

NORMAL **WEAR** CONTAMINATION **ABNORMAL** NORMAL **FLUID CONDITION**

Machine Id 139-503 **Diesel Engine** {not provided} (--- GAL)

RECOMMENDATION

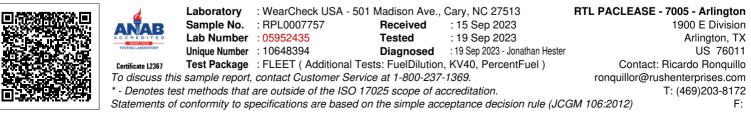
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CONTAMINATION	

Cili and litter change at the mote scamping has been noted. Resample and viscosity of the oil on your next sample. Visiter the oil on your next sample. V	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. Machine Age hts Cliniti into 45157	Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.			Client Info		RPL0007757		
and viscosity of the oil on your next sample. presentation on your next sample. presentation on your next sample. <t< th=""><th>e Sample Date</th><th></th><th>Client Info</th><th></th><th>24 Jul 2023</th><th></th><th></th></t<>		e Sample Date		Client Info		24 Jul 2023		
Oil Age Init of Age <		Machine Age	hrs	Client Info		46167		
OIL Changed Hiler Changed Sample Status Client Info Changed Hiler Changes ABNORM Image Hiler Changes ABNORM <th< th=""><th>Oil Age</th><th>hrs</th><th>Client Info</th><th></th><th>46167</th><th></th><th></th></th<>		Oil Age	hrs	Client Info		46167		
Filter Changed Sample Status Clean Info Changes Images Component Images Component Component <th>Filter Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>46167</th> <th></th> <th></th>		Filter Age	hrs	Client Info		46167		
Sample Status ABNORMA PARCENA NCACR ron pp ASTU 0586 >40 72 37 37 All component wear rates are normal. ron pp ASTU 0586 >4 <1 37 Silve op ASTU 0585 >4 <1 37 37 Silve op ASTU 0585 >40 15 37 37 Silve op ASTU 0585 >30 460 37 37 37 Aduminum pp ASTU 0585 >30 460 37 37 37 Copper pp ASTU 0585 >30 460 37 37 37 Vanadum pp ASTU 0585 >30 40 37 37 37 37 Vanadum pp ASTU 0585 >20 70 37 37 37 Valeadum pp ASTU 0585 >20 70 37 37 37 Felorontent negligble. Elemental level of silicon (S) above normal <th>Oil Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Changed</th> <th></th> <th></th>		Oil Changed		Client Info		Changed		
WEAR Iron ppm ASTM 2586m >100 72 All component wear rates are normal. Nickel ppm ASTM 2586m >4 <1 Nickel ppm ASTM 2586m >4 <1 Nickel ppm ASTM 2586m >3 <1 Aluminum ppm ASTM 2586m >33 <1 Lead ppm ASTM 2586m >330 15 7 Vanadium ppm ASTM 2586m >300 15 7 Vanadium ppm ASTM 2586m >300 15 7 Vanadium ppm ASTM 2586m >20 215 Vanadium ppm ASTM 2586m >20 215 Velicon Metal scalar Visual NONE NONE		Filter Changed		Client Info		Changed		
All component wear rates are normal. Chromium ppm ASTM D5185 >20 5 Silver ppm ASTM D5185 >20 Silver ppm ASTM D5185 >20 Silver ppm ASTM D5185 >20 -1 Aluminum ppm ASTM D5185 >20 15 Lead ppm ASTM D5185 >30 46 Vanadium ppm ASTM D5185 >30 41 Vanadium ppm ASTM D5185 >30 46 Vanadium ppm ASTM D5185 >30 46 Vanadium ppm ASTM D5185 >20 215 Value value value Visual NONE NONE Fuel % ASTM D324		Sample Status				ABNORMAL		
All component wear rates are normal. Chromium ppm ASTM D5185 >20 5 Silver ppm ASTM D5185 >20 Silver ppm ASTM D5185 >20 Silver ppm ASTM D5185 >20 -1 Aluminum ppm ASTM D5185 >20 15 Lead ppm ASTM D5185 >30 46 Vanadium ppm ASTM D5185 >30 41 Vanadium ppm ASTM D5185 >30 46 Vanadium ppm ASTM D5185 >30 46 Vanadium ppm ASTM D5185 >20 215 Value value value Visual NONE NONE Fuel % ASTM D324								
