

## Machine Id JOHN DEERE 350G 1FF350GXCEE809809 Component Hydraulic System Fluid HITACHI HYDRAULIC SUPER EX 46HN (51 GAL)

$\mathbf{N} \mathbf{A} \mathbf{A} \mathbf{A} \mathbf{C} = \mathbf{N}$	
DMMEN	

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.



All component wear rates are normal.

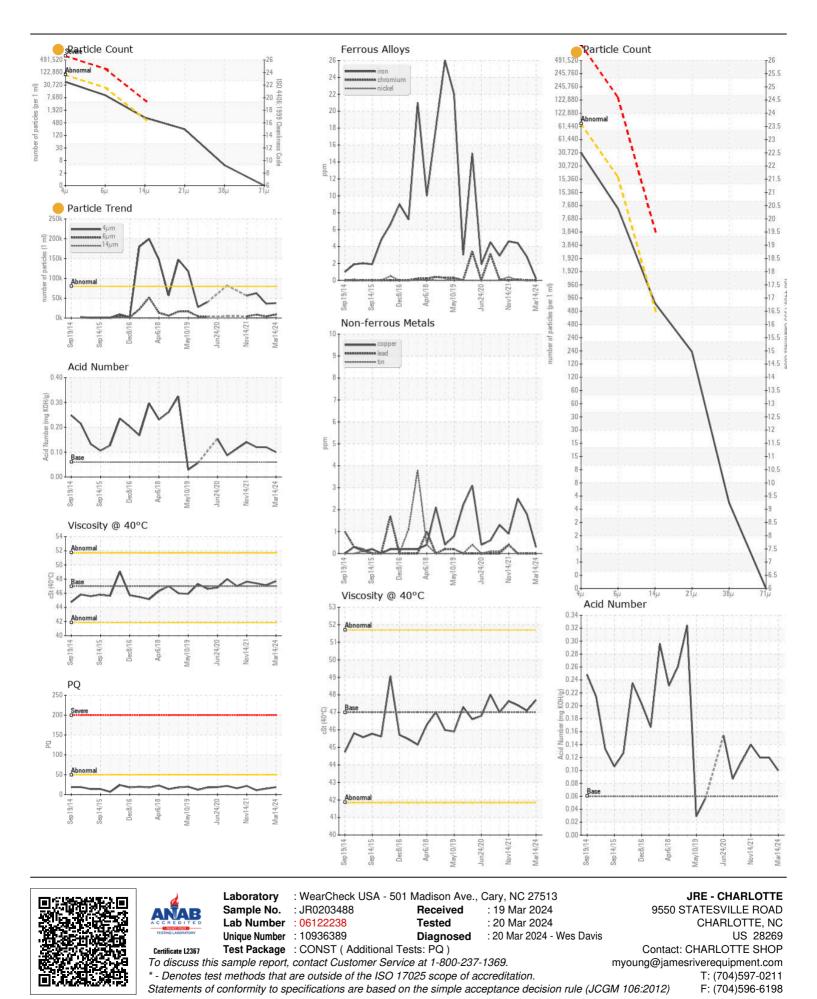
## CONTAMINATION

There is a light 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/Ab     Current     History1     History2       Sample Number     Client Info     JR0203488     JR0162410       Sample Date     Client Info     11093     10617     9936       Oil Age     hrs     Client Info     0     0     500       Oil Age     hrs     Client Info     0     0     500       Oil Changed     Client Info     Not Changed     Not Anaged     NA       Sample Status	·/				~~~~		
Sample Number     Client Info     JR0203488     JR018256     JR0162410       Sample Date     Client Info     14 Mar 2024     11 Dec 2023     13 Apr 2023       Machine Age     hrs     Client Info     11093     10617     9936       Oil Age     hrs     Client Info     0     0     500       Oil Anged     hrs     Client Info     Not Changed     Changed     Not Changed       Filter Changed     Client Info     Not Changed     Not Changed     Changed     Nor MAL       PQ     ASTM D8184     >50     19     15     11       Iron     ppm     ASTM D8185     >9     0     0     <1       Nickel     ppm     ASTM D8185     >9     0     0     0       Nickel     ppm     ASTM D8185     >9     0     0     0       Juminum     ppm     ASTM D8185     >9     0     0     0       Vanadium     ppm     ASTM D8185     >50     0     0     0       Lead	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age     hrs     Client Info     11093     10617     9936       Oil Age     hrs     Client Info     10412     681     500       Filter Age     hrs     Client Info     Not Changed     Changed       Oil Changed     Client Info     Not Changed     Not Changed     Not Changed       Filter Changed     Client Info     Not Changed     Not Changed     Not Changed       Filter Changed     Client Info     Not Changed     Not Changed     Not Changed       Chromium     ppm     ASTM D5185m     50     0     0     <1       Nickel     ppm     ASTM D5185m     55     0     0     0       Silver     ppm     ASTM D5185m     528     0     0     0       Copper     ppm     ASTM D5185m     >28     0     0     0       Vanadium     ppm     ASTM D5185m     >50     0     0     0       Vanadium     ppm     ASTM D5185m     >50     0     0     0       Vanadium	Sample Number		Client Info		JR0203488		JR0162410
Oil Age     hrs     Client Info     10412     681     500       Filter Age     hrs     Client Info     0     0     500       Oil Changed     Client Info     Changed     Not Changed     Not Changed     Not Changed       Sample Status     Client Info     Changed     Nor Changed     Nor MAL       PQ     ASTM D5185m     >32     <1     3     4       Chromium     ppm     ASTM D5185m     >9     0     0     <1       Nickel     ppm     ASTM D5185m     >9     0     0     0       Silver     ppm     ASTM D5185m     >9     <1     1     <1       Lead     ppm     ASTM D5185m     >8     0     0     0       Copper     ppm     ASTM D5185m     >1     2     2     1       Vellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >11     2     3     1       Pot	Sample Date		Client Info		14 Mar 2024	11 Dec 2023	13 Apr 2023
