

OIL ANALYSIS REPORT

Machine Id GMC 3500HD 2018 GMC Component Diesel Engine Fluid

TRC MOLY XL PRO-SPEC III SYNTHETIC15W40 (3 GAL)

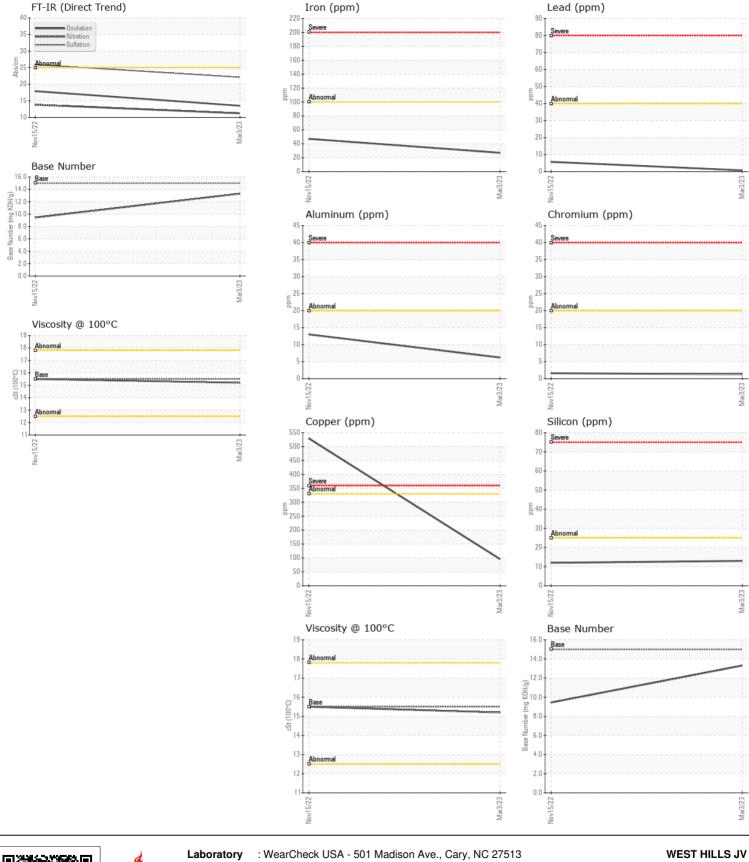
Test UCM Method United Method History History Sample Nature Client Inio Marchine Age Client Inio Resonance 15 Merce 16 Merce 15 Merce 16 Merce 15 Merce 16								
Beample at the next service interval to monitor. Sample Number Sample Date Client Info TR05/0712 IND07/012	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Simple Late Orient Hino Backine key mis Client Hino Changed		Sample Number		Client Info		TR05807074	TR05703123	
Oil Age mis Client Info Se00 1000 mit Piller Age Client Info Changed Changed Changed Changed Term Oil Changed Client Info Changed Changed Term Changed Term WEAR Iron pm ASTUD585 510 27 47		Sample Date		Client Info		03 Mar 2023	15 Nov 2022	
Filter Age mis Client Info S800 12000 OI Changed Client Info Changed Ch		Machine Age	mls	Client Info		84800	78000	
Oil Changed Fitre Changed Sample Status Client Info Singer All component wear rates are normal. Changed Fitre Changed Sample Status Changed Client Info Singer All component wear rates are normal.		Oil Age	mls	Client Info		6800	12000	
Filter Changed Sample Status Cleanged NORMAL Changed ABNORMAL Change		•	mls	Client Info		6800	12000	
Sample Status Note ABNORMAL ABNORMAL				Client Info		Changed	Changed	
WEAR ron ppm ASIM DS185m >1.00 27 47 All component wear rates are normal. ppm ASIM DS185m >4 0 <1		Filter Changed		Client Info		Changed	Changed	
All component wear rates are normal. Chromium ppm ASTM05856 200 1 2 Nickel ppm ASTM05856 -20 6 Silver ppm ASTM05856 -3 -1 0 Silver ppm ASTM05856 -30 -1 6 Lead ppm ASTM05856 -40 -1 6 Lead ppm ASTM05856 -50 -1 1 Vanadium ppm ASTM05856 -50 -1 1 Vanadium ppm ASTM05856 -50 1 1 Vanadium ppm ASTM05856 -50 4 11 Vanadium ppm ASTM05856 -20 4 11 Vanadium ppm ASTM05856 -20 4 11 Vanadium ppm ASTM0		Sample Status				NORMAL	ABNORMAL	
All component wear rates are normal. Chromium ppm ASTM05856 200 1 2 Nickel ppm ASTM05856 -20 6 Silver ppm ASTM05856 -3 -1 0 Silver ppm ASTM05856 -30 -1 6 Lead ppm ASTM05856 -40 -1 6 Lead ppm ASTM05856 -50 -1 1 Vanadium ppm ASTM05856 -50 -1 1 Vanadium ppm ASTM05856 -50 1 1 Vanadium ppm ASTM05856 -50 4 11 Vanadium ppm ASTM05856 -20 4 11 Vanadium ppm ASTM05856 -20 4 11 Vanadium ppm ASTM0	WEAD	Iron	nnm	ASTM D5185m	>100	97	17	
All component wear rates are normal. Nickel ppm ASTM 05156n -34 0 <-1	WEAN							
Titanium ppm ASTM 05186m C C1 C1 C1 C1 Silver ppm ASTM 05186m >3 C1 0	All component wear rates are normal.							
Silver ppm ASTL D5185m -3 <1 0					~ 1			
Aluminum ppm ASTM D5155n >20 6 13 Lead ppm ASTM D5155n >40 <1					-3			
Lead pp ASTM D5185n >-40 <1 6 Copper ppm ASTM D5185n >-15 <1								
Copper ppm ASTM DS185m >330 96 A 529 Tin ppm ASTM D5185m >15 <1								
