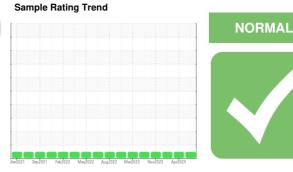


OIL ANALYSIS REPORT





47.14L [OKLAHOMA^102] Component Diesel Engine

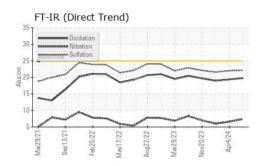
Area OKLAHOMA/102

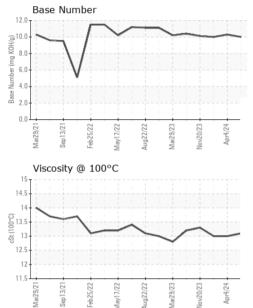
Fluid MOBIL DELVAC 1300 SUPER15W40 (7 GAL)

Descention Client Info I H M2 2021 M Apr.2024 N B Feb.2024 Veer Machine Age hrs Client Info 6215 85.0 5547 Warp Machine Age hrs Client Info 6215 85.0 5547 The Br or indication of any contamination in the i. The Br or indication of any contamination in the i. Norticates NAA Changed Contamination The Br or indication in the contition of the i. Sample Status Inc. Norticates NAA Changed Situation remaining in the oil. The condition of the i. Situation Inc. NAA Contamination NAA Changed NAA NAA Changed NAA Changed NAA NAAA NAA NAAA	DIAGNOSIS	SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Descention Client Info I H M2 2021 M Apr.2024 N B Feb.2024 Veer Machine Age hrs Client Info 6215 85.0 5547 Warp Machine Age hrs Client Info 6215 85.0 5547 The Br or indication of any contamination in the i. The Br or indication of any contamination in the i. Norticates NAA Changed Contamination The Br or indication in the contition of the i. Sample Status Inc. Norticates NAA Changed Situation remaining in the oil. The condition of the i. Situation Inc. NAA Contamination NAA Changed NAA NAA Changed NAA Changed NAA NAAA NAA NAAA	Recommendation	Sample Number		Client Info		WC0935199	WC0914433	WC0821735
Year Machine Age ins Client info 6215 8450 5547 Bit component wear raties are normal. Dit Age is Client info Changed NA Changed Strip information Dit Change Client info Changed NA Changed Strip information Strip information More information More information Normation Normation Strip information Normation Strip information	Resample at the next service interval to monitor.	Sample Date		Client Info		14 May 2024	04 Apr 2024	16 Feb 2024
di component veze rates are normal. Contamination Contamination in the se in oindication of any contamination in the il. Nucl condition The BA regult indicates that there is suitable Fuel with there is suitable for further service. Viel Matter in the oil. Nucl condition of the ill. Viel Matter in the oil. Nucl condition of the ill. Viel Matter in the oil. Nucl condition of the ill. Viel Matter in the oil. Nucl condition of the ill. Viel Matter in the oil. Nucl condition of the ill. Nucl condition	Wear	Machine Age	hrs	Client Info		-	8450	5547
Channel of any contamination in the init is or indication of any contamination in the out. The condition of the DN result indicates that there is suitable for further service. CONTAMINATION Reled Note Math NORMAL NORMAL Normal bit docation findicates that there is suitable for further service. CONTAMINATION with of Michael		Oil Age	hrs	Client Info		370	0	210
Sample Status NORMAL NORMAL NORMAL NORMAL Mulcinditation that there is suitable will is suitable for further service. CONTAMINATION method imitbaso current history1 history2 Viel WC Method NEG NEG NEG NEG Wate WC Method NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG Mulcination non ppm ASTM Distion 9 8 7 Chromium ppm ASTM Distion 0 <1		Oil Changed		Client Info		Changed	N/A	Changed
CONT ANIAN FAILON methods imbibase current inatory inatory The BK result indicates that there is suitable ikinity remaining in the oil. The condition of the ill is suitable for further service. Fuel WC Method NEG NEG NEG Water WC Method NEG NEG NEG NEG Glool WC Method NEG NEG NEG Weatr WC Method Neide NEG NEG WEAR METALS method Initiator Nitiator 1 Nickel ppm ASTM D585m 0 <1	There is no indication of any contamination in the						NORMAL	NORMAL
