

Machine Id **F-50** Component **Diesel Engine** Fluid **DURAMAX 15W40 (--- QTS)**

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0029823	DC0020445	
Sample Date		Client Info		16 Mar 2024	28 Oct 2023	
Machine Age	hrs	Client Info		5595	4720	
Oil Age	hrs	Client Info		430	344	
Filter Age	hrs	Client Info		430	344	
Oil Changed		Client Info		Changed	Changed	
Filter Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
Iron	nnm	ASTM D5185m	>100	4	6	
			~7			
			-3			
				-		
			>15	-		
			NONE		-	
reliow ivietal	scalar	visual	NONE		NONE	
Silicon	ppm	ASTM D5185m	>25	3	4	
Potassium	ppm	ASTM D5185m	>20	4	1	
Fuel	%	ASTM D3524	>5	0.5	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
Soot %	%	*ASTM D7844	>3	0.1	0.1	
Nitration	Abs/cm	*ASTM D7624	>20	7.3	6.8	
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.6	16.3	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
0				_		
Barium	ppm	ASTM D5185m			0	
Molybdenum	ppm	ASTM D5185m		3	2	
	10.10.17.7					
Manganese	ppm	ASTM D5185m		0	<1	
Manganese Magnesium	ppm	ASTM D5185m		60	40	
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m		60 2210	40 2362	
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		60 2210 777	40 2362 919	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		60 2210 777 1092	40 2362 919 1082	
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		60 2210 777	40 2362 919	
	Sample Number Sample Date Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status Iron Chromium Nickel Titanium Silver Aluminum Lead Copper Tin Vanadium White Metal Yellow Metal Yellow Metal Yellow Metal Silicon Potassium Fuel Water Glycol Soot % Nitration Sulfation Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water	Sample NumberSample DateMachine AgehrsOil AgehrsFilter AgehrsOil ChangedFilter ChangedFilter Changed Sample StatusppmIchromiumppmNickelppmNickelppmSilverppmCopperppmTinppmVanadiumppmVanadiumppmSiliconppmFuel%WaterscalarSiliconppmFuel%NitrationAbs/.tmmSiltscalarSoot %%NitrationAbs/.tmmSiltscalarSulfationscalarSodiumppmSiltscalarSand/DirtscalarSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppmSodiumppm	Sample NumberClient InfoSample DateClient InfoMachine AgehrsClient InfoOil AgehrsClient InfoFilter AgehrsClient InfoOil ChangedClient InfoFilter ChangedClient InfoSample StatusClient InfoSample StatusSilverPpmASTM D5185mNickelppmASTM D5185mAluminumppmASTM D5185mCopperppmASTM D5185mTinppmASTM D5185mCopperppmASTM D5185mVanadiumppmASTM D5185mVanadiumppmASTM D5185mFuel%VanatiumppmASTM D5185mFuel%ASTM D5185mFuel%SiliconppmASTM D5185mFuel%VaterWC MethodGlycolWC MethodGlycolWC MethodSiltscalarSulfationAbs/cmAbs/cm*ASTM D7844NitrationAbs/cmAppearancescalarScalar*VisualCodorscalar*VisualEmulsified WaterscalarSodiumppmASTM D5185mBoronppmASTM D5185mSodiumppmStiltscalarSodiumppmStilt ScalarSodium	Sample NumberClient InfoSample DateClient InfoMachine AgehrsClient InfoOil AgehrsClient InfoFilter AgehrsClient InfoOil ChangedClient InfoFilter ChangedClient InfoSample StatusClient InfoIronppmASTM D5185mNickelppmASTM D5185mSilverppmASTM D5185mVanadiumppmASTM D5185mVanadiumppmASTM D5185mVanadiumppmASTM D5185mVellow MetalscalarSiliconppmASTM D5185mSuitonppmASTM D5185mSoot %%*ASTM D7624SulfationAbs/cmAbs/cm*ASTM D7624Sand/Dirtscalar*VisualNONEAppearancescalar*VisualNORMLAppearancescalar*VisualNORMLEmulsified Waterscalar*VisualNORMLEmulsified Waterscalar*VisualNORML	Sample NumberClient InfoDC0029823Sample DateClient Info16 Mar 2024Machine AgehrsClient Info430Filter AgehrsClient Info430Oil ChangedClient Info430Oil ChangedClient InfoChangedFilter ChangedClient InfoChangedSample StatusVisual>1004IronppmASTM D5185m>1004ChromiumppmASTM D5185m>20<1NickelppmASTM D5185m>40TitaniumppmASTM D5185m>30AluminumppmASTM D5185m>30<1TinppmASTM D5185m>30<1TinppmASTM D5185m>150VanadiumppmASTM D5185m>150VanadiumppmASTM D5185m>150VanadiumppmASTM D5185m>204Yellow Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONESiliconppmASTM D5185m>204Fuel%ASTM D5185m>204Fuel%ASTM D5185m>204Fuel%ASTM D5185m>204Fuel%ASTM D5185m>204Fuel%ASTM D5185m>204Fuel%ASTM D5185m>204S	Sample NumberClient InfoDC0029823DC0020445Sample DateClient Info16 Mar 202428 Oct 2023Machine AgehrsClient Info430344Filter AgehrsClient Info430344Filter AgehrsClient Info430344Oil ChangedClient InfoChangedChangedChangedFilter ChangedClient InfoChangedChangedChangedSample StatusClient Info46ChromiumppmASTM D5185m>1004NorkelppmASTM D5185m>20<10NickelppmASTM D5185m>20<10NickelppmASTM D5185m>2094LeadppmASTM D5185m>3000AluminumppmASTM D5185m>330<12TinppmASTM D5185m>1500VanadiumppmASTM D5185m>1500VanadiumppmASTM D5185m>2041Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>2041Fuel%ASTM D5185m>2041Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>2041Fuel%ASTM D5185m>2041K