All component wear rates are normal. Nickel ppm 457M 05185 -4 1 Titanium ppm 457M 05185 -3 -1 Silver ppm 457M 05185 -30 -11 Alurninum ppm 457M 05185 -30 46 Alurninum ppm 457M 05185 -30 46 Vanadium ppm 457M 05185 -530 46 Vanadium ppm 457M 05185 -530 46 Vanadium ppm 457M 05185 -540 15 7 Vanadium ppm 457M 05185 >250 NONE CONTAMINATION Silicon ppm 457M 05185 >25 0.6 Fuel onten tegligible. Elemental level of silicon (Si) above normal Fuel % 47M 05185 >20 12.6 Fuel onten tegligible. Elemental level of silicon (Si) above normal	WEAR		ppm					
Nucketion pp/II No. R1	All component wear rates are normal		ppm					
Silver ppm ASTW DB18m >3 <1	Al component wear fates are normal.		ppm		>4			
Aluminum ppm ASTM DS185m >20 71 Lead ppm ASTM DS185m >300 46 Copper ppm ASTM DS185m >300 46 Vanadium ppm ASTM DS185m >300 46 White Metal scalar 'Visual NONE CONTAMINATION Silicon (Si) above normal indicating ingress of seal material. Silicon (Si) above normal indicating ingress of seal material. Silicon (Si) above normal indicating ingress of seal material. Water Wol (Mehtod >0.2 NEG Solid % % 'SIM D518/m 20 Si Water Wol (Mehtod >0.2 NEG Solid % % 'SIM D78/4 >0 0.5 Water Wol (Mehtod >.02			ppm					
Lead ppm ASTM D5165m -40 15 Copper ppm ASTM D5165m -30 46 Tin ppm ASTM D5165m -15 7 4 Vanadium ppm ASTM D5165m -1 Vanadium ppm ASTM D5165m -1 Vellow Metal scalar Visual NONE NONE Solicon potassium ppm ASTM D5165m -20 215 Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. No No NEG Value Water Wold HM NEG Solicon % % ASTM D5165m -20 REG Solican ASTM D5165m -30 2.5.0 Solican AStaritant Astrian AStrian 7554			ppm					
Copper ppm ASTM D5155m >330 46 Tin ppm ASTM D515m >15 7 Vanadium ppm ASTM D515m >15 7 White Metal scalar 'Visual NONE NONE CONTAMINATION Silicon ppm ASTM D515m >20 39 Fuel content negligible. Elemental level of silicon (Si) above normalindicating ingress of seal material. Silicon ppm ASTM D515m >20 215 Fuel content negligible. Elemental level of silicon (Si) above normalindication ppm ASTM D515m >20 12.6 Fuel content negligible. Elemental level of silicon (Si) above normalindication ASTM D764 >3 0.5 0.5 Solito % % MSTM D764 >3 0.5 Solitafion Astim MSTM D764 >3 0.5			ppm					
Tin ppm ASTM DS185n >15 7 Vanadium ppm ASTM DS185n >15 7 Vanadium ppm ASTM DS185n >15 7 Velow Metal scalar 'Visual NONE NONE CONTAMINATION Silicon ppm ASTM D5185n >25 ▲ 39 Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. Silicon ppm ASTM D5185n >25 ▲ 39 Water WO Method >0.2 NEG Glycol WC Method >0.2 NEG Sott % % % 75TM D7624 >20 12.6 Suitation Abs(cm * ASTM D7624 >20 12.6 Sott % % 75TM D7624 >20 12.6 <			ppm					
Vanadium ppm ASTM D5165m			ppm					
White Metal Yellow Metal scalar 'Visual 'Visual NONE NONE Inone NONE		Tin	ppm		>15			
Yellow Metal scalar *Visual NONE								