Tin ppm ASTM D5185m >15 <1 1 Vanadium ppm ASTM D5185m 0 0 0 Vanadium scalar 'Visual NONE NONE NONE NONE NONE CONTAMINATION Silicon ppm ASTM D5185m >25 13 12 Potassium ppm ASTM D5185m >20 4 11 Potassium ppm ASTM D5185m >20 4 11 Value W Welthed >5 <1.0								
Vanadium ppm ASTM D5185m 0 0								
White Metal scalar 'Visual NONE					210			
Velow Metal scalar Visual NONE NONE					NONE	-	-	
Silicon ppm ASTM D5185m >225 13 12 Potassium ppm ASTM D5185m >20 4 11 Fuel WC Method >5 <1.0						-		
Potassium pp ASTM D5185m >20 4 11 Fuel WC Method >5 <1.0 <1.0 < Water WC Method >0 20 NEG NEG < Glycol WC Method >0.0 NEG NEG < < Soot % % 'ASTM D7844 >3 0.7 1.1 < Soot % % 'ASTM D7844 >3 0.7 1.1 < Soot % % 'ASTM D7844 >3 0.7 1.1 < Sitt scalar 'Visual NONE NONE NONE < Debris scalar 'Visual NOR NORE NONE < Odor scalar 'Visual NOR NOR NOR < Boron ppm ASTM D515m 3 3 Molybden								
There is no indication of any contamination in the oil. Fuel WC Method >5 <1.0	CONTAMINATION							
Function Water Work Method Sol Ref Ref	There is no indication of any contamination in the oil.		ppm					
Glycol WC Method NEG NONE NONE NONE NONE NONE NONE NORE								
Soot % % *ASTM D7844 >3 0.7 1.1 Nitration Abs/m *ASTM D7624 >20 11.2 13.8 Sulfation Abs/m *ASTM D7624 >20 22.1 25.9 Sulfation Abs/m *ASTM D7455 >30 22.1 25.9 Silt scalar *Visual NONE NORE					>0.2			
NitrationAbs/cm*ASTM D7624>2011.213.8SulfationAbs/tm*ASTM D7115>3022.125.9Siltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNORENONENONEAppearancescalar*VisualNORMNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*VisualNORMLNORMLNORMLBoronppmASTM D5185m133BariumppmASTM D5185m2111MaganeseppmASTM D5185m1-111MaganeseppmASTM D5185m1-111PhosphrousppmASTM D5185m4503940CalciumppmASTM D5185m4503940PhosphrousppmASTM D5185m4503940CalciumppmASTM D5185m4501085CalciumppmASTM D5185m101045MagnesiumppmASTM D5185m101045CalciumppmASTM D5185m101045CalciumppmASTM D5185m101045C								
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Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORM NORML NORML NORML Odor scalar *Visual NORM NORML NORML NORML Emulsified Wate scalar *Visual NORML NORML NORML FLUID CONDITION Scalar *Visual NORML NOR NOR Boron ppm ASTM D5185m 3 Boron ppm ASTM D5185m 2 11 Molybdenum ppm ASTM D5185m 1 Maganese ppm ASTM D5185m 1 1 Magnesium ppm ASTM D5185m 4500 4268 3940 Magnesium ppm ASTM D5185m 140 4070 Magnensium <td< td=""><th></th><td></td><td></td><td></td><th></th><td></td><td></td></td<>								
Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORM NORML NORML Odor scalar *Visual NORM NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG FLUID CONDITION Sodium ppm ASTM D5185m 3 3 Boron ppm ASTM D5185m 0 0 0 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Magnaese ppm ASTM D5185m 101 111 Magnaesium ppm ASTM D5185m 103 98 Magnaesium ppm ASTM D5185m 400 401 Magnaesium ppm ASTM D5185m 400 401 Magnesium ppm ASTM								
