNORMALIronppmASTM D5185m>1000NickelppmASTM D5185m>10<10NickelppmASTM D5185m>10<10SilverppmASTM D5185m0<10AluminumppmASTM D5185m<10LeadppmASTM D5185m<10CopperppmASTM D5185m<10VanadiumppmASTM D5185m<10Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>2030SiliconppmASTM D5185m>2030SiliconppmASTM D5185m>2030Soliconscalar*VisualNONENONENONESoliconppmASTM D5185m>2030SoliconppmASTM D5185m>20NONENONESoliconppmASTM D5185mScalarNONENONESoliconppmASTM D5185mScalarNONENONESoliconppm	Oil Age	hrs	Client Info		0	0	
Filter Changed Sample Status Client Info N/A Not Change Iron ppm ASTM D5185m >200 4 14 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >10 <1 0 Nickel ppm ASTM D5185m 0 <1 0 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m 0 0 Lead ppm ASTM D5185m 1 0 Vanadium ppm ASTM D5185m 2 <1 0 Vanadium ppm ASTM D5185m 0 <1 0 Vanadium ppm ASTM D5185m 20 3 0 Yellow Metal scalar *Visual NONE NONE	Filter Age	hrs	Client Info		0	0	
Sample StatusNORMALNORMALNORMALIronppmASTM D5185m>200414ChromiumppmASTM D5185m>1000NickelppmASTM D5185m>10<10TitaniumppmASTM D5185mI0<1SilverppmASTM D5185mI00AluminumppmASTM D5185mI00LeadppmASTM D5185mI0<CopperppmASTM D5185mI0<VanadiumppmASTM D5185mI0<VanadiumppmASTM D5185mI2<-1Yellow Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m12SiliconppmASTM D5185mS30Solitscalar*VisualNONENONENONESolitscalar*VisualNORNONENONEAppearancescalar*VisualNORMNORMLNORMLAppearancescalar*VisualNORNORNORBoronppmASTM D5185m00<	Oil Changed		Client Info		N/A	Not Changd	
Iron ppm ASTM D5185m >200 4 14 Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >10 <1 0 Titanium ppm ASTM D5185m 0 <1 Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m 1 0 Lead ppm ASTM D5185m 2 <1 Vanadium ppm ASTM D5185m 2 <1 Vanadium ppm ASTM D5185m 0 <1 Vanadium ppm ASTM D5185m 0 <1 Vanadium ppm ASTM D5185m >20 3 0 Yellow Metal scalar 'Visual NONE NONE	Filter Changed		Client Info		N/A	Not Changd	
Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >10 <1 0 Titanium ppm ASTM D5185m >10 <1 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m 1 0 Lead ppm ASTM D5185m 1 0 Copper ppm ASTM D5185m 2 <1 Vanadium ppm ASTM D5185m 0 <1 Vanadium ppm ASTM D5185m 0 <1 Vanadium ppm ASTM D5185m 20 3 0 Vanadium ppm ASTM D5185m >20 3 0 Vallow MONE NONE NONE NONE Silicon ppm	Sample Status				NORMAL	NORMAL	
Chromium ppm ASTM D5185m >10 0 0 Nickel ppm ASTM D5185m >10 <1 0 Titanium ppm ASTM D5185m >10 <1 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m 1 0 Lead ppm ASTM D5185m 1 0 Copper ppm ASTM D5185m 2 <1 Vanadium ppm ASTM D5185m 0 <1 Vanadium ppm ASTM D5185m 0 <1 Vanadium ppm ASTM D5185m 20 3 0 Vanadium ppm ASTM D5185m >20 3 0 Vallow MONE NONE NONE NONE Silicon ppm				000			
Nickel ppm ASTM D5185m >10 <1					-		
Titanium ppm ASTM D5185m 0 <1					-		