Filter Age OII Changed     hrs     Client Info     Not Changed Not Changed       Sample Status     Client Info     Not Changed     Not Changed     Not Changed       PQ     ASTM D8184     >50     19     15     11       Iron     ppm     ASTM D5185m     >32     <1     3     4       Chromium     ppm     ASTM D5185m     >9     0     0     <1       Nickel     ppm     ASTM D5185m     >9     0     0     0       Aluminum     ppm     ASTM D5185m     >9     <1     1     <1       Lead     ppm     ASTM D5185m     >0     0     0     0       Vanaduum     ppm     ASTM D5185m     >5     0     0     0     0       Visual     NONE     NONE     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >20     0     0     0       Vi	Machine Age	hrs	Client Info		11093	10617	9936
Oil Changed Sample Status     Client Info     Not Changed Changed ATTENTION     Not Changed Not Chan	Oil Age	hrs	Client Info		10412	681	500
Filter Changed Sample Status     Client Info     Changed ATTENTION     Not Changed NORMAL     N/A       PQ     ASTM D8184     >50     19     15     11       Iron     ppm     ASTM D5185m     >32     <1     3     4       Chromium     ppm     ASTM D5185m     >50     0     0     <1       Nickel     ppm     ASTM D5185m     50     0     0     0       Silver     ppm     ASTM D5185m     50     <1     1     <1       Lead     ppm     ASTM D5185m     >50     <1     2     2       Tin     ppm     ASTM D5185m     >50     <1     2     2       Tin     ppm     ASTM D5185m     >50     <1     0     0       Vanadium     ppm     ASTM D5185m     >50     <1     0     0       Vanadium     ppm     ASTM D5185m     >11     2     3     1       Paticles >4µm     ASTM D7647     >80000     37692     36026     62598 <th>Filter Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th>0</th> <th>500</th>	Filter Age	hrs	Client Info		0	0	500
Sample Status     ATTENTION     NORMAL     NORMAL       PQ     ASTM D8184     >50     19     15     11       Iron     ppm     ASTM D5185m     >9     0     0     <1       Nickel     ppm     ASTM D5185m     >9     0     0     <1       Nickel     ppm     ASTM D5185m     S0     0     0     0       Aluminum     ppm     ASTM D5185m     >9     <1     1     <1       Lead     ppm     ASTM D5185m     >9     <1     1     <1       Lead     ppm     ASTM D5185m     >50     0     0     0       Vanadium     ppm     ASTM D5185m     >50     0     0     0       Vanadium     ppm     ASTM D5185m     >10     <1     0     0       Vanadium     ppm     ASTM D5185m     >11     2     3     1       Paticles     scalar     *Visual     NONE     NONE     NONE     NONE       Silot     pp	Oil Changed		Client Info		Not Changd	Not Changd	Changed
PQ     ASTM D8184     >50     19     15     11       Iron     ppm     ASTM D8185m     >32     <1     3     4       Chromium     ppm     ASTM D5185m     >9     0     0     <1     0       Nickel     ppm     ASTM D5185m     >5     0     0     0     0       Silver     ppm     ASTM D5185m     >9     <1     1     <1     0       Auminum     ppm     ASTM D5185m     >28     0     0     0       Copper     ppm     ASTM D5185m     >50     <1     2     2       Tin     ppm     ASTM D5185m     >50     0     0     0       Vanadium     ppm     ASTM D5185m     >50     0     0     0       Vanadium     ppm     ASTM D5185m     >50     0     0     0     0       Vanadium     ppm     ASTM D5185m     >20     0     0     0     0       Vellow Metal     scalar     *Visual </th <th>Filter Changed</th> <th></th> <th>Client Info</th> <th></th> <th>Changed</th> <th>Not Changd</th> <th>N/A</th>	Filter Changed		Client Info		Changed	Not Changd	N/A
Iron     ppm     ASTM D5185m     >32     <1	Sample Status				ATTENTION	NORMAL	NORMAL
Iron     ppm     ASTM D5185m     >32     <1							
Chromium     ppm     ASTM D5185m     >9     0     0     <1	PQ				19		
