

## **OIL ANALYSIS REPORT**

## OKLAHOMA/102/EG - DOZER 35.11L [OKLAHOMA^102^EG - DOZER] Component

**Diesel Engine** Fluic

MOBIL DELVAC 1300 SUPER15W40 (--- GAL)



DIAGNOSIS SAMPLE INFORMATION method limit/base	current h	istory1 history2
Recommendation Sample Number Client Info WCC	0886907 WC08	321744 WC0807931
Resample at the next service interval to monitor. Sample Date Client Info 13 N	lar 2024 15 Fe	b 2024 21 Jun 2023
Wear Machine Age hrs Client Info 8776	8776	8306
All component wear rates are normal. Oil Age hrs Client Info 8780	470	50
Contamination Oil Changed Client Info Not	Changd Chang	ged Changed
There is no indication of any contamination in the Sample Status NOF	RMAL ABNC	ORMAL ABNORMAL
pil. CONTAMINATION method limit/base	current h	istorv1 historv2
Fluid Condition	10 1	0 <1.0
he BN result indicates that there is suitable	EG NE	
Ikalinity remaining in the oil. The condition of the Vater Voter V		
It is suitable for further service. Given the weight of the field in the service in the service is the service in the service is the service	EG NE	IG NEG
WEAR METALS method limit/base	current h	istory1 history2
Iron ppm ASTM D5185m >100 1	<b>3</b> 50	12
Chromium ppm ASTM D5185m >20 <	1 2	<1
Nickel ppm ASTM D5185m >2 <	<b>1</b> 1	<1
Titanium ppm ASTM D5185m >2 <	<b>1</b> <1	0
Silver ppm ASTM D5185m >2 <	<b>1</b> <1	<1
Aluminum         ppm         ASTM D5185m         >25         4	11	<1
Lead ppm ASTM D5185m >40 <	<b>1</b> <1	0
Copper ppm ASTM D5185m >330 34	4 260	208
Tin ppm ASTM D5185m >15 <	<b>1</b> <1	<1
Vanadium ppm ASTM D5185m <	<b>1</b> <1	0
Cadmium ppm ASTM D5185m <	1 <1	0
ADDITIVES method limit/base	current h	istory1 history2
Boron ppm ASTM D5185m 0 50	<b>0</b> 19	29
Barium ppm ASTM D5185m 0 0	0	0
Danam ppin nom bottom o	2	
Molybdenum ppm ASTM D5185m 0 53	<b>3</b> 140	0 103
MolybdenumppmASTM D5185m055ManganeseppmASTM D5185m<	<b>3</b> 140 <b>1</b> 3	0 103 1
MolybdenumppmASTM D5185m055ManganeseppmASTM D5185mMagnesiumppmASTM D5185m045	<b>3</b> 140 <b>1</b> 3 <b>94</b> 666	0 103 1 6 460
MolybdenumppmASTM D5185m055ManganeseppmASTM D5185mMagnesiumppmASTM D5185m049CalciumppmASTM D5185m17	2       3     140       1     3       94     666       712     218	0 103 1 6 460 80 1626
MolybdenumppmASTM D5185m055ManganeseppmASTM D5185m045MagnesiumppmASTM D5185m045CalciumppmASTM D5185m17PhosphorusppmASTM D5185m75	3     140       1     3       94     666       712     218       59     916	103       1       6     460       80     1626       6     741
MolybdenumppmASTM D5185m055ManganeseppmASTM D5185m049MagnesiumppmASTM D5185m049CalciumppmASTM D5185m049PhosphorusppmASTM D5185m75ZincppmASTM D5185m92	3         140           1         3           94         666           712         218           59         916           22         12°	103       1       6     460       80     1626       6     741       12     860
MolybdenumppmASTM D5185m055ManganeseppmASTM D5185m049MagnesiumppmASTM D5185m049CalciumppmASTM D5185m049PhosphorusppmASTM D5185m75ZincppmASTM D5185m75SulfurppmASTM D5185m25	2       3     140       1     3       94     666       712     218       59     916       22     12°       569     337	103       1       6     460       80     1626       6     741       12     860       73     2469
DarishippmAstm bereadooMolybdenumppmASTM D5185m05ManganeseppmASTM D5185m04MagnesiumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m11PhosphorusppmASTM D5185m75ZincppmASTM D5185m92SulfurppmASTM D5185m25CONTAMINANTSmethodlimit/base	2       3     140       1     3       94     666       712     218       59     916       22     12*       569     337       current     h	0     103       1     1       6     460       80     1626       6     741       12     860       73     2469       istory1     history2
DarianppmNorm Series05MolybdenumppmASTM D5185m05ManganeseppmASTM D5185m044MagnesiumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m044ZincppmASTM D5185m74SulfurppmASTM D5185m74CONTAMINANTSmethodlimit/baseSiliconppmASTM D5185m25	2       3     140       1     3       94     666       712     218       59     916       22     12°       569     337       current     h       1     16	0     103       1     1       6     460       80     1626       6     741       12     860       73     2469       istory1     history2       8
