

#### [W62697] Machine Id JOHN DEERE 350G 1FF350GXTMF815037 Component

# Right Final Drive

JOHN DEERE GL-5 80W90 (--- GAL)

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. ( Customer Sample Comment: W62697 )

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### **WEAR**

All component wear rates are normal.

## CONTAMINATION

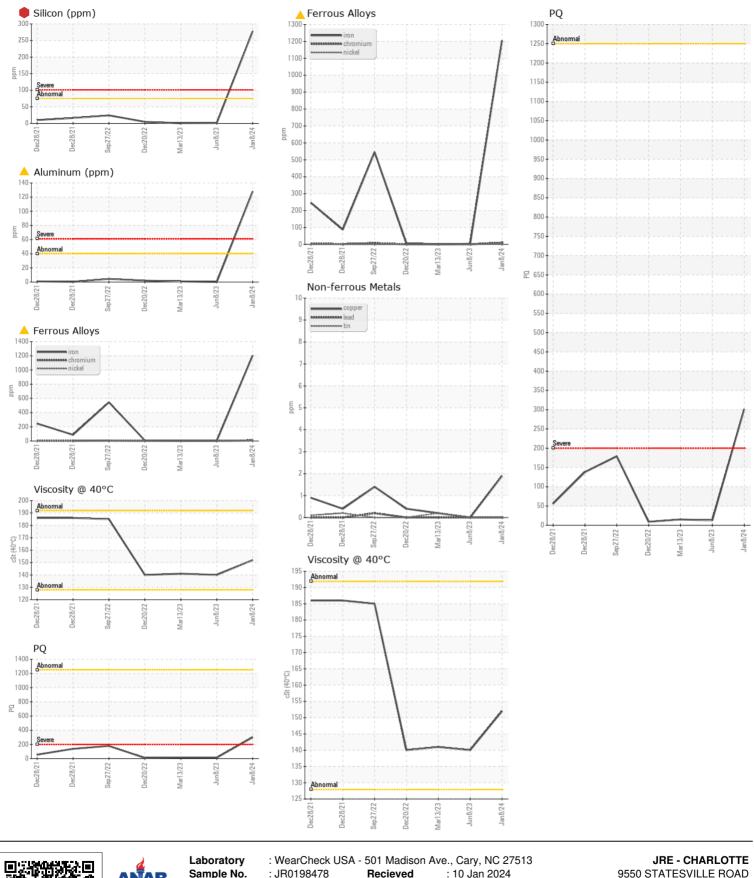
Elemental levels of silicon (Si) and aluminum (Al) indicate aluminasilicate (coarse dirt) ingress.

## FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sample DateClient Info08 Jan 202408 Jan 202313 Mar 2023Machine AgehrsClient Info442834842984Oil AgehrsClient Info99281500500Filter AgehrsClient Info00500Oil ChangedClient InfoImageNch ChangedChangedFilter ChangedImageClient InfoImageNch ChangedChangedFilter ChangedImageClient InfoN/AN/AChangedSample StatusImageSEVERENORMALNORMALPQASTM D51855703011315IronppmASTM D5185591000NickelppmASTM D5185510000NickelppmASTM D51855401283(11ImageppmASTM D51855401001LeadppmASTM D5185540001ImageppmASTM D51855401001VanadiumppmASTM D5185540001VanadiumppmASTM D51855401001VanadiumppmASTM D51855401001VanadiumppmASTM D51855401001VanadiumppmASTM D51855401001VanadiumppmASTM D5185540<							
Sample DateClient Info08 Jan 202408 Jun 202313 Mar 2023Machine AgehrsClient Info442834842984Oil AgehrsClient Info39281500500Filter AgehrsClient InfoChangedNot ChangedChangedFilter ChangedClient InfoN/AN/ANASample StatusClient InfoN/AN/ANoRMALPQASTM D5185>7501011315IronpmASTM D5185>91000NickelppmASTM D5185>91000NickelppmASTM D5185>91000NickelppmASTM D5185>91000SilverppmASTM D5185>10000AuminumppmASTM D5185>4020-11LeadppmASTM D5185>10000CopperppmASTM D5185>10000VanadiumppmASTM D5185>10000VanadiumppmASTM D5185>10000Vellow Metalscalar'VisualNONENONENONENONEVellow Metalscalar'VisualNONENONENONENONESiltscalar'VisualNONENONENONENONESodd/Dirtscalar'Visual <t< th=""><th>Test</th><th>UOM</th><th>Method</th><th>Limit/Abn</th><th>Current</th><th>History1</th><th>History2</th></t<>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info442834842984Oil AgehrsClient Info39281500500Filter AgehrsClient Info00500Oil ChangedClient InfoIKAngedN/AN/AChangedFilter ChangedClient InfoIN/AN/AChangedSample StatusClient InfoIN/AN/ANORMALPQASTM D8184>12053011315IronpmASTM D5185>91000NickelpmASTM D5185>91000NickelpmASTM D5185>91000NickelpmASTM D5185>10000AluminumpmASTM D5185>0000AluminumpmASTM D5185>10000CopperpmASTM D5185>402200VanadiumpmASTM D5185>10000VanadiumpmASTM D5185>10000VanadiumpmASTM D5185>401200VanadiumpmASTM D5185>10000VanadiumpmASTM D5185>10000VanadiumpmASTM D5185>10000VanadiumpmASTM D5185>10NONENONE<	Sample Number		Client Info		JR0198478	JR0171831	JR0155424
Oil AgehrsClient InfoJag281500500Filter AgehrsClient InfoAANot ChangedChangedFilter ChangedClient InfoKANAChangedSample StatusClient InfoNANANARAPQASTM D518m5750SUPERNORMALNORMALPQASTM D518m5750A 12053.011.31.5IronppmASTM D518m591000NickelppmASTM D518m5041.01.0NickelppmASTM D518m510510.00NickelppmASTM D518m510000AluminmppmASTM D518m5100.000AluminmppmASTM D518m5100.000AluminmppmASTM D518m5100.000VanadiumppmASTM D518m5100.000VanadiumppmASTM D518m5100.000ValuadiumppmASTM D518m570PC781.00ValuadiumppmASTM D518m570PC781.00ValuadiumppmASTM D518m570NEGNONENONEValuadiumppmASTM D518m570NEGNONENONEValuadiumppmASTM D518m570NEGNONENONESilicon <t< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>08 Jan 2024</th><th>08 Jun 2023</th><th>13 Mar 2023</th></t<>	Sample Date		Client Info		08 Jan 2024	08 Jun 2023	13 Mar 2023
Filter Age OhrsClient Info00500Oil ChangedClient InfoChangedNot ChangedChangedFilter ChangedQClient InfoN/AN/AChangedSample StatusSEVERENORMALNORMALNORMALPQASTM D8184>12503011315IronppmASTM D5185>7010000NickelppmASTM D5185>10<1000NickelppmASTM D5185>10<1000SilverppmASTM D5185>40A128<11<11LeadppmASTM D5185>40A128<100CopperppmASTM D5185>4020<11VanduimppmASTM D5185>40A000VisualNONENONENONENONENONENONEYellow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185>20180<11PotassiumppmASTM D5185>20180<11PotassiumppmASTM D5185>20180<11QuadraticvisualNONENONENONENONESiliconppmASTM D5185>20180<11Quadraticscalar'VisualNONENONENONESiliconppmASTM D5185<	Machine Age	hrs	Client Info		4428	3484	2984