Nickel     ppm     ASTM D5185m     >5     0     0     0       Titanium     ppm     ASTM D5185m     0     <1     0       Silver     ppm     ASTM D5185m     0     0     0     0       Aluminum     ppm     ASTM D5185m     >9     <1     1     <1       Lead     ppm     ASTM D5185m     >50     <1     2     2       Tin     ppm     ASTM D5185m     >50     <1     2     2       Tin     ppm     ASTM D5185m     >50     <1     0     0       Vanadium     ppm     ASTM D5185m     >11     2     3     1       Velow Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >20     0     0     0     0       Vater     WC Method     >0.75     NEG     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >2000     37692     36026	-						-
Titanium     ppm     ASTM D5185m     0     <1					•		
Silver     ppm     ASTM D5185m     0     0     0     0       Aluminum     ppm     ASTM D5185m     >9     <1     1     <1       Lead     ppm     ASTM D5185m     >28     0     0     0       Copper     ppm     ASTM D5185m     >50     <1     2     2       Tin     ppm     ASTM D5185m     >50     0     0     0       Vanadium     ppm     ASTM D5185m     >50     0     0     0       White Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >11     2     3     1       Potassium     ppm     ASTM D5185m     >20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >80000     37692     36026     62598       Particles >71µm     ASTM D7647     >10     0     0     <				>5	-		
Aluminum     ppm     ASTM D5185m     >9     <1					•		
Lead     ppm     ASTM D5185m     >28     0     0     0       Copper     ppm     ASTM D5185m     >50     <1     2     2       Tin     ppm     ASTM D5185m     >5     0     0     0       Vanadium     ppm     ASTM D5185m     0     <1     0       White Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Yellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m<>11     2     3     1       Potassium     ppm     ASTM D5185m<>20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >640     736     112     308       Particles >21µm     ASTM D7647     >10     0     1     112     308       Particles >21µm     ASTM D7647     >40     4     2     4     2     4					-		
Copper     ppm     ASTM D5185m     >50     <1							
Tin     ppm     ASTM D5185m     >5     0     0     0       Vanadium     ppm     ASTM D5185m     0     <1     0       White Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Yellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >11     2     3     1       Potassium     ppm     ASTM D5185m     >20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >8000     37692     36026     62598       Particles >6µm     ASTM D7647     >160     206     23     76       Particles >38µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     23/21/16     0     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE <t< th=""><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th></t<>					-		
Vanadium     ppm     ASTM D5185m     0     <1							_
White Metal     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Yellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >11     2     3     1       Potassium     ppm     ASTM D5185m     >20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG     PEG       Particles >4µm     ASTM D7647     >80000     37692     36026     62598       Particles >51µm     ASTM D7647     >640     736     112     308       Particles >21µm     ASTM D7647     >100     0     1     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NORE     NORML     NORML     NORML       Appearance				>5	-		