DarkinppmASTM D5185m055ManganeseppmASTM D5185m044MagnesiumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m045PhosphorusppmASTM D5185m74ZincppmASTM D5185m92SulfurppmASTM D5185m25CONTAMINANTSmethodlimit/baseSiliconppmASTM D5185m>25SodiumppmASTM D5185m>2511SodiumppmASTM D5185m445	2       3     140       1     3       94     666       712     218       59     916       22     12°       569     337       current     h       1     16       9     ▲ 367	0 103 1 6 460 80 1626 6 741 12 860 73 2469 istory1 history2 8 7 ▲ 295
Dati MitppmASTM D5185m055ManganeseppmASTM D5185m049MagnesiumppmASTM D5185m049CalciumppmASTM D5185m049CalciumppmASTM D5185m79ZincppmASTM D5185m99SulfurppmASTM D5185m99SulfurppmASTM D5185m92SiliconppmASTM D5185m25SiliconppmASTM D5185m25SodiumppmASTM D5185m20PotassiumppmASTM D5185m20	3 140 1 3 94 666 712 218 59 916 22 12 <sup>-1</sup> 569 337 current h 1 16 9 ▲ 367 ▲ 47	0 103 1 1 6 460 80 1626 6 741 12 860 73 2469 istory1 history2 8 7 ▲ 295 ▲ 37
Data HitppmASTM D5185m055ManganeseppmASTM D5185m044MagnesiumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m045PhosphorusppmASTM D5185m74ZincppmASTM D5185m92SulfurppmASTM D5185m25SiliconppmASTM D5185m25SiliconppmASTM D5185m25SodiumppmASTM D5185m20PotassiumppmASTM D5185m20INFRA-REDmethodlimit/base	3 140 1 3 94 666 712 218 59 916 22 12 <sup>-</sup> 569 337 current h 1 16 9 ▲ 367 ▲ 47 current h	0 103 1 1 6 460 80 1626 6 741 12 860 73 2469 istory1 history2 8 7 ▲ 295 ▲ 37 istory1 history2
Data MinppmASTM D5185m053ManganeseppmASTM D5185m044MagnesiumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m74ZincppmASTM D5185m74ZincppmASTM D5185m92SulfurppmASTM D5185m24CONTAMINANTSmethodlimit/baseSiliconppmASTM D5185m>25SodiumppmASTM D5185m>20PotassiumppmASTM D5185m>20INFRA-REDmethodlimit/baseSoot %%*ASTM D7844Soot %%*ASTM D7844	2       3     140       1     3       94     666       712     218       59     916       22     12°       569     337       current     h       1     16       9     ▲ 367       ▲ 47       current     h       1     0.3	0 103 1 1 6 460 80 1626 6 741 12 860 73 2469 istory1 history2 8 7 ▲ 295 ▲ 37 istory1 history2 8 0.1
DatisticppmActivity bottompMolybdenumppmASTM D5185m05:ManganeseppmASTM D5185m04:CalciumppmASTM D5185m04:CalciumppmASTM D5185m04:PhosphorusppmASTM D5185m7:ZincppmASTM D5185m9:SulfurppmASTM D5185m9:SulfurppmASTM D5185m2:CONTAMINANTSmethodlimit/baseSiliconppmASTM D5185m>25SodiumppmASTM D5185m>20PotassiumppmASTM D5185m>20INFRA-REDmethodlimit/baseSoot %%*ASTM D7844NitrationAbs/cm*ASTM D7624NitrationAbs/cm*ASTM D7624NitrationAbs/cm*ASTM D7624NitrationAbs/cm*ASTM D7624	$\begin{array}{c c} 2 \\ 3 \\ 1 \\ 94 \\ 666 \\ 712 \\ 218 \\ 59 \\ 916 \\ 22 \\ 12^{-5} \\ 569 \\ 337 \\ current \\ h \\ 1 \\ 1 \\ 1 \\ 0 \\ 4 \\ 7 \\ current \\ h \\ 1 \\ 0.3 \\ 4 \\ 9.5 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.3 \\ 0.$	0 103 1 1 6 460 80 1626 6 741 12 860 73 2469 istory1 history2 8 7 ▲ 295 ▲ 37 istory1 history2 istory1 history2 6 0.1 6 .1
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DatationppmASTM D5185m05ManganeseppmASTM D5185m044MagnesiumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m74ZincppmASTM D5185m94SulfurppmASTM D5185m24CONTAMINANTSmethodlimit/baseSiliconppmASTM D5185m>25SodiumppmASTM D5185m>208INFRA-REDmethodlimit/baseSoot %%*ASTM D7844>30NitrationAbs/cm*ASTM D7624>206SulfationAbs/Itm*ASTM D7415>3021	2       3     140       1     3       94     666       712     218       59     916       22     12°       569     337       current     h       1     16       9     ▲ 367       2     47       current     h       .1     0.3       .4     9.5       1.7     22.       current     h	0 103 1 1 6 460 80 1626 6 741 12 860 73 2469 istory1 history2 8 7 ▲ 295 ▲ 37 istory1 history2 9 0.1 6 .1 2 22.1 istory1 history2
Determine MolybdenumppmASTM D5185m05:ManganeseppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m044CalciumppmASTM D5185m74ZincppmASTM D5185m92SulfurppmASTM D5185m24CONTAMINANTSmethodlimit/baseSiliconppmASTM D5185m25SodiumppmASTM D5185m20PotassiumppmASTM D5185m20Soot %%*ASTM D7844>3SulfationAbs/cm*ASTM D7624>20FLUID DEGRADATIONmethodlimit/baseOxidationAbs/imm*ASTM D7414>25OxidationAbs/imm*ASTM D7414>25	2       3     140       1     3       94     666       712     218       59     916       22     12°       569     337       current     h       1     16       9     367       current     h       1     0.3       .1     0.3       .4     9.5       1.7     22.       current     h	0 103 1 1 6 460 80 1626 6 741 12 860 73 2469 istory1 history2 8 7 ▲ 295 ▲ 37 istory1 history2 9 0.1 6.1 2 22.1 istory1 history2 0 19 7