Oil ChangedClient InfoKhangedNot ChangedChangedFilter ChangedClient InfoN/AN/AChangedSample StatusSEVERENORMALNORMALPQASTM D8184>12503011315IronppmASTM D5185>750120533<10ChromiumppmASTM D5185>10<100<11NickelppmASTM D5185>10<10<11TitaniumppmASTM D5185>40128<11<11LeadppmASTM D5185>4020<11LeadppmASTM D5185>4020<11VanduimppmASTM D5185>4020<11VanduimppmASTM D5185>4020<11VanduimppmASTM D5185>4020<11VanduimppmASTM D5185>4020<11ValderysaNONENONENONENONENONEYellow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185>20180<11PotassiumppmASTM D5185>20180<11PotassiumppmASTM D5185>20180<11SiliconppmASTM D5185>20180<11Quadeysa'VisualNONE </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>3928</th> <th>1500</th> <th>500</th>	Oil Age	hrs	Client Info		3928	1500	500
Filter Changed Sample Status Client Info NA NA NA NA Changed Sample Status   PQ ASTM D8184 >1250 301 13 15   Iron ppm ASTM D8184 >1250 301 13 15   Iron ppm ASTM D5185m >9 10 0 0   Nickel ppm ASTM D5185m >10 <1 0 <1   Silver ppm ASTM D5185m >10 <1 0 <1   Silver ppm ASTM D5185m >40 2 0 <1   Lead ppm ASTM D5185m >40 2 0 <1   Vanadium ppm ASTM D5185m >10 0 0 <1   Vanadium ppm ASTM D5185m >40 2 0 <1   Vanadium ppm ASTM D5185m >10 0 0 <1   Vanadium ppm ASTM D5185m >10 0 <1 <1   Vanadium ppm ASTM D5185m >20 18 0 <1<   Valend scalar 'Visual NONE NONE NONE   Silicon ppm ASTM	Filter Age	hrs	Client Info		0	0	500
Sample StatusSEVERENORMALNORMALPQASTM D8184>12053011315IronppmASTM D5185>91000NickelppmASTM D5185>91000NickelppmASTM D5185>10<100SilverppmASTM D51855<100AluminumppmASTM D5185>40A 128<1<1LeadppmASTM D5185>40A 128<1<1CopperppmASTM D5185>4020<1VanadiumppmASTM D5185>1000<1VanadiumppmASTM D5185>1000<1VanadiumppmASTM D5185>1000<1VanadiumppmASTM D5185>1000<1VanadiumppmASTM D5185>1000<1VanadiumppmASTM D5185>1000<1VanadiumppmASTM D5185>5180<1SiliconppmASTM D5185>20180<1VanadiumppmASTM D5185>20180<1PotassiumppmASTM D5185>20180<1Siliconscalar*VisualNORENORENORENORESodiumppmASTM D5185>518<	Oil Changed		Client Info		Changed	Not Changd	Changed
PQ     ASTM D8184     >1250     301     133     15       Iron     ppm     ASTM D5185     >750     A 1205     33     <1       Chromium     ppm     ASTM D5185     >9     10     0     0       Nickel     ppm     ASTM D5185     >9     10     0     <1       Titanium     ppm     ASTM D5185     >9     10     0     <1       Silver     ppm     ASTM D5185     >40     2     <1     <1       Lead     ppm     ASTM D5185     >40     2     0     <1     <1       Lead     ppm     ASTM D5185     >40     2     0     <1     <1       Lead     ppm     ASTM D5185     >10     0     0     <1     <1       Vanadium     ppm     ASTM D5185     >10     0     0     <1     <1       Vanadium     ppm     ASTM D5185     >75     \$278     1     <1<     <1       Valow Metal     scalar	Filter Changed		Client Info		N/A	N/A	Changed
Iron     ppm     ASTM D5185m     >750     ▲ 1205     3.3     <.1	Sample Status				SEVERE	NORMAL	NORMAL
Chromium NickelppmASTM D5185m ASTM D5185m>91000NickelppmASTM D5185m>10<10<1TitaniumppmASTM D5185m000SilverppmASTM D5185m>40 <b>A</b> 128<1<1LeadppmASTM D5185m>10000CopperppmASTM D5185m>1000<1YanadiumppmASTM D5185m>1000<1VanadiumppmASTM D5185m>1000<1Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>20180<1VaterWC Method>0.075NEGNONENONENONESilitscalar*VisualNONENONENONENONESodiumppmASTM D5185m>20180<1Odorscalar*VisualNONENONENONENONESilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNORENONENONENONEAppearancescalar*VisualNORHNORHLNORHLAppearancescalar*VisualNORHNORHLNORHLBoronppmASTM D5185m<40<1BoronppmASTM D5185m<518<1<	PQ		ASTM D8184	>1250	301	13	15
NickelppmASTM D5185m>10<1	Iron	ppm	ASTM D5185m	>750	<b>1205</b>	3	<1
TitaniumppmASTM D5185m5<1	Chromium	ppm	ASTM D5185m	>9	10	0	0
TitaniumppmASTM D5185m5<1	Nickel		ASTM D5185m	>10	<1	0	<1
Aluminum     ppm     ASTM D5185m     >40     A 128     <1	Titanium		ASTM D5185m		5	<1	0
AluminumppmASTM D5185m>40A 128<1	Silver	ppm	ASTM D5185m		0	0	0
