

OIL ANALYSIS REPORT

COLORADO/443/EG - LOADER 45.52L [COLORADO^443^EG - LOADER] Component

Resample at the next service interval to monitor.

There is no indication of any contamination in the

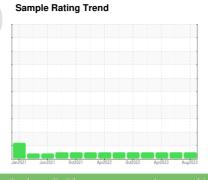
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the

All component wear rates are normal.

oil is suitable for further service.

Diesel Engine Fluid

MOBIL DELVAC 1300 SUPER15W40 (5 GAL)





Recommendation

Contamination

Fluid Condition

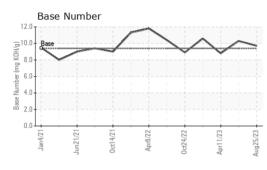
Wear

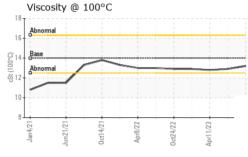
oil.

SUPER15W40 (5	GAL)	Jan2021	Jun2021 Oct2021	Apr2022 Oct2022 Apr2023	Aug2023	
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0823101	WC0823175	WC0799074
Sample Date		Client Info		25 Aug 2023	22 Jun 2023	11 Apr 2023
Machine Age	hrs	Client Info		3853	3578	3323
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	6	8	8
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	4	7
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	<1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method				history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 54	history1 52	history2 57
	ppm ppm		0			
Boron		ASTM D5185m	0	54	52	57
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	54 0	52 0	57 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	54 0 39	52 0 41	57 0 40
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	54 0 39 <1	52 0 41 <1	57 0 40 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	54 0 39 <1 530	52 0 41 <1 490	57 0 40 <1 509
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	54 0 39 <1 530 1694	52 0 41 <1 490 1669	57 0 40 <1 509 1658
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	54 0 39 <1 530 1694 771	52 0 41 <1 490 1669 753	57 0 40 <1 509 1658 731
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	54 0 39 <1 530 1694 771 945	52 0 41 <1 490 1669 753 927	57 0 40 <1 509 1658 731 880
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 Imit/base	54 0 39 <1 530 1694 771 945 3112	52 0 41 <1 490 1669 753 927 2885	57 0 40 <1 509 1658 731 880 2966
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 Imit/base	54 0 39 <1 530 1694 771 945 3112 current	52 0 41 <1 490 1669 753 927 2885 history1	57 0 40 <1 509 1658 731 880 2966 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 0 0 Imit/base	54 0 39 <1 530 1694 771 945 3112 current 3	52 0 41 <1 490 1669 753 927 2885 history1 4	57 0 40 <1 509 1658 731 880 2966 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 0 0 0 imit/base >25	54 0 39 <1 530 1694 771 945 3112 current 3 1	52 0 41 <1 490 1669 753 927 2885 history1 4 2	57 0 40 <1 509 1658 731 880 2966 history2 3 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 0 <u>limit/base</u> >25 >20	54 0 39 <1 530 1694 771 945 3112 current 3 1 <1	52 0 41 <1 490 1669 753 927 2885 history1 4 2 2 <1	57 0 40 <1 509 1658 731 880 2966 history2 3 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm 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	54 0 39 <1 530 1694 771 945 3112 current 3 1 <1 <1	52 0 41 <1 490 1669 753 927 2885 history1 4 2 2 <1 history1	57 0 40 <1 509 1658 731 880 2966 history2 3 0 0 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	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	54 0 39 <1 530 1694 771 945 3112 <u>current</u> 3 1 <1 <1 <u>current</u> 0.3	52 0 41 <1 490 1669 753 927 2885 history1 4 2 2 <1 4 2 <1 0.3	57 0 40 <1 509 1658 731 880 2966 history2 3 0 0 0 history2 0.2
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 0 0 0 0 0 0 0 0 0 0 0 0 0 0	54 0 39 <1 530 1694 771 945 3112 <i>current</i> 3 1 <1 <1 <i>current</i> 0.3 5.9	52 0 41 <1 490 1669 753 927 2885 history1 4 2 2 <1 4 2 <1 history1 0.3 6.7	57 0 40 <1 509 1658 731 880 2966 history2 3 0 0 0 history2 0.2 5.9
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 D7844 *ASTM D7844 *ASTM D7844	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	54 0 39 <1 530 1694 771 945 3112 current 3 1 <1 <1 current 0.3 5.9 21.5 current	52 0 41 <10 490 1669 753 927 2885 history1 4 2 2 1 4 2 2 <1 history1 0.3 6.7 22.7 history1	57 0 40 309 1658 731 880 2966 history2 3 0 0 0 history2 0.2 5.9 20.0 history2
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	54 0 39 <1 530 1694 771 945 3112 current 3 1 <1 <1 current 0.3 5.9 21.5	52 0 41 <1 490 1669 753 927 2885 history1 4 2 2 <1 4 2 <1 0.3 6.7 22.7	57 0 40 <1 509 1658 731 880 2966 history2 3 0 0 0 history2 0.2 5.9 20.0

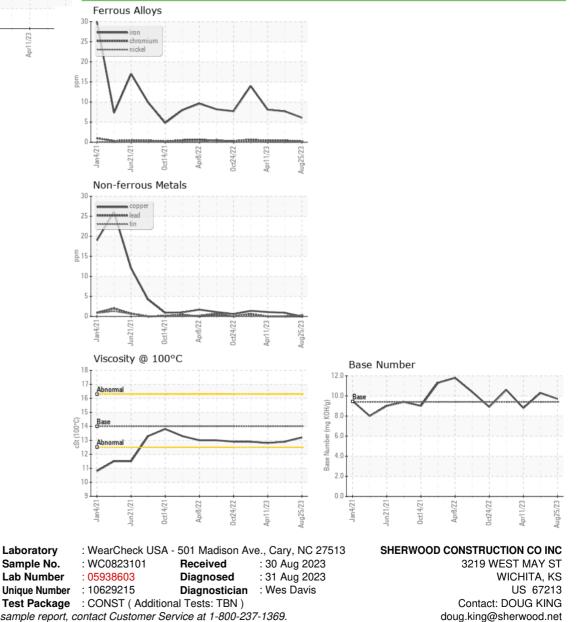


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	13.2	12.9	12.8
GRAPHS						



 Certificate L2367
 Test Package
 : CONST (Additional Tests: TBN)

 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - 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)

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