The BN result indicates that there is suitable for further service. Fuel Wor Method NEG <1.0		CONTAMINATIO	N	method	limit/base	current	history1	history2
Water WC Method NEG NEG NEG Is suitable for further service. Weller WC Method NEG NEG NEG VEAR METALS method Imutbase current Hatory1 Hatory2 Iron ppm ASTM D5185m 0 <1		Fuel		WC Method		<1.0	<1.0	<1.0
It is suitable for further service. Glycol WC Method MEG NEG NEG VMCAR METALS nerthod imitbase current history history Iron ppm ASTM 05165m 0 -1 -1 Chroomium ppm ASTM 05165m 0 -1 -1 Nickel ppm ASTM 05165m 0 -1 -1 Silver ppm ASTM 05165m 0 -1 -1 Silver ppm ASTM 05165m 0 -1 -1 Copper ppm ASTM 05165m 0 -1 -1 Copper ppm ASTM 05165m 0 -1 -1 Varadium ppm ASTM 05165m 0 -1 -1 Varadium ppm ASTM 05165m 0 -1 -1 Copper ppm ASTM 05165m 0 -1 -1 ADDTIVES method imitbase out -1 -1 Maganese ppm ASTM 05165m 0 0 1 Maganese ppm ASTM 05165m 0 0 1 Maganesium ppm ASTM 05165m 775 7800 63		Water		WC Method		NEG	NEG	NEG
Iron ppm ASTM D5185n 9 8 7 Chromium ppm ASTM D5185n 0 -1 -1 Nickel ppm ASTM D5185n 0 -1 -1 Titanium ppm ASTM D5185n 0 -1 -1 Silver ppm ASTM D5185n 0 -1 -1 Aluminum ppm ASTM D5185n 0 -1 -1 Aluminum ppm ASTM D5185n 0 -1 -1 Copper ppm ASTM D5185n 0 -1 -1 Varadium ppm ASTM D5185n 0 -1 -1 Cadmium ppm ASTM D5185n 0 -1 -1 ADDITVES method limit/base current Historyt Historyt Marganese ppm ASTM D5185n 37 45 54 Barum ppm ASTM D5185n 461 463 463 Galeium <td></td> <td>Glycol</td> <td></td> <td>WC Method</td> <td></td> <th>NEG</th> <td>NEG</td> <td>NEG</td>		Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM DS185m 0 <1 <1 Nickel ppm ASTM DS185m 0 <1		WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185n 0 <1 <1 Nickel ppm ASTM D5185n 0 <1		Iron	ppm	ASTM D5185m		9	8	7
Nickel ppm ASTM D5185n 0 <1 <1 Titanium ppm ASTM D5185n 0 <1		Chromium		ASTM D5185m		0	<1	<1
Titanium ppm ASTM D5185m 0 <1 <1 Silver ppm ASTM D5185m 0 0 <1 Auminum ppm ASTM D5185m 0 <1 <1 Lead ppm ASTM D5185m 0 <1 <1 Copper ppm ASTM D5185m 0 <1 1 Vanadium ppm ASTM D5185m 0 <1 <1 ADDITIVES method init/base current history1 <1 Molybdenum ppm ASTM D5185m 37 45.5 54 Barium ppm ASTM D5185m 37 38.4 41 Magnesium pm ASTM D5185m 37 38.4 41 Magnesium pm ASTM D5185m 37 38.4 43 Magnesi		Nickel						<1
Silver ppm ASTM D5185m 0 0 <1 Aluminum ppm ASTM D5185m 0 2 3 3 Lead ppm ASTM D5185m 0 <1 1 Copper ppm ASTM D5185m 0 <1 1 Tin ppm ASTM D5185m 0 <1 1 Cadmium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 <1 <1 ADDITIVES method Imit/base current history1 history2 Barium ppm ASTM D5185m 37 45 54 Barium ppm ASTM D5185m 0 0 1 Molybdenum ppm ASTM D5185m 37 45 54 Barium ppm ASTM D5185m 37 38 463 Calcium ppm ASTM D5185m 37 38 463 Calcium ppm ASTM D5185m 3046 21 1 Magnesium ppm ASTM D5185m 3046 2775 780 633 Calcium ppm ASTM D5185m 3046 2773 2								
Aluminum ppm ASTM D5185m 2 3 3 Lead ppm ASTM D5185m 0 <1								
Lead ppm ASTM D5185 0 <1								
Copper ppm ASTM D5185m 1 1 Tin ppm ASTM D5185m 0 1 1 Vanadium ppm ASTM D5185m 0 <1								
Tin ppm ASTM D5186m 0 1 1 Vanadium ppm ASTM D5186m 0 <1								
Vanadium ppm ASTM D5185m 0 <1 <1 Cadmium ppm ASTM D5185m 0 <1								1
CadmiumppmASTM D5185m0<1<1ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m374554BariumppmASTM D5185m001MolybdenumppmASTM D5185m373841MagneseeppmASTM D5185m373841MagnesiumppmASTM D5185m461463463CalciumppmASTM D5185m183217631631PhosphorusppmASTM D5185m775780693ZincppmASTM D5185m928945882SulfurppmASTM D5185m304627732733CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m455SodiumppmASTM D5185m212PotassiumppmASTM D5185m212PotassiumppmASTM D5185m022INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440.50.40.3NitrationAbs/tm*ASTM D784522.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/tm*ASTM D784419.819.019.0								