LeadppmASTM D5185m>15000CopperppmASTM D5185m>4020<1TinppmASTM D5185m>1000<1VanadiumppmASTM D5185m>10000White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>75\$2781<1PotassiumppmASTM D5185m>20180<1WaterWC Method>0.075NEGNEGNONESilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORENONENONENORMAppearancescalar*VisualNORMNORMLNORMLNORMLGodorscalar*VisualNORMNORMLNORMLNORMLBoronppmASTM D5185m>518<10BoronppmASTM D5185m>518<10ManganeseppmASTM D5185m<1200<1ManganeseppmASTM D5185m<131639PhosphorusppmASTM D5185m<10012SoliturppmASTM D5185m<10012 <tr< th=""><th>Aluminum</th><th>ppm</th><th>ASTM D5185m</th><th>&gt;40</th><th><b>128</b></th><th>&lt;1</th><th>&lt;1</th></tr<>	Aluminum	ppm	ASTM D5185m	>40	<b>128</b>	<1	<1
TinppmASTM D5185m>1000<11	Lead		ASTM D5185m	>15	0	0	0
VanadiumppmASTM D5185m000White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>752781<1PotassiumppmASTM D5185m>20180<1WaterWC Method>0.075NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORENORENONENONEAppearancescalar*VisualNORENORMLNORMLNORMLOdorscalar*VisualNORENORENORMLNORMLNORMLBoronppmASTM D5185m>518<100BoronppmASTM D5185m>518<100MolybdenumppmASTM D5185m<1200<1ManganeseppmASTM D5185m12002CalciumppmASTM D5185m<131639PhosphorusppmASTM D5185m10012SulfurppmASTM D5185m10012	Copper	ppm	ASTM D5185m	>40	2	0	<1
White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185m>75• 2781<1PotassiumppmASTM D5185m>20180<1WaterWC Method>0.075NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLBoronppmASTM D5185m>518<10BoronppmASTM D5185m<1536144BariumppmASTM D5185m<1200ManganeseppmASTM D5185m<3802CalciumppmASTM D5185m<3802PhosphorusppmASTM D5185m1131639PhosphorusppmASTM D5185m10012SulfurppmASTM D5185m10012SulfurppmASTM D5185m1187052305922196	Tin	ppm	ASTM D5185m	>10	0	0	<1
Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>75• 2781<1PotassiumppmASTM D5185m>20180<1WaterWC Method>0.075NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLBoronppmASTM D5185m>518<10BoronppmASTM D5185m<153611444BariumppmASTM D5185m<1200MalganeseppmASTM D5185m<136139PhosphorusppmASTM D5185m131639PhosphorusppmASTM D5185m<10012SulfurppmASTM D5185m<10012SulfurppmASTM D5185m<10012SulfurppmASTM D5185m<10012	Vanadium	ppm	ASTM D5185m		0	0	0
SiliconppmASTM D5185m>75•2781<1	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Potassium     ppm     ASTM D5185m     >20     18     0     <1	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
WaterWC Method>0.075NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGNEGSodiumppmASTM D5185m>518<1001BariumppmASTM D5185m>518<100<101MagnesiumppmASTM D5185m12000<10200101010101010111<	Silicon	ppm	ASTM D5185m	>75	<b>e</b> 278	1	<1
Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>518<10BoronppmASTM D5185m>518<10MalganeseppmASTM D5185m<112000MagnesiumppmASTM D5185m131639PhosphorusppmASTM D5185m10012ZincppmASTM D5185m100012SulfurppmASTM D5185m100012	Potassium	ppm	ASTM D5185m	>20	18	0	<1
Debrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>518<10BoronppmASTM D5185m>518<10BariumppmASTM D5185m<153611444BariumppmASTM D5185m<1610<11MagnesiumppmASTM D5185m1200<11MagnesiumppmASTM D5185mI31639PhosphorusppmASTM D5185m10012SulfurppmASTM D5185m100012SulfurppmASTM D5185m187052305922196	Water		WC Method	>0.075	NEG	NEG	NEG
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGNEGSodiumppmASTM D5185m>518<100BoronppmASTM D5185m15361444BariumppmASTM D5185m<16100MolybdenumppmASTM D5185m00<11MagnesiumppmASTM D5185m1200PhosphorusppmASTM D5185m131639PhosphorusppmASTM D5185m10012ZincppmASTM D5185m100012SulfurppmASTM D5185m187052305922196	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORML<	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.075NEGNEGNEGSodiumppmASTM D5185m>518<10BoronppmASTM D5185m<1536144BariumppmASTM D5185m<100MolybdenumppmASTM D5185m<1200ManganeseppmASTM D5185m1200MagnesiumppmASTM D5185m131639PhosphorusppmASTM D5185m942709960ZincppmASTM D5185m10012SulfurppmASTM D5185m187052305922196	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water     scalar     *Visual     >0.075     