Yellow Metal     scalar     *Visual     NONE     NONE     NONE     NONE       Silicon     ppm     ASTM D5185m     >11     2     3     1       Potassium     ppm     ASTM D5185m     >20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >80000     37692     36026     62598       Particles >14µm     ASTM D7647     >2000     8751     4106     8469       Particles >14µm     ASTM D7647     >640     736     112     308       Particles >38µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NORE     NORML     NORML     NORML       Appearance     scalar     *Visual     NORM     NORML     N					•		÷
Silicon     ppm     ASTM D5185m     >11     2     3     1       Potassium     ppm     ASTM D5185m     >20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >80000     37692     36026     62598       Particles >6µm     ASTM D7647     >2000     8751     4106     8469       Particles >14µm     ASTM D7647     >640     736     112     308       Particles >38µm     ASTM D7647     >160     206     23     76       Particles >71µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NORE     NORML     NORML     NORML       Appearance     scalar     *Visual     NORML     NORML     NORML     NO				-	-		
Potassium     ppm     ASTM D5185m     >20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >80000     37692     36026     62598       Particles >6µm     ASTM D7647     >20000     8751     4106     8469       Particles >14µm     ASTM D7647     >640     736     112     308       Particles >21µm     ASTM D7647     >160     206     23     76       Particles >71µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORT     NOR     NORML	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium     ppm     ASTM D5185m     >20     0     0     0       Water     WC Method     >0.075     NEG     NEG     NEG       Particles >4µm     ASTM D7647     >80000     37692     36026     62598       Particles >6µm     ASTM D7647     >20000     8751     4106     8469       Particles >14µm     ASTM D7647     >640     736     112     308       Particles >21µm     ASTM D7647     >160     206     23     76       Particles >71µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORT     NOR     NORML	Silioon	000	ACTM DE105m	. 11	0	0	4
Water     WC Method     >0.075     NEG     NEG     NEG       Particles >4μm     ASTM D7647     >80000     37692     36026     62598       Particles >50µm     ASTM D7647     >20000     8751     4106     8469       Particles >14µm     ASTM D7647     >640     736     112     308       Particles >21µm     ASTM D7647     >160     206     23     76       Particles >38µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML       Appearance     scalar     *Visual     NO					_		
Particles >4μm     ASTM D7647     >80000     37692     36026     62598       Particles >6μm     ASTM D7647     >20000     8751     4106     8469       Particles >14μm     ASTM D7647     >640     736     112     308       Particles >21μm     ASTM D7647     >160     206     23     76       Particles >38μm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE       Sand/Dirt     scalar     *Visual     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML <th></th> <th>ррп</th> <th></th> <th></th> <th>-</th> <th></th> <th>÷</th>		ррп			-		÷
Particles >6µm     ASTM D7647     >20000     8751     4106     8469       Particles >14µm     ASTM D7647     >640     736     112     308       Particles >21µm     ASTM D7647     >160     206     23     76       Particles >38µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Goron     scalar     *Visual     NORML     NORM     NORML     NORML     NORML       Barium     ppm     ASTM D5185m     >21     0     <1     0       Magnesiu					-		
