

## WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION NORMAL



Mobile Fleet Machine Id 5100 5100 Component

Hydraulic System

AW HYDRAULIC OIL ISO 10 (40 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.



All component wear rates are normal.

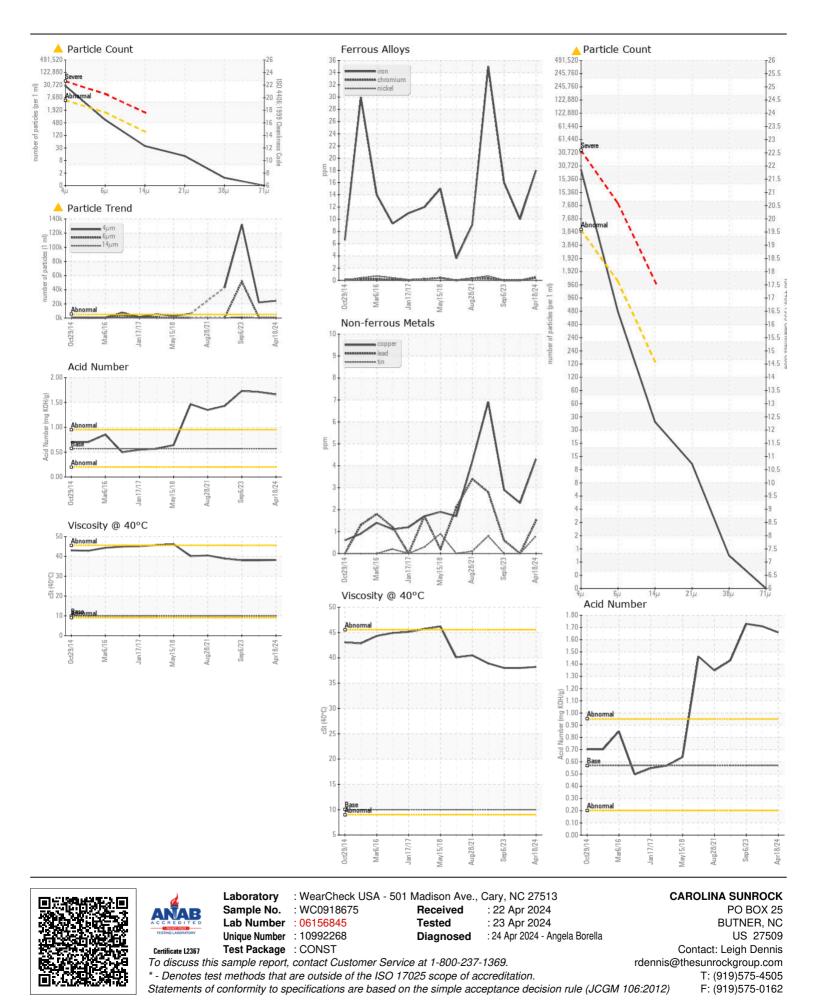
## CONTAMINATION

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test     UOM     Method     Limit/An     Current     History1     History1     History2       Sample Dume     Client Info     18 4 2024     05 3an 2024     06 5ep 2023       Machine Age     hrs     Client Info     12788     12204     11569       Oil Age     hrs     Client Info     2419     1835     1200       Oil Changed     Client Info     Changed     Not Changed     ABNORMAL     ABNORMAL       Filter Age     hrs     Client Info     Changed     Not Changed     ABNORMAL     ABNORMAL       Sample Status     -     10     <1     0     0     0       Chromium     ppm     ASTM D5185m     >10     <1     0     0       Nickel     ppm     ASTM D5185m     >10     <1     0     0       Aluminum     ppm     ASTM D5185m     >10     <1     0     0       Aluminum     ppm     ASTM D5185m     >10     <1     0     0       Vanadium     ppm     ASTM D5185m							
Sample Date     Client Info     18 Apr 2024     05 Jan 2024     06 Sep 2023       Machine Age     hrss     Client Info     2419     1835     1200       Oil Age     hrss     Client Info     2419     1835     1200       Oil Changed     Client Info     Changed     Not Changed     Not Changed       Filter Age     nrs     Client Info     Changed     Not Changed     Not Changed       Sample Status     Filter Signes     Sample Status     ABNORMAL     ABNORMAL     ABNORMAL       Iron     ppm     ASTM 05185m     >10     <1     0     0       Nickel     ppm     ASTM 05185m     >10     <1     0     <1       Silver     ppm     ASTM 05185m     >10     <1     0     <1       Aluminum     ppm     ASTM 05185m     >10     <1     0     <1       Vanadium     ppm     ASTM 05185m     >10     <1     0     <1       Vanadium     ppm     ASTM 05185m     >20     3     0     0<	Test	UOM		Limit/Abn	Current	~	History2
Machine Age Oil Age     hrs     Client Info     12788     12204     11569       Filter Age     hrs     Client Info     2419     1835     1200       Filter Age     hrs     Client Info     Changed     Not Changed     Not Changed       Filter Changed     Client Info     Changed     Not Changed     Abtrop Mathematical Abtrop Mathmatematical Abtrop	Sample Number		Client Info		WC0918675	WC0861604	WC0852353
Oil AgehrsClient Info241918351200Filter AgeNrsClient InfoChangedNot ChangedNot Cha	Sample Date				18 Apr 2024	05 Jan 2024	06 Sep 2023
Filter Åge     hrs     Client Info     2419     1835     1200       Oil Changed     Client Info     Changed     Not Changed     Not Changed     Not Changed       Sample Status     Client Info     Changed     Not Changed     Not Changed       Sample Status     ABNORMAL     ABNORMAL     ABNORMAL     ABNORMAL     ABNORMAL       Iron     ppm     ASTM D5185m     >10     <1     0     0       Nickel     ppm     ASTM D5185m     >10     <1     0     0       Nickel     ppm     ASTM D5185m     >10     4     2     5       Lead     ppm     ASTM D5185m     >10     4     2     3       Tin     ppm     ASTM D5185m     >10     <1     0     <1       Vanadium     ppm     ASTM D5185m     >20     15     8     11       Vanadium     ppm     ASTM D5185m     >20     3     0     0       Valadum     ppm     ASTM D5185m     >20     3     0	-	hrs	Client Info		12788	12204	11569