NEG     NEG     NEG       Sodium     ppm     ASTM D5185m     >51     8     <1     0       Boron     ppm     ASTM D5185m     >51     8     <1     0       Barium     ppm     ASTM D5185m      153     61     44       Barium     ppm     ASTM D5185m      <1     0     0       Molybdenum     ppm     ASTM D5185m      <1     0     <11       Manganese     ppm     ASTM D5185m      12     0     0       Magnesium     ppm     ASTM D5185m      8     0     2       Calcium     ppm     ASTM D5185m      13     16     39       Phosphorus     ppm     ASTM D5185m      942     709     960       Zinc     ppm     ASTM D5185m      10     0     12       Sulfur     ppm     ASTM D5185m      18705 <td< th=""><th>Appearance</th><th>scalar</th><th>*Visual</th><th>NORML</th><th>NORML</th><th>NORML</th><th>NORML</th></td<>	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sodium     ppm     ASTM D5185m >51     8     <1	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Boron     ppm     ASTM D5185m     153     61     44       Barium     ppm     ASTM D5185m     <1     0     0       Molybdenum     ppm     ASTM D5185m     0     0     <1       Manganese     ppm     ASTM D5185m     0     0     <1       Magnesium     ppm     ASTM D5185m     12     0     0       Magnesium     ppm     ASTM D5185m     8     0     2       Calcium     ppm     ASTM D5185m     13     16     39       Phosphorus     ppm     ASTM D5185m     942     709     960       Zinc     ppm     ASTM D5185m     10     0     12       Sulfur     ppm     ASTM D5185m     18705     23059     22196	Emulsified Water	scalar	*Visual	>0.075	NEG	NEG	NEG
Barium     ppm     ASTM D5185m     <1	Sodium	ppm	ASTM D5185m	>51	8	<1	0
Molybdenum     ppm     ASTM D5185m     0     0     <1	Boron	ppm	ASTM D5185m		153	61	44
Manganese     ppm     ASTM D5185m     12     0     0       Magnesium     ppm     ASTM D5185m     8     0     2       Calcium     ppm     ASTM D5185m     13     16     39       Phosphorus     ppm     ASTM D5185m     942     709     960       Zinc     ppm     ASTM D5185m     10     0     12       Sulfur     ppm     ASTM D5185m     18705     23059     22196	Barium	ppm	ASTM D5185m		<1	0	0
Magnesium     ppm     ASTM D5185m     8     0     2       Calcium     ppm     ASTM D5185m     13     16     39       Phosphorus     ppm     ASTM D5185m     942     709     960       Zinc     ppm     ASTM D5185m     10     0     12       Sulfur     ppm     ASTM D5185m     18705     23059     22196	Molybdenum	ppm	ASTM D5185m		0	0	<1
Calcium     ppm     ASTM D5185m     13     16     39       Phosphorus     ppm     ASTM D5185m     942     709     960       Zinc     ppm     ASTM D5185m     10     0     12       Sulfur     ppm     ASTM D5185m     18705     23059     22196	Manganese	ppm	ASTM D5185m		12	0	0
Phosphorus     ppm     ASTM D5185m     942     709     960       Zinc     ppm     ASTM D5185m     10     0     12       Sulfur     ppm     ASTM D5185m     18705     23059     22196	Magnesium	ppm	ASTM D5185m		8	0	2
Zinc     ppm     ASTM D5185m     10     0     12       Sulfur     ppm     ASTM D5185m     18705     23059     22196	Calcium	ppm	ASTM D5185m		13	16	39
Sulfur     ppm     ASTM D5185m     18705     23059     22196	Phosphorus	ppm	ASTM D5185m		942	709	960
	Zinc	ppm	ASTM D5185m		10	0	12
Visc @ 40°C cSt ASTM D445 152 140 141	Sulfur	ppm	ASTM D5185m		18705	23059	22196
	Visc @ 40°C	cSt	ASTM D445		152	140	141

Submitted By: Mike Young - CHARLOTTE SHOP



: 10 Jan 2024 9550 STATESVILLE ROAD Sample No. : JR0198478 Recieved Lab Number : 06056923 CHARLOTTE, NC Diagnosed : 11 Jan 2024 : 10822872 : Sean Felton US 28269 **Unique Number** Diagnostician Test Package : CONST (Additional Tests: PQ) Contact: CHARLOTTE SHOP Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. myoung@jamesriverequipment.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (704)597-0211 F: (704)596-6198 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)