May21/16

## **OIL ANALYSIS REPORT**



1c+6/20

en

1c18171

Dec 8/77

VISUAL		method				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	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
		mathad	limit/booo	ourropt	biotonut	history
	IEO	method	iinii/base	current	riistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14	13.2	13.5	13.3
GRAPHS						

Ferrous Alloys 180 160 eb15/24 140 120 편<sup>100</sup> 80 60 40 20 0 1ct6/21 lav21/16 an14/18 4nv4/19 0ct6/20 C18-10 ah 15/74 Non-ferrous Metals 350 300 250 200 법 150 100 50 0 Sep14/18 ec8/77 eb15/24 CLAF/ Mav21 Viscosity @ 100°C Base Number 18 120. 100. 16 KOH/g 80.0 cSt (100°C) 14 60.0 40.0 13 ASP 20. 0.0 0ct6/21. Sep14/18 Dec8/22 Apr20/17 0ct6/20 Dec8/22 Feb15/24 Dct6/20 Oct6/21 eb15/24 Sep14/18 Vov4/19 Apr20/17 May21/16 VInv4/19 May21/ : WearCheck USA - 501 Madison Ave., Cary, NC 27513 SHERWOOD CONSTRUCTION CO INC Laboratory Sample No. : WC0886907 Received : 28 Mar 2024 3219 WEST MAY ST Lab Number : 06131800 Tested : 29 Mar 2024 WICHITA, KS Unique Number : 10951265 Diagnosed : 29 Mar 2024 - Wes Davis US 67213 Test Package : CONST (Additional Tests: TBN) Contact: DOUG KING To discuss this sample report, contact Customer Service at 1-800-237-1369. doug.king@sherwood.net

\* - 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)

Certificate L2367

F: x:

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