Oil Changed Filter Changed Sample StatusClient Info Client Info 	Oil Age	hrs			2419	1835	1200
Filter Changed Sample Status     Client Info     Changed ABNORMAL     Not Changed ABNORMAL     Changed ABNORMAL     ABNORMAL ABNORMAL     ABNORMAL ABNORMAL       Iron     ppm     ASTM D5185m     >10     <1     0     0       Nickel     ppm     ASTM D5185m     >10     <1     0     0       Titanium     ppm     ASTM D5185m     >10     4     2     5       Silver     ppm     ASTM D5185m     >10     4     2     3       Copper     ppm     ASTM D5185m     >10     4     2     3       Tin     ppm     ASTM D5185m     >10     <1     0     <1       Vanadium     ppm     ASTM D5185m     >10     <1     0     <1       Vanatum     ppm     ASTM D5185m     >10     <1     0     <1       Vanatum     ppm     ASTM D5185m     >20     3     0     0       Vanatum     ppm     ASTM D5185m     >20     3     0     0       Paticles >4µm     A	Filter Age	hrs	Client Info		2419	1835	1200
Sample Status     ABNORMAL     ABNORMAL     ABNORMAL     ABNORMAL     ABNORMAL       Iron     ppm     ASTM D5185m     >20     18     10     16       Chromium     ppm     ASTM D5185m     >10     <1     0     0       Nickel     ppm     ASTM D5185m     >10     <1     0     <1       Silver     ppm     ASTM D5185m     >10     4     2     5       Lead     ppm     ASTM D5185m     >10     4     2     3       Tin     ppm     ASTM D5185m     >10     <1     0     0       Vanadium     ppm     ASTM D5185m     >10     <1     0     0       Vanadium     ppm     ASTM D5185m     >20     15     8     11       Potassium     ppm     ASTM D5185m     >20     3     0     0       Vater     WC Method     >0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >10     33     288     1282 <	Oil Changed				Changed	0	Not Changd
Iron     ppm     ASTM D5185m     >20     18     10     16       Chromium     ppm     ASTM D5185m     >10     <1     0     0       Nickel     ppm     ASTM D5185m     >10     <1     0     <1       Silver     ppm     ASTM D5185m     >10     4     2     5       Lead     ppm     ASTM D5185m     >10     4     2     3       Tin     ppm     ASTM D5185m     >10     <1     0     <1       Copper     ppm     ASTM D5185m     >10     <1     0     <1       Quantification     ppm     ASTM D5185m     >10     <1     0     <1       Valacd     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >20     15     8     11       Potassium     ppm     ASTM D7647     >500     242320     22026     132090       Particles >4µm     ASTM D7647     >10	Filter Changed		Client Info		Changed	Not Changd	Changed
Chromium     ppm     ASTM D5185m     >10     <1	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Chromium     ppm     ASTM D5185m     >10     <1	Iron	nnm	ASTM D5185m	>20	10	10	16
Nickel     ppm     ASTM D5185m     >10     <1	-				-		
Titanium     ppm     ASTM D5185m     1     0     <1				-			
Silver     ppm     ASTM D5185m     <1				210			-
Aluminum     ppm     ASTM D5185m     >10     4     2     5       Lead     ppm     ASTM D5185m     >10     2     0     <1       Copper     ppm     ASTM D5185m     >10     <1     0     0       Vanadium     ppm     ASTM D5185m     >10     <1     0     <1       White Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Yellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m<>20     3     0     0       Water     WC Method     >0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >5000     24320     22026     132090       Particles >6µm     ASTM D7647     >100     1     1     7     269       Particles >71µm     ASTM D7647     >40     11     7     269       Particles >71µm     ASTM D7647     >0     0     0     0							