Particles >14μm     ASTM D7647     >640     736     112     308       Particles >21μm     ASTM D7647     >160     206     23     76       Particles >38μm     ASTM D7647     >40     4     2     4       Particles >71μm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Sand/Dirt     scalar     *Visual     NORE     NORML     NORML     NORML     NORML       Appearance     scalar     *Visual     NORM     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML     NORML       Boron     ppm     ASTM D5185m     >21     0     <1     0       Barium							
Particles >21µm     ASTM D7647     >160     206     23     76       Particles >38µm     ASTM D7647     >40     4     2     4       Particles >71µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE       Sand/Dirt     scalar     *Visual     NOR     NONE     NONE     NONE     NORE       Appearance     scalar     *Visual     NORM     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML     NORML       Emulsified Water     scalar     *Visual     >0.075     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     >21     0     <1     0       Barium							
Particles >38µm     ASTM D7647     >40     4     2     4       Particles >71µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE       Sand/Dirt     scalar     *Visual     NOR     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML     NORML     NORML       Odor     scalar     *Visual     NORM     NORML     NORML     NORML     NORML       Emulsified Water     scalar     *Visual     >0.075     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     >21     0     <1     0       Barium     ppm     ASTM D5185m     >21     0     <1     0       Marganese     ppm </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Particles >71µm     ASTM D7647     >10     0     0     1       Oil Cleanliness     ISO 4406 (c)     >23/21/16     22/20/17     22/19/14     23/20/15       Silt     scalar     *Visual     NONE     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE     NONE     NONE       Sand/Dirt     scalar     *Visual     NONE     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       Emulsified Water     scalar     *Visual     >0.075     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     >21     0     <1     0       Barium     ppm     ASTM D5185m     0     <1     0     <1 </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Oil CleanlinessISO 4406 (c)>23/21/1622/20/1722/19/1423/20/15Siltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>210<10BoronppmASTM D5185m>210<10BariumppmASTM D5185m00<1<1ManganeseppmASTM D5185m00<1<1MagnesiumppmASTM D5185m0142PhosphorusppmASTM D5185m062323SulfurppmASTM D5185m13069111Acid Number (AN)mg KOHgASTM D5185m130.120.12				-	-		-
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>210<10BoronppmASTM D5185m>210<10BariumppmASTM D5185m<00<10ManganeseppmASTM D5185m<000<1<1MagnesiumppmASTM D5185m<00142PhosphorusppmASTM D5185m0631586ZincppmASTM D5185m0623323SulfurppmASTM D5185m13069111Acid Number (AN)mg KOHgASTM D80450.060.100.120.12					-		
Debrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>210<10BoronppmASTM D5185m0<10BariumppmASTM D5185m0<1<1MalganeseppmASTM D5185m0<1<1MagnesiumppmASTM D5185m002CalciumppmASTM D5185m0142PhosphorusppmASTM D5185m0631586ZincppmASTM D5185m062323SulfurppmASTM D5185m13069111Acid Number (AN)mg KOHgASTM D80450.060.100.120.12		scalar	( )				
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>210<10BoronppmASTM D5185m>210<10BariumppmASTM D5185m0000MolybdenumppmASTM D5185m0<1<1ManganeseppmASTM D5185m002CalciumppmASTM D5185m0142PhosphorusppmASTM D5185m0631586ZincppmASTM D5185m062323SulfurppmASTM D5185m13069111Acid Number (AN)mg KOHgASTM D80450.060.100.120.12					-		
Appearancescalar*VisualNORMLNORNORNORNORNORNO					-		