Base Number (BN) mg KOH/g ASTM D2896

ASTM D445

Visc @ 100°C cSt

7.2

13.5

6.9

12.4

NORMAL

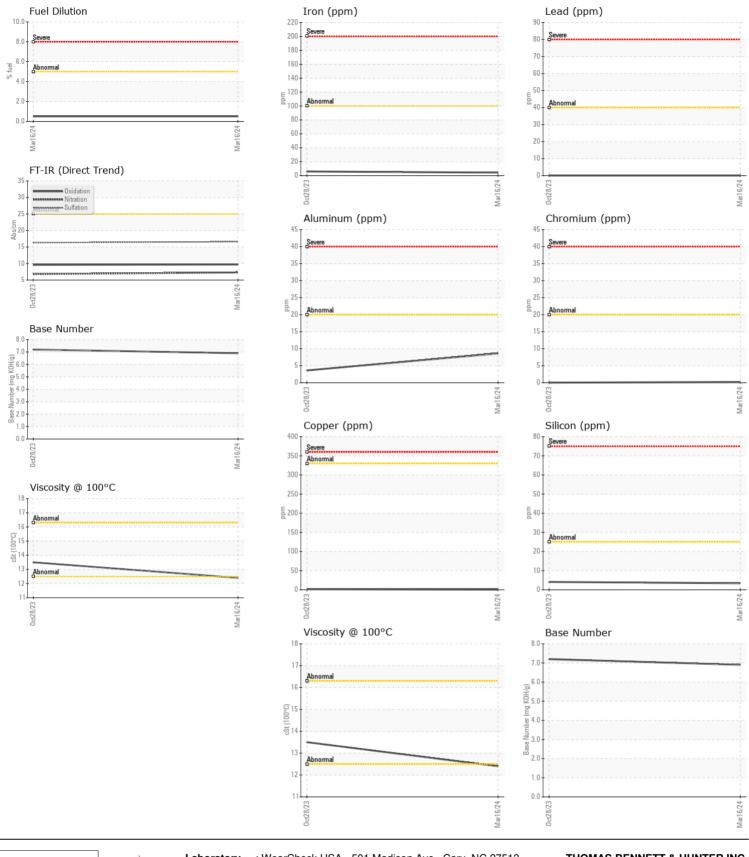
NORMAL

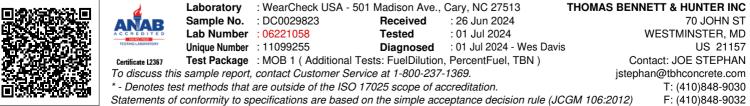
NORMAL

WEAR

CONTAMINATION

FLUID CONDITION





Contact/Location: JOE STEPHAN - THOWESMD Page 2 of 2