Boron ppm ASTM D5185m 37 45 54 Barium ppm ASTM D5185m 0 0 1 Molybdenum ppm ASTM D5185m 37 38 41 Manganese ppm ASTM D5185m 37 38 41 Magnesium ppm ASTM D5185m 461 463 463 Calcium ppm ASTM D5185m 1832 1763 1631 Phosphorus ppm ASTM D5185m 780 633 Zinc ppm ASTM D5185m 928 945 882 Sulfur ppm ASTM D5185m 928 945 882 Sulfur ppm ASTM D5185m 928 945 5 Sodium ppm ASTM D5185m 92 1 2 Sodium ppm ASTM D5185m 92 1 2 Potassium ppm ASTM D5185m 0 2 2 INFRA-RED method limit/base current history1 history2 Soot %								
Barium ppm ASTM D5185m 0 0 1 Molybdenum ppm ASTM D5185m 37 38 41 Manganese ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 461 463 463 Calcium ppm ASTM D5185m 461 463 1631 Phosphorus ppm ASTM D5185m 775 780 693 Zinc ppm ASTM D5185m 928 945 882 Sulfur ppm ASTM D5185m 3046 2773 2733 CONTAMINANTS method imit/base current history1 history2 Silicon ppm ASTM D5185m Q 2 2 Potassium ppm ASTM D5185m Q 2 2 INFRA-RED method limit/base current history1 history2 Soot % % 'ASTM D7844 0.5 0.4 0.3		ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185m 0 0 1 Molybdenum ppm ASTM D5185m 37 38 41 Manganese ppm ASTM D5185m <1		Boron	ppm	ASTM D5185m		37	45	54
Molybdenum ppm ASTM D5185m 37 38 41 Manganese ppm ASTM D5185m <1		Barium		ASTM D5185m			0	1
Manganesse ppm ASTM D5185m <1 <1 1 Magnesium ppm ASTM D5185m 461 463 463 Calcium ppm ASTM D5185m 1832 1763 1631 Phosphorus ppm ASTM D5185m 775 780 693 Zinc ppm ASTM D5185m 928 945 882 Sulfur ppm ASTM D5185m 3046 2773 2733 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 4 5 5 Sodium ppm ASTM D5185m 4 5 5 Sodium ppm ASTM D5185m 0 2 2 Potassium ppm ASTM D5185m 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7844 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7844 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7844 0.5 22.0 <t< td=""><td></td><td>Molybdenum</td><td></td><td></td><td></td><th>37</th><td>38</td><td>41</td></t<>		Molybdenum				37	38	41
Magnesium ppm ASTM D5185m 461 463 463 Calcium ppm ASTM D5185m 1832 1763 1631 Phosphorus ppm ASTM D5185m 775 780 693 Zinc ppm ASTM D5185m 928 945 882 Sulfur ppm ASTM D5185m 3046 2773 2733 CONTAMINANTS method imit/base current history1 history2 Silicon ppm ASTM D5185m 4 5 5 Sodium ppm ASTM D5185m 4 5 5 Sodium ppm ASTM D5185m 0 2 2 Potassium ppm ASTM D5185m 0 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.5 0.4 0.3 Nitration Abs/tmm *ASTM D7624 7.4 6.6 6.0 Sulfation Abs/tmm *ASTM D744 19.8 19.4				ASTM D5185m		<1	<1	1
Calcium ppm ASTM D5185m 1832 1763 1631 Phosphorus ppm ASTM D5185m 775 780 693 Zinc ppm ASTM D5185m 928 945 882 Sulfur ppm ASTM D5185m 3046 2773 2733 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 4 5 5 Sodium ppm ASTM D5185m 2 1 2 Potassium ppm ASTM D5185m 0 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D5185m 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 7.4 6.6 6.0 Sulfation Abs/.tm *ASTM D7415 22.2 22.0 21.6 FLUID DEGRAD_TION method limit/base current history1 history2 Oxidation Abs/.tm *ASTM D7414		-						463
PhosphorusppmASTM D5185m775780693ZincppmASTM D5185m928945882SulfurppmASTM D5185m304627732733CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m455SodiumppmASTM D5185m212PotassiumppmASTM D5185m022INFRA-REDmethodimit/basecurrenthistory1history2Soot %%*ASTM D78440.50.40.3NitrationAbs/rm*ASTM D741522.222.021.6FLUID DEGRADATIONmethodimit/basecurrenthistory1history2OxidationAbs/rm*ASTM D741419.819.419.0		-						