Appearance Odorscalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGFLUID CONDITIONSodiumppmASTM D5185m0211BoronppmASTM D5185m000BariumppmASTM D5185m000MalganeseppmASTM D5185m0111MagnesiumppmASTM D5185m11MagnesiumppmASTM D5185m198CalciumppmASTM D5185m450042683940PhosphorusppmASTM D5185m140010121085SulfurppmASTM D5185m140010121085SulfurppmASTM D5185m44072OxidationAbs/.1mm*ASTM D7414>2513.517.9								
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Emulsified Waterscalar*Visual>0.2NEGFLUID CONDITIONThe BN result indicates that there is suitable alkalinity remaining in the oil is suitable for further service.SodiumppmASTM D5185mI2111BariumppmASTM D5185mI00MolybdenumppmASTM D5185mI1071111ManganeseppmASTM D5185mI<1							-	
Sodium ppm ASTM D5185m 3 3 Boron ppm ASTM D5185m 2 11 Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 0 0 Manganese ppm ASTM D5185m 1 <							-	
Boron ppm ASTM D5185m Q 11 Barium ppm ASTM D5185m 0 0.0 Molybdenum ppm ASTM D5185m 107 111 Manganese ppm ASTM D5185m 1 <11 Magnesium ppm ASTM D5185m 4500 4268 3940 Calcium ppm ASTM D5185m 4500 4814 876 Phosphorus ppm ASTM D5185m 1400 1012 1085 Sulfur ppm ASTM D5185m 1400 1012 1085 Oxidation Abs/.1mm *ASTM D5185m 1400 1012 1085 Dxidation Abs/.1mm *ASTM D714 >25 13.5 17.9		Emulsified Water	scalar	^Visual	>0.2	NEG	NEG	
Boron ppm ASTM D5185m Q 11 Barium ppm ASTM D5185m 0 0.0 Molybdenum ppm ASTM D5185m 107 111 Manganese ppm ASTM D5185m 1 <11	FLUID CONDITION	Sodium	maa	ASTM D5185m		3	3	
Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 107 111 Manganese ppm ASTM D5185m 1 <10								
Molybdenum ppm ASTM D5185m 107 111 Manganese ppm ASTM D5185m 1 <1	, ,							
Manganese ppm ASTM D5185m 1 <1 Magnesium ppm ASTM D5185m 4500 31 98 Calcium ppm ASTM D5185m 4500 4268 3940 Phosphorus ppm ASTM D5185m 1400 1012 1085 Zinc ppm ASTM D5185m 1400 1012 1085 Sulfur ppm ASTM D5185m 1400 1012 1085 Oxidation Abs/.1mm *ASTM D5145m 14.53 4072								
Magnesium ppm ASTM D5185m 31 98 Calcium ppm ASTM D5185m 4500 4268 3940 Phosphorus ppm ASTM D5185m 4500 814 876 Zinc ppm ASTM D5185m 1400 1012 1085 Sulfur ppm ASTM D5185m 4153 4072 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 17.9		,						
Calcium ppm ASTM D5185m 4500 4268 3940 Phosphorus ppm ASTM D5185m 1400 814 876 Zinc ppm ASTM D5185m 1400 1012 1085 Sulfur ppm ASTM D5185m 1400 4153 4072 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 17.9		-						
Phosphorus ppm ASTM D5185m 814 876 Zinc ppm ASTM D5185m 1400 1012 1085 Sulfur ppm ASTM D5185m 1400 1012 1085 Oxidation Abs/.1mm *ASTM D7144 >25 13.5 17.9		•			4500			
Zinc ppm ASTM D5185m 1400 1012 1085 Sulfur ppm ASTM D5185m 0 4153 4072 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 17.9						814	876	
Sulfur ppm ASTM D5185m 4153 4072 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 17.9					1400			
Oxidation Abs/.1mm *ASTM D7414 >25 13.5 17.9								
					>25			
						13.30	9.44	

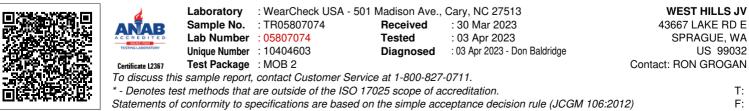
Visc @ 100°C cSt

ASTM D445 15.5

15.5

15.2





Contact/Location: RON GROGAN - WESSPRTR Page 2 of 2