Silver ppm ASTM D5185m 0 0 Aluminum ppm ASTM D5185m 1 0 Lead ppm ASTM D5185m 1 0 Copper ppm ASTM D5185m 2 <1 Copper ppm ASTM D5185m 2 <1 0 Vanadium ppm ASTM D5185m 0 <1 0 Vanadium ppm ASTM D5185m 0 <1 0 Vanadium ppm ASTM D5185m 0 <1 0 Vanadium ppm ASTM D5185m NONE NONE NONE Vellow Metal scalar *Visual NONE NONE NONE Silicon ppm ASTM D5185m >20 3 0 Silit scalar *Visual NONE NONE NONE				>10			
Aluminum ppm ASTM D5185m 1 0 Lead ppm ASTM D5185m 1 0 Copper ppm ASTM D5185m 2 <1 0 Copper ppm ASTM D5185m 2 <1 0 Tin ppm ASTM D5185m 0 <1 0 Vanadium ppm ASTM D5185m 0 0 <1 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Silicon ppm ASTM D5185m 20 3 0 Water WC Method >0.2 NEG NORE NONE Debris scalar *Visual NOR NORE NORE Appearance scalar *Visual NORML							
Lead ppm ASTM D5185m 1 0 Copper ppm ASTM D5185m 2 <1 Tin ppm ASTM D5185m 2 <1 Vanadium ppm ASTM D5185m 0 <1 0 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Silicon ppm ASTM D5185m 1 2 Silicon ppm ASTM D5185m >20 3 0 Water WC Method >0.2 NEG NEG Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Mody scalar *Visual NORML NORML					-		
Copper ppm ASTM D5185m 2 <1							
TimppmASTM D5185m<1					-	-	
VanadiumppmASTM D5185m0<1					_		
White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>2030PotassiumppmASTM D5185m>2030WaterWC Method>0.2NEGNEGSilitscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m32BoronppmASTM D5185m00MalybdenumppmASTM D5185m00ManganeseppmASTM D5185m1<1MagnesiumppmASTM D5185m191655PhosphorusppmASTM D5185m6945655ZincppmASTM D5185m1374115586						-	
Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m12PotassiumppmASTM D5185m>2030WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m00MolybdenumppmASTM D5185m00ManganeseppmASTM D5185m11<1MagnesiumppmASTM D5185m19165PhosphorusppmASTM D5185m694565SulfurppmASTM D5185m1374115586				NONE	-		
SiliconppmASTM D5185m12PotassiumppmASTM D5185m>2030WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m32BoronppmASTM D5185m00BariumppmASTM D5185m00ManganeseppmASTM D5185m11<1MagnesiumppmASTM D5185m19165PhosphorusppmASTM D5185m1374115586SulfurppmASTM D5185m1374115586							
PotassiumppmASTM D5185m>2030WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m00MalgaeseppmASTM D5185m00MagnesiumppmASTM D5185m11<11PhosphorusppmASTM D5185m19165PhosphorusppmASTM D5185m694565SulfurppmASTM D5185m1374115586	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m00MalganeseppmASTM D5185m00MagnesiumppmASTM D5185m11<1PhosphorusppmASTM D5185m19165PhosphorusppmASTM D5185m694565SulfurppmASTM D5185m61374115586	Silicon	ppm	ASTM D5185m		1	2	
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLCdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m00BariumppmASTM D5185m00MolybdenumppmASTM D5185m1<1MagnesiumppmASTM D5185m19165PhosphorusppmASTM D5185m694565ZincppmASTM D5185m694565SulfurppmASTM D5185m1374115586	Potassium	ppm	ASTM D5185m	>20	3	0	
Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m4<10BariumppmASTM D5185m00MolybdenumppmASTM D5185m1<1<MagnesiumppmASTM D5185m11<1<CalciumppmASTM D5185m19165PhosphorusppmASTM D5185m658461ZincppmASTM D5185m694565SulfurppmASTM D5185m1374115586	Water		WC Method	>0.2	NEG	NEG	