ZincppmASTM D5185m928945882SulfurppmASTM D5185m304627732733CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m455SodiumppmASTM D5185m455SodiumppmASTM D5185m212PotassiumppmASTM D5185m022INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440.50.40.3NitrationAbs/cm*ASTM D76247.46.66.0SulfationAbs/.1mm*ASTM D741522.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D741419.819.419.0								
SulfurppmASTM D5185m304627732733CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m455SodiumppmASTM D5185m212PotassiumppmASTM D5185m022INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440.50.40.3NitrationAbs/cm*ASTM D76247.46.66.0SulfationAbs/.1mm*ASTM D741522.222.021.6FLUID DEGRADATIONMethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D741419.819.419.0								
SiliconppmASTM D5185m455SodiumppmASTM D5185m212PotassiumppmASTM D5185m022INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440.50.40.3NitrationAbs/cm*ASTM D76247.46.66.0SulfationAbs/lm*ASTM D762422.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/lm*ASTM D741419.819.419.0								
SodiumppmASTM D5185m212PotassiumppmASTM D5185m022INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440.50.40.3NitrationAbs/cm*ASTM D76247.46.666.0SulfationAbs/1mm*ASTM D741522.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/1mm*ASTM D741419.819.419.0		CONTAMINANTS	5	method	limit/base	current	history1	history2
SodiumppmASTM D5185m212PotassiumppmASTM D5185m022INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D78440.50.40.3NitrationAbs/cm*ASTM D76247.46.666.0SulfationAbs/.1mm*ASTM D741522.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D741419.819.419.0		Silicon	ppm	ASTM D5185m		4	5	5
PotassiumppmASTM D5185m 0 22INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844 0.5 0.4 0.3 NitrationAbs/cm*ASTM D7624 7.4 6.6 6.0 SulfationAbs/.1mm*ASTM D7415 22.2 22.0 21.6 FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414 19.8 19.4 19.0				ASTM D5185m		2	1	2
Soot % % *ASTM D7844 0.5 0.4 0.3 Nitration Abs/cm *ASTM D7624 7.4 6.6 6.0 Sulfation Abs/.1mm *ASTM D7415 22.2 22.0 21.6 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 19.8 19.4 19.0		Potassium	ppm	ASTM D5185m		0	2	2
NitrationAbs/cm*ASTM D76247.46.66.0SulfationAbs/.1mm*ASTM D741522.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D741419.819.419.0		INFRA-RED		method	limit/base	current	history1	history2
NitrationAbs/cm*ASTM D76247.46.66.0SulfationAbs/.1mm*ASTM D741522.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D741419.819.419.0		Soot %	%	*ASTM D7844		0.5	0.4	0.3
SulfationAbs/.1mm*ASTM D741522.222.021.6FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D741419.819.419.0		Nitration	Abs/cm	*ASTM D7624			6.6	6.0
Oxidation Abs/.1mm *ASTM D7414 19.8 19.4 19.0								
		FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
		Oxidation	Abs/.1mm	*ASTM D7414		19.8	19.4	19.0
						10.0	10.3	10.0



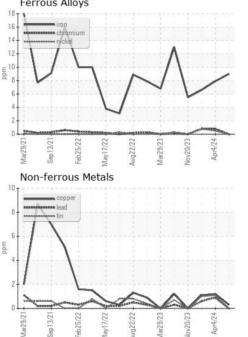
OIL ANALYSIS REPORT

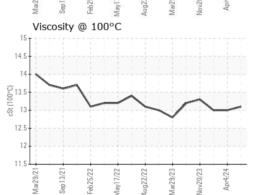




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual		NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		13.1	13.0	13.0
GRAPHS						

Ferrous Alloys







Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 SHERWOOD CONSTRUCTION CO INC Sample No. : WC0935199 : 05 Jun 2024 Received 3219 WEST MAY ST Lab Number : 06199934 Tested : 06 Jun 2024 WICHITA, KS Unique Number : 11062057 Diagnosed : 06 Jun 2024 - Wes Davis US 67213 Test Package : CONST (Additional Tests: TBN) Contact: DOUG KING Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. doug.king@sherwood.net T: (316)617-3161 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x:

Report Id: SHEWIC [WUSCAR] 06199934 (Generated: 06/07/2024 04:21:36) Rev: 1

Submitted By: BOBBY JONES

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