Silicon ppm ASTM D5185m<>>25 ▲ 39 Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. potassium ppm ASTM D5185m >20 215 Fuel % ASTM D5185m >20 NEG Glycol WC Method >0.2 NEG Sol % % 'ASTM D7844 >3 0.5 Nitration Abs/cm<''ASTM D7844 >20 12.6 Sulfation Abs/cm<''ASTM D7844 >20 12.6 Sulfation Abs/cm<''ASTM D7145 >20 12.6 Sand/Dirt scalar 'Visual NONE NONE Appearance scalar 'Visual NORM NORM The BN result indicates that there is suitable alkalinity remaining in the oili s acceptable for the time in service. Sofium			scalar					
Potassium ppm ASTM D5186m >20 215 Fuel % ASTM D586m >20 215 Fuel % ASTM D586m >20 215 Fuel % ASTM D586m >0.5 0.6 Fuel % ASTM D586m >0.5 0.6 Glycol WC Method >0.2 NEG Soot % % ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'Visual NONE NONE Sand/Dirt scalar 'Visual		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium ppm ASTM D5186m >20 215 Fuel % ASTM D586m >20 215 Fuel % ASTM D586m >20 215 Fuel % ASTM D586m >0.5 0.6 Fuel % ASTM D586m >0.5 0.6 Glycol WC Method >0.2 NEG Soot % % ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'ASTM D7844 >3 0.5 Suifation Abs/cm 'Visual NONE NONE Sand/Dirt scalar 'Visual		Cilicon			. 05	A 20		
Fuel % ASTM D324 >5 0.6 Water WC Method >0.2 NEG Glycol WC Method >0.2 NEG Solot % 'ASTM D784 >30 0.5 Solot % 'ASTM D784 >30 0.5 Solot % 'ASTM D784 >30 0.5 Solot % 'ASTM D784 >30 25.0 Sulfation Abs/tm< 'ASTM D7815 >30 25.0 Sulfation Abs/tm<'ASTM D784 >30 NONE Sulfation Abs/tm<'ASTM D784 >30 12.6 Sulfation scalar 'Visual NONE NONE Sand/Dirt scalar 'Visual NORM NORML Appearance scalar 'Visual NORM NORML The BN result indicates that there is suitable alkalinity remaining in the oil is acceptab	CONTAMINATION							
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Giycol WC Method NE G I Soot %0 %6 *ASTM D7844 >3 0.5 I Nitration Abs(m *ASTM D7844 >20 12.6 I Nitration Abs(m *ASTM D7847 >30 25.0 I Sulfation Abs(m *ASTM D7847 >30 25.0 I Silt scalar *Visual NONE IACN I Silt scalar *Visual NONE IACN I Odor scalar *Visual NORM IACN I Odor scalar *Visual NORM IACN I	indicating ingress of seal material.		70					
Soot % % *ASTM D7844 >3 0.5 Nitration Abs/cm *ASTM D7624 >20 12.6 Sulfation Abs/cm *ASTM D7645 >30 25.0 Sulfation Abs/cm 'Visual NONE NONE Sand/Dirt scalar 'Visual NOR NOR Appearance scalar 'Visual NOR NOR Odor scalar 'Visual NOR NOR Enulsified Water scalar 'Visual NOR 17 Boron					>0.2			
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Emulsified Waterscalar*Visual>0.2NEGFLUID CONDITIONThe BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.SodiumppmASTM D5185m17BariumppmASTM D5185m49MolybdenumppmASTM D5185m12MaganesceppmASTM D5185m6MagnesiumppmASTM D5185m6CalciumppmASTM D5185m6PhosphorusppmASTM D5185m6ZincppmASTM D5185m6344SulfurppmASTM D5185m807SulfurppmASTM D5185m6OxidationAbs/1mm*ASTM D5185m22.5Base Number (BN)mg KOHgASTM D28965.3								
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Calcium ppm ASTM D5185m 1236 Phosphorus ppm ASTM D5185m 634 Zinc ppm ASTM D5185m 807 Sulfur ppm ASTM D5185m 2736 Oxidation Abs/.1mm *ASTM D7414 >25 22.5 Base Number (BN) mg KOH/g ASTM D2896 5.3		•		ASTM D5185m				
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Base Number (BN) mg KOH/g ASTM D2896 5.3					>25			
			mg KOH/g	ASTM D2896		5.3		
		Visc @ 100°C	cSt	ASTM D445		11.6		

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Submitted By: Ricardo Ronquillo Page 2 of 2