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m<10BariumppmASTM D5185m00MolybdenumppmASTM D5185m00MagnesiumppmASTM D5185m1<1CalciumppmASTM D5185m19165PhosphorusppmASTM D5185m694565ZincppmASTM D5185m61374115586	Silt	scalar	*Visual	NONE	NONE	NONE	
Appearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m10BariumppmASTM D5185m000MolybdenumppmASTM D5185m000ManganeseppmASTM D5185m1<1<MagnesiumppmASTM D5185m19165PhosphorusppmASTM D5185m694565SulfurppmASTM D5185m61374115586	Debris	scalar	*Visual	NONE	NONE	NONE	
Odorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m32BoronppmASTM D5185m<10BariumppmASTM D5185m00MolybdenumppmASTM D5185m00ManganeseppmASTM D5185m1<1MagnesiumppmASTM D5185m12<1CalciumppmASTM D5185m19165PhosphorusppmASTM D5185m658461ZincppmASTM D5185m694565SulfurppmASTM D5185m1374115586	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Water scalar *Visual >0.2 NEG NEG Sodium ppm ASTM D5185m 3 2 Boron ppm ASTM D5185m <1 0 Barium ppm ASTM D5185m <1 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m 1 <1 <1 Magnesium ppm ASTM D5185m 1 <1 <1 Phosphorus ppm ASTM D5185m 11 <1 Magnesium ppm ASTM D5185m 119 165 Phosphorus ppm ASTM D5185m 658 461 Zinc ppm ASTM D5185m 694 565 Sulfur ppm ASTM D5185m 13741 15586	Appearance	scalar	*Visual	NORML	NORML	NORML	
Sodium ppm ASTM D5185m 3 2 Boron ppm ASTM D5185m <1 0 Barium ppm ASTM D5185m 0 0 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m 1 <1 Magnesium ppm ASTM D5185m 12 <1 Calcium ppm ASTM D5185m 19 165 Phosphorus ppm ASTM D5185m 658 461 Zinc ppm ASTM D5185m 694 565 Sulfur ppm ASTM D5185m 13741 15586	Odor	scalar	*Visual	NORML	NORML	NORML	
Boron ppm ASTM D5185m <1	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Boron ppm ASTM D5185m <1	Sodium	nom	ASTM D5185m		3	2	
Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m 1 <1 Magnesium ppm ASTM D5185m 12 <1 Calcium ppm ASTM D5185m 19 165 Phosphorus ppm ASTM D5185m 658 461 Zinc ppm ASTM D5185m 694 565 Sulfur ppm ASTM D5185m 13741 15586							
Molybdenum ppm ASTM D5185m O O Manganese ppm ASTM D5185m 1 <1 Magnesium ppm ASTM D5185m 12 <1 Magnesium ppm ASTM D5185m 12 <1 Calcium ppm ASTM D5185m 19 165 Phosphorus ppm ASTM D5185m 658 461 Zinc ppm ASTM D5185m 694 565 Sulfur ppm ASTM D5185m 13741 15586							
Manganese ppm ASTM D5185m 1 <1							
Magnesium ppm ASTM D5185m 12 <1							
Calcium ppm ASTM D5185m 19 165 Phosphorus ppm ASTM D5185m 658 461 Zinc ppm ASTM D5185m 694 565 Sulfur ppm ASTM D5185m 13741 15586							
Phosphorus ppm ASTM D5185m 658 461 Zinc ppm ASTM D5185m 694 565 Sulfur ppm ASTM D5185m 13741 15586	•						
Zinc ppm ASTM D5185m 694 565 Sulfur ppm ASTM D5185m 13741 15586							
Sulfur ppm ASTM D5185m 13741 15586							

Report Id: CRAASHMA [WUSCAR] 06217175 (Generated: 06/24/2024 14:43:00) Rev: 1

Contact/Location: JASON WILDE - CRAASHMA







Contact/Location: JASON WILDE - CRAASHMA Page 2 of 2