Lead     ppm     ASTM D5185m     >10     2     0     <1				>10			
Copper     ppm     ASTM D5185m     >75     4     2     3       Tin     ppm     ASTM D5185m     >10     <1     0     0       Vanadium     ppm     ASTM D5185m     <1     0     <1     0     <1       White Metal     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Yellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m<>20     15     8     11       Potassium     ppm     ASTM D5185m<>20     3     0     0       Water     WC Method<>0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >100     587     809     51473       Particles >5µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     yi9/114     2216/12     221/17/12     24/							
Tin     ppm     ASTM D5185m     >10     <1							
Vanadium     ppm     ASTM D5185m     <1					-		
White Metal     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Yellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >20     3     0     0       Water     WC Method     >0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >5000     ▲ 24320     ▲ 22026     ▲ 132090       Particles >6µm     ASTM D7647     >5000     ▲ 24320     ▲ 22026     ▲ 132090       Particles >51µm     ASTM D7647     >100     11     7     ▲ 269       Particles >21µm     ASTM D7647     >10     1     6     0       Oli Cleanliness     ISO 4406 (c)     >19171/4     ▲ 22/16/12     ▲ 22/17/12     ▲ 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NORML     NORML     NORML       Appearance <tds< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tds<>							
Yellow Metal     scalar     'Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >20     3     0     0       Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     WC Method     >0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >5000     ▲ 24320     ▲ 22026     ▲ 132090       Particles >6µm     ASTM D7647     >100     33     28     ▲ 1282       Particles >21µm     ASTM D7647     >10     1     1     6       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >10     1     1     0     0       Oil Cleanliness     scalar     'Visual     NONE     NONE     NONE     NONE       Debris     scalar     'Visual     NONE     NONE     NORE     NORE     NORE       Appearance     scalar     'Visual     NORH     NORML				NONF			
Silicon     ppm     ASTM D5185m     >20     15     8     11       Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     WC Method     >0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >5000     ▲ 24320     ▲ 22026     ▲ 132090       Particles >6µm     ASTM D7647     >1300     587     809     ▲ 51473       Particles >6µm     ASTM D7647     >160     33     28     ▲ 1282       Particles >21µm     ASTM D7647     >10     1     7     ▲ 269       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (> 19171/4     ▲ 22/16/12     ▲ 22/17/12     ▲ 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NORML     NORML     NORML     NORML					-		
Potassium     ppm     ASTM D5185m     >20     3     0     0       Water     WC Method     >0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >5000     24320     22026     132090       Particles >6µm     ASTM D7647     >1300     587     809     51473       Particles >14µm     ASTM D7647     >160     33     28     1282       Particles >21µm     ASTM D7647     >10     1     1     6       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >191714     22/16/12     22/17/12     24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NORML     NORML       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>							
Water     WC Method     >0.1     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >5000     ▲ 24320     ▲ 22026     ▲ 132090       Particles >6µm     ASTM D7647     >1300     587     809     ▲ 51473       Particles >14µm     ASTM D7647     >160     33     28     ▲ 1282       Particles >21µm     ASTM D7647     >40     11     7     ▲ 269       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     ▲ 22/16/12     ▲ 22/17/12     ▲ 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NORML     NORML     NORML       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Ddor     scalar     *Visual     NOR <t< th=""><th>Silicon</th><th>ppm</th><th>ASTM D5185m</th><th>&gt;20</th><th>15</th><th>8</th><th>11</th></t<>	Silicon	ppm	ASTM D5185m	>20	15	8	11
Particles >4μm     ASTM D7647     >5000     ▲ 24320     ▲ 22026     ▲ 132090       Particles >6μm     ASTM D7647     >1300     587     809     ▲ 51473       Particles >14μm     ASTM D7647     >160     33     28     ▲ 1282       Particles >21μm     ASTM D7647     >40     11     7     ▲ 269       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >30     0     0     0       Oil Cleanliness     ISO 4406 (c)     >191714     ▲ 22/16/12     ▲ 22/17/12     ▲ 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NORE     NORE     NORE     NORE       Appearance     scalar     *Visual     NORH     NORM     NORM     NORM     NORM       Odo     scalar     *Visual     NORH     NO	Potassium	ppm	ASTM D5185m	>20	3	0	0
Particles >6µm     ASTM D7647     >1300     587     809     ▲ 51473       Particles >14µm     ASTM D7647     >160     33     28     1282       Particles >21µm     ASTM D7647     >40     11     7     ▲ 269       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     ▲ 22/16/12     ▲ 22/17/12     ▲ 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORM     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML       Boron     ppm     ASTM D5185m     5     2			WC Method	>0.1	NEG	NEG	NEG
Particles >14µm     ASTM D7647     >160     33     28     1282       Particles >21µm     ASTM D7647     >40     11     7     269       Particles >38µm     ASTM D7647     >10     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/4     22/16/12     22/17/12     24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE       Sand/Dirt     scalar     *Visual     NONE     NONE     NORE     NORE       Appearance     scalar     *Visual     NORM     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORM     NORML     NORML       Emulsified Water     scalar     *Visual     NORM     NORM     NORM     NORM       Barium     ppm     ASTM D5185m     5     2     0 <th></th> <th></th> <th>ASTM D7647</th> <th>&gt;5000</th> <th><u> </u></th> <th>▲ 22026</th> <th>▲ 132090</th>			ASTM D7647	>5000	<u> </u>	▲ 22026	▲ 132090
Particles >21µm     ASTM D7647     >40     11     7     269       Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14 <b>A</b> 22/16/12 <b>A</b> 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     LIGHT     NONE       Sand/Dirt     scalar     *Visual     NONE     NONE     NORML     NORML     NORML       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORML     NORML     NORML     NORML       Boron     ppm     ASTM D5185m     5     2     0     <1       Barium     ppm     ASTM D5185m     5     0     0     0       Magnese     ppm     ASTM D5185m     5 <th>·</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	·						
Particles >38µm     ASTM D7647     >10     1     1     6       Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     A 22/16/12     A 22/17/12     A 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     LIGHT     NONE       Sand/Dirt     scalar     *Visual     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     >0.1     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     5     2     <1     2 <tr< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr<>							
Particles >71µm     ASTM D7647     >3     0     0     0       Oil Cleanliness     ISO 4406 (c)     >19/17/14     ▲ 22/16/12     ▲ 22/17/12     ▲ 24/23/17       Silt     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     LIGHT     NONE       Sand/Dirt     scalar     *Visual     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Gotor     scalar     *Visual     >0.1     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     5     2     0     <1       Barium     ppm     ASTM D5185m     5     2     <1     2							
Oil CleanlinessISO 4406 (c)>19/17/14▲ 22/16/12▲ 22/17/12▲ 24/23/17Siltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m520<1BoronppmASTM D5185m5000MolybdenumppmASTM D5185m52<12ManganeseppmASTM D5185m20590636CalciumppmASTM D5185m200666674827PhosphorusppmASTM D5185m370112911131079ZincppmASTM D5185m370122211381310SulfurppmASTM D5185m370122211381310SulfurppmASTM D5185m2500709758727740Acid Number (AN)mg KOHgASTM D5185m0.571.661.711.73					-		
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m520<1BoronppmASTM D5185m520<1BariumppmASTM D5185m52<12ManganeseppmASTM D5185m52<12ManganeseppmASTM D5185m200666674827PhosphorusppmASTM D5185m300112911131079ZincppmASTM D5185m370122211381310SulfurppmASTM D5185m2500709758727740Acid Number (AN)mg KOHgASTM D50450.571.661.711.73					-		-
Debrisscalar*VisualNONENONELIGHTNONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m520<1BoronppmASTM D5185m520<1BariumppmASTM D5185m52<12ManganeseppmASTM D5185m52<12MagnesiumppmASTM D5185m20666674827PhosphorusppmASTM D5185m300112911131079ZincppmASTM D5185m370122211381310SulfurppmASTM D5185m2500709758727740Acid Number (AN)mg KOHgASTM D50450.571.661.711.73							
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m520<1BoronppmASTM D5185m520<1BariumppmASTM D5185m52<12ManganeseppmASTM D5185m25590636<1MagnesiumppmASTM D5185m200666674827PhosphorusppmASTM D5185m370112911131079ZincppmASTM D5185m370122211381310SulfurppmASTM D5185m2500709758727740Acid Number (AN)mg KOHgASTM D50450.571.661.711.73					-		
Appearance Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m011BoronppmASTM D5185m520<1BariumppmASTM D5185m5000MolybdenumppmASTM D5185m52<12ManganeseppmASTM D5185m25590636CalciumppmASTM D5185m200666674827PhosphorusppmASTM D5185m370112911131079ZincppmASTM D5185m370122211381310SulfurppmASTM D5185m2500709758727740Acid Number (AN)mg KOHgASTM D80450.571.661.711.73					-		
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGSodiumppmASTM D5185m011BoronppmASTM D5185m520<1BariumppmASTM D5185m5000MolybdenumppmASTM D5185m52<12ManganeseppmASTM D5185m25590636CalciumppmASTM D5185m200666674827PhosphorusppmASTM D5185m300112911131079ZincppmASTM D5185m370122211381310SulfurppmASTM D5185m2500709758727740Acid Number (AN)mg KOHgASTM D80450.571.661.711.73							
Emulsified Water     scalar     *Visual     >0.1     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     0     1     1       Boron     ppm     ASTM D5185m     5     2     0     <1       Barium     ppm     ASTM D5185m     5     0     0     0       Molybdenum     ppm     ASTM D5185m     5     2     <1     2       Manganese     ppm     ASTM D5185m     5     2     <1     2       Magnesium     ppm     ASTM D5185m     25     590     590     636       Calcium     ppm     ASTM D5185m     200     666     674     827       Phosphorus     ppm     ASTM D5185m     300     1129     1113     1079       Zinc     ppm     ASTM D5185m     370     1222     1138     1310       Sulfur     ppm     ASTM D5185m     2500     7097     5872     7740       Acid Number (AN)     mg KOH/g     ASTM D8045     0.57				-	-		
Sodium     ppm     ASTM D5185m     0     1     1       Boron     ppm     ASTM D5185m     5     2     0     <1       Barium     ppm     ASTM D5185m     5     0     0     0       Molybdenum     ppm     ASTM D5185m     5     0     0     0       Magnese     ppm     ASTM D5185m     5     2     <1     2       Magnesium     ppm     ASTM D5185m     25     590     590     636       Calcium     ppm     ASTM D5185m     200     666     674     827       Phosphorus     ppm     ASTM D5185m     300     1129     1113     1079       Zinc     ppm     ASTM D5185m     370     1222     1138     1310       Sulfur     ppm     ASTM D5185m     2500     7097     5872     7740       Acid Number (AN)     mg KOHg     ASTM D8045     0.57     1.66     1.71     1.73					-		
Boron     ppm     ASTM D5185m     5     2     0     <1		Scalal	visual	>0.1	NEG	NEG	NEG
Boron     ppm     ASTM D5185m     5     2     0     <1	Sodium	ppm	ASTM D5185m		0	1	1
Barium     ppm     ASTM D5185m     5     0     0     0       Molybdenum     ppm     ASTM D5185m     5     2     <1	Boron		ASTM D5185m	5	2	0	<1
Manganese     ppm     ASTM D5185m     <1	Barium		ASTM D5185m	5	0	0	0
Magnesium     ppm     ASTM D5185m     25     590     590     636       Calcium     ppm     ASTM D5185m     200     666     674     827       Phosphorus     ppm     ASTM D5185m     300     1129     1113     1079       Zinc     ppm     ASTM D5185m     370     1222     1138     1310       Sulfur     ppm     ASTM D5185m     2500     7097     5872     7740       Acid Number (AN)     mg KOH/g     ASTM D8045     0.57     1.66     1.71     1.73	Molybdenum	ppm	ASTM D5185m	5	2	<1	2
Calcium     ppm     ASTM D5185m     200     666     674     827       Phosphorus     ppm     ASTM D5185m     300     1129     1113     1079       Zinc     ppm     ASTM D5185m     370     1222     1138     1310       Sulfur     ppm     ASTM D5185m     2500     7097     5872     7740       Acid Number (AN)     mg KOHg     ASTM D8045     0.57     1.66     1.71     1.73	Manganese	ppm	ASTM D5185m		<1	0	<1
Phosphorus     ppm     ASTM D5185m     300     1129     1113     1079       Zinc     ppm     ASTM D5185m     370     1222     1138     1310       Sulfur     ppm     ASTM D5185m     2500     7097     5872     7740       Acid Number (AN)     mg KOHg     ASTM D8045     0.57     1.66     1.71     1.73	Magnesium	ppm	ASTM D5185m	25	590	590	636
Zinc     ppm     ASTM D5185m     370     1222     1138     1310       Sulfur     ppm     ASTM D5185m     2500     7097     5872     7740       Acid Number (AN)     mg KOHg     ASTM D8045     0.57     1.66     1.71     1.73	Calcium	ppm	ASTM D5185m	200	666	674	827
Sulfur     ppm     ASTM D5185m     2500     7097     5872     7740       Acid Number (AN)     mg KOHg     ASTM D8045     0.57     1.66     1.71     1.73	Phosphorus	ppm	ASTM D5185m	300	1129	1113	1079
Acid Number (AN) mg KOH/g ASTM D8045 0.57 1.66 1.71 1.73	Zinc	ppm	ASTM D5185m	370	1222	1138	1310
		ppm	ASTM D5185m	2500	7097	5872	7740
Visc @ 40°C cSt ASTM D445 10 38.2 38.0 38.0	. ,	mg KOH/g		0.57		1.71	
	Visc @ 40°C	cSt	ASTM D445	10	38.2	38.0	38.0



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