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>210<10BoronppmASTM D5185m>210<10BariumppmASTM D5185m0000MolybdenumppmASTM D5185m00<1<1ManganeseppmASTM D5185m00<1<1MagnesiumppmASTM D5185m002CalciumppmASTM D5185m0142PhosphorusppmASTM D5185m0631586ZincppmASTM D5185m062323SulfurppmASTM D5185m13069111Acid Number (AN)mg KOHgASTM D80450.060.100.120.12							NORML
Emulsified Water     scalar     *Visual     >0.075     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     >21     0     <1     0       Boron     ppm     ASTM D5185m     >21     0     <1     0       Barium     ppm     ASTM D5185m     0     0     0     0       Malganese     ppm     ASTM D5185m     0     <1     <1       Manganese     ppm     ASTM D5185m     0     0     <1       Magnesium     ppm     ASTM D5185m     0     0     21       Phosphorus     ppm     ASTM D5185m     0     0     22       Phosphorus     ppm     ASTM D5185m     0     14     2       Phosphorus     ppm     ASTM D5185m     0     631     586       Zinc     ppm     ASTM D5185m     0     632     23     23       Sulfur     ppm     ASTM D5185m     0.06     69     111       Acid Number (AN)     mg KOH/g     ASTM							
Sodium     ppm     ASTM D5185m     >21     0     <1					-		
Boron     ppm     ASTM D5185m     0     <1							
Barium     ppm     ASTM D5185m     0     0     0       Molybdenum     ppm     ASTM D5185m     0     <1     <1       Manganese     ppm     ASTM D5185m     0     0     <1       Magnesium     ppm     ASTM D5185m     0     0     2       Calcium     ppm     ASTM D5185m     0     14     2       Phosphorus     ppm     ASTM D5185m     0     631     586       Zinc     ppm     ASTM D5185m     0     62     23     23       Sulfur     ppm     ASTM D5185m     13     0     69     111       Acid Number (AN)     mg KOH/g     ASTM D8045     0.06     0.10     0.12     0.12	Sodium	ppm	ASTM D5185m	>21	0	<1	0
Molybdenum     ppm     ASTM D5185m     0     <1	Boron	ppm	ASTM D5185m		0	<1	0
Manganese     ppm     ASTM D5185m     0     0     <1	Barium	ppm	ASTM D5185m		0		
Magnesium     ppm     ASTM D5185m     0     0     2       Calcium     ppm     ASTM D5185m     0     14     2       Phosphorus     ppm     ASTM D5185m     827     637     631     586       Zinc     ppm     ASTM D5185m     0     6     23     23       Sulfur     ppm     ASTM D5185m     13     0     69     111       Acid Number (AN)     mg KOH/g     ASTM D8045     0.06     0.10     0.12     0.12	Molybdenum	ppm				<1	<1
Calcium     ppm     ASTM D5185m     0     14     2       Phosphorus     ppm     ASTM D5185m     827     637     631     586       Zinc     ppm     ASTM D5185m     0     6     23     23       Sulfur     ppm     ASTM D5185m     13     0     69     111       Acid Number (AN)     mg KOH/g     ASTM D8045     0.06     0.10     0.12     0.12	-	ppm					
Phosphorus     ppm     ASTM D5185m     827     637     631     586       Zinc     ppm     ASTM D5185m     0     6     23     23       Sulfur     ppm     ASTM D5185m     13     0     69     111       Acid Number (AN)     mg KOH/g     ASTM D8045     0.06     0.10     0.12     0.12	Magnesium	ppm	ASTM D5185m			0	2
Zinc     ppm     ASTM D5185m     0     6     23     23       Sulfur     ppm     ASTM D5185m     13     0     69     111       Acid Number (AN)     mg KOH/g     ASTM D8045     0.06     0.10     0.12     0.12		ppm					
Sulfur     ppm     ASTM D5185m     13     0     69     111       Acid Number (AN)     mg KOH/g     ASTM D8045     0.06     0.10     0.12     0.12		ppm		827			
Acid Number (AN) mg KOH/g ASTM D8045 0.06 0.10 0.12 0.12	-						
Visc @ 40°C cSt ASTM D445 47 47.7 47.1 47.4	. ,						
	Visc @ 40°C	cSt	ASTM D445	47	47.7	47.1	47.4



Submitted By: Mike Young - CHARLOTTE SHOP