

## **OIL ANALYSIS REPORT**

# OKLAHOMA/102/EG - TRUCK-ON-HWY-HEAVY DUTY 05.80 [OKLAHOMA^102^EG - TRUCK-ON-HWY-HEAVY DUTY]

**Diesel Engine** 

Fluid MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

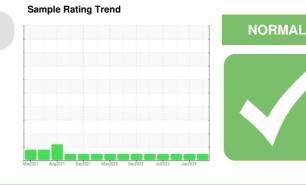
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

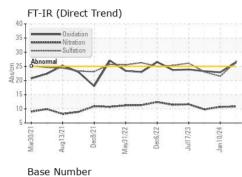
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

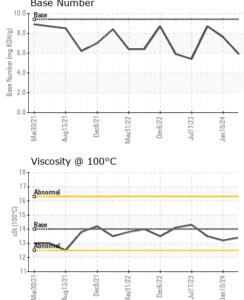


SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0914419	WC0874022	WC0848917
Sample Date		Client Info		23 Apr 2024	10 Jan 2024	14 Sep 2023
Machine Age	hrs	Client Info		6383	5710	5328
Oil Age	hrs	Client Info		673	382	377
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	30	9	12
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	6	4
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	2	<1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
					0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base		-	history2 37
				current	history1	
Boron	ppm	ASTM D5185m	0	current 284	history1 53	37
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	0	current 284 2	history1 53 <1	37 0
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	current 284 2 86	history1 53 <1 65	37 0 31
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 284 2 86 <1	history1 53 <1 65 <1	37 0 31 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current 284 2 86 <1 427	history1 53 <1 65 <1 526	37 0 31 <1 432
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	current           284           2           86           <1           427           1388	history1 53 <1 65 <1 526 1467	37 0 31 <1 432 1852
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	Current 284 2 86 <1 427 1388 982	history1 53 <1 65 <1 526 1467 744	37 0 31 <1 432 1852 808
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	Current 284 2 86 <1 427 1388 982 1105	history1           53           <1           65           <1           526           1467           744           889	37 0 31 <1 432 1852 808 991
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0	Current 284 2 86 <1 427 1388 982 1105 3449	history1           53           <1           65           <1           526           1467           744           889           2566	37 0 31 <1 432 1852 808 991 3355
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Current 284 2 86 <1 427 1388 982 1105 3449 Current	history1         53         <1         65         <1         526         1467         744         889         2566         history1	37 0 31 <1 432 1852 808 991 3355 history2
Boron Barium Molybdenum Maganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current           284           2           86           <1           427           1388           982           1105           3449           current           8	history1           53           <1           65           <1           526           1467           744           889           2566           history1           4	37 0 31 <1 432 1852 808 991 3355 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current           284           2           86           <1           427           1388           982           1105           3449           current           8           3	history1           53           <1           65           <1           526           1467           744           889           2566           history1           4           4	37 0 31 <1 432 1852 808 991 3355 history2 4 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current           284           2           86           <1           427           1388           982           1105           3449           current           8           3           8           3           8	history1           53           <1           65           <1           526           1467           744           889           2566           history1           4           11	37 0 31 <1 432 1852 808 991 3355 history2 4 5 16
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	Current 284 2 86 <1 427 1388 982 1105 3449 Current 8 3 8 3 8	history1         53         <1         65         <1         526         1467         744         889         2566         history1         4         11         history1	37 0 31 <1 432 1852 808 991 3355 history2 4 5 16 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm i ppm i	ASTM D5185m ASTM D5185m	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current         284         2         86         <1         427         1388         982         1105         3449         current         8         3         8         0.5	history1           53           <1           65           <1           526           1467           744           889           2566           history1           4           11           history1           0.3	37 0 31 <1 432 1852 808 991 3355 history2 4 5 16 history2 0.4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	current         284         2         86         <1         427         1388         982         1105         3449         current         8         3         8         0.5         10.8	history1         53         <1         65         <1         526         1467         744         889         2566         history1         4         11         history1         0.3         10.7	37 0 31 <1 432 1852 808 991 3355 history2 4 5 16 history2 0.4 9.8
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Current         284         2         86         <1         427         1388         982         1105         3449         current         8         3         8         current         0.5         10.8         26.6	history1         53         <1         65         <1         526         1467         744         889         2566         history1         4         11         0.3         10.7         21.5	37 0 31 <1 432 1852 808 991 3355 history2 4 5 16 history2 0.4 9.8 23.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Current 284 2 86 <1 427 1388 982 1105 3449 Current 8 3 8 Current 0.5 10.8 26.6 Current	history1         53         <1         65         <1         526         1467         744         889         2566         history1         4         4         11         history1         0.3         10.7         21.5         history1	37 0 31 <1 432 1852 808 991 3355 history2 4 5 16 history2 0.4 9.8 23.0 history2

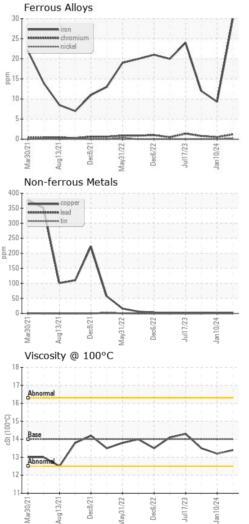


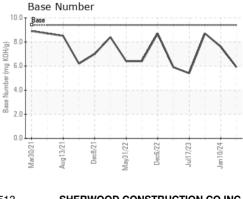
# **OIL ANALYSIS REPORT**





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	>0.2	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	14	13.4	13.2	13.5
CDADUS						





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 SHERWOOD CONSTRUCTION CO INC Sample No. : WC0914419 Received : 10 May 2024 3219 WEST MAY ST Lab Number : 06176470 Tested : 13 May 2024 WICHITA, KS Unique Number : 11022523 Diagnosed : 14 May 2024 - Sean Felton 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 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (316)617-3161 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x: