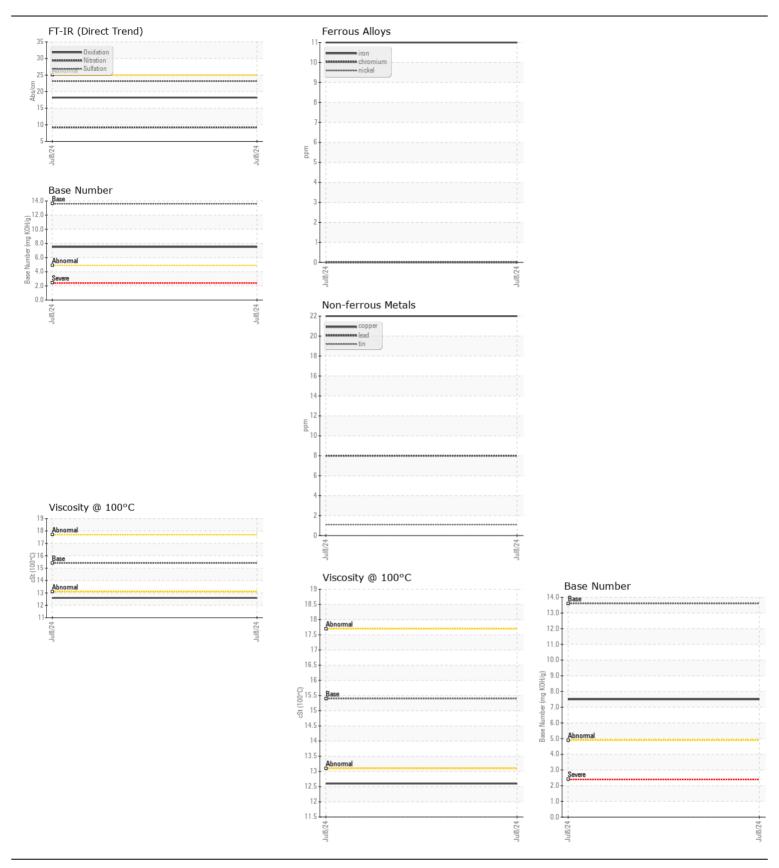


## JOHN DEERE 844K 1DW844KXTGF675187

Diesel Engine

## JOHN DEERE ENGINE OIL PLUS 50 II 15W40 (--- QTS)

Test         UOM         Method         Unitary         History 2           Resample at the next service interval to monitor.         Sample Name         Client Info         4702             Machine Age         hrs         Client Info         0         4702             Oli Age         hrs         Client Info         0         0             Oli Age         hrs         Client Info         0         0             Oli Age         hrs         Client Info         0         0             Sample Status         Client Info         0         0              WEAR         Iron         pm         ASTA (SIS)         >51         0             All component wear rates are normal.         Iron         pm         ASTA (SIS)         >50         0             Sliver         ppm         ASTA (SIS)         >51         0             Trainin         ppm         ASTA (SIS)         >50         0             Nokel         oppm		<b>G</b> (0)						
Basemple at the next service interval to monitor.         Sample Number Sample Dat         Cleant Info         UB022459 (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Silver Data         Distribution         Silver Data         Distribution         Silver Data	Resample at the next service interval to monitor.	Sample Number		Client Info		JR0224549		
Oil Age         Insc         Client Info         D         Insc         Insc         Client Info         D         Insc         Insc           Filter Ohanged         Insc         Client Info         D         Changed         Insc         Client Info         D         Changed         Insc         Changed         Insc         Filter Ohanged         Stample St								
Filter Age         Ins         Client Info         One page         Ins         Client Info         Changed         Ins         Ins <th< th=""><th>-</th><th>hrs</th><th>Client Info</th><th></th><th>3770</th><th></th><th></th></th<>		-	hrs	Client Info		3770		
Oil Changed Filter Changed Sample-Status         Clent Info         Changed Changed Sample-Status         Changed Chem Info         Changed Changed NORINA         Changed Chem Info		-						
Filter Changed Sample Status         Client Info NORMAL         Changed Image NORMAL         Image I		-	hrs					
Sample Status         Normal         Pinol		-				-		
Iron         ppm         ASTM DS16sn         > 51         11             All component wear rates are normal.         Promoulum         ppm         ASTM DS16sn         > 51         0             Nickel         ppm         ASTM DS16sn         > 51         0             Tatanium         ppm         ASTM DS16sn         > 31         0             Silver         ppm         ASTM DS16sn         > 31         0             Aluminum         ppm         ASTM DS16sn         > 26         8             Auradum         ppm         ASTM DS16sn         > 41              Tin         ppm         ASTM DS16sn         > 41              Variadum         ppm         ASTM DS16sn         > 41              Variadum         ppm         ASTM DS16sn         > 41              Variadum         ppm         ASTM DS16sn         > 41		-		Client Info		-		
All component wear rates are normal.       Chromium       ppm       ASTM 0586s       11       0          Nickel       ppm       ASTM 0586s       -30       0           Silver       ppm       ASTM 0586s       -33       0           Silver       ppm       ASTM 0586s       -33       0           Lead       ppm       ASTM 0586s       -26       8           Lead       ppm       ASTM 0585s       -26       8           Vanadium       ppm       ASTM 0585s       -26       1           Vanadium       ppm       ASTM 0585s       -26       2           Vanadium       ppm       ASTM 0585s       -26       2           There is no indication of any contamination in the oil.       Silicon       ppm       ASTM 0585s       -20       2          Water       %       ASTM 0585s       -20       2		Sample Status				NORMAL		
All component wear rates are normal.       Chromium       ppm       ASTM 0586s       11       0          Nickel       ppm       ASTM 0586s       -30       0           Silver       ppm       ASTM 0586s       -33       0           Silver       ppm       ASTM 0586s       -33       0           Lead       ppm       ASTM 0586s       -26       8           Lead       ppm       ASTM 0585s       -26       8           Vanadium       ppm       ASTM 0585s       -26       1           Vanadium       ppm       ASTM 0585s       -26       2           Vanadium       ppm       ASTM 0585s       -26       2           There is no indication of any contamination in the oil.       Silicon       ppm       ASTM 0585s       -20       2          Water       %       ASTM 0585s       -20       2	WEAR	Iron	nom	ASTM D5185m	>51	11		
All component wear rates are normal.         Nickel         ppm         ASTM 05185n         >5         0             Titanium         ppm         ASTM 05185n         -0              Aluminum         ppm         ASTM 05185n         -31         0             Aluminum         ppm         ASTM 05185n         -31         2             Lead         ppm         ASTM 05185n         -36         8             Value         ppm         ASTM 05185n         -26         8             Value         ppm         ASTM 05185n         -00              Value         volue         scalar         'Visual         NONE         NONE             Value         scalar         'Visual         NONE         NONE             There is no indication of any contamination in the oil.         Sci 7%         %         ASTM 05185n         >21         C6             Sci 7%         %         ASTM 05185n         >21         NONE <t< td=""><td rowspan="11"></td><th></th><td></td><td></td><td></td><th></th><td></td><td></td></t<>								
Titanium         ppm         ASTM 05156         3         0            Silver         ppm         ASTM 05156         -33         12             Lead         ppm         ASTM 05156         -26         8             Lead         ppm         ASTM 05156         -26         8             Copper         ppm         ASTM 05156         -26         8             Vanadium         ppm         ASTM 05156         -26         8             Vanadium         ppm         ASTM 05156         -26         8             Vanadium         ppm         ASTM 05156         -26         1             Vanadium         ppm         ASTM 05156         -20         1             Velow Metal         scalar         Visual         NONE         NONE             Silicon         ppm         ASTM 05156         -20         1             Giycol         Workethod         -0.21         NEG <td< td=""><th></th><td></td><td></td><td></td><th></th><td></td><td></td></td<>								
Silver         ppm         ASTM D5185m         >3         0								
Aluminum         ppm         ASTM D315m         >21         2            Lead         ppm         ASTM D315m         >26         8             Copper         Tin         ppm         ASTM D315m         >26         8             Vanadium         ppm         ASTM D315m         >26         8             Vanadium         ppm         ASTM D315m         >4         1             Vanadium         ppm         ASTM D315m         >2         6             Value         scalar         "Visual         NONE         NONE             CONTAMINATION         Silicon         ppm         ASTM D35m         >22         6             Botossium         ppm         ASTM D35d         >21         <1.0             Water         v%         ASTM D35d         >22         <1.0             Water         v%         MStM D76d         >20         2.1             Sold %         %         MSt					>3			
Lead         pp         ASTM D5185m         >26         8             Copper         ppm         ASTM D5185m         -26         22             Tin         ppm         ASTM D5185m         -4         1             Vanadium         ppm         ASTM D5185m         -4         1             Vanadium         ppm         ASTM D5185m         -20         1             Velow Metal         scalar         Visual         NONE         NONE             Velow Metal         scalar         Visual         NONE         NONE             There is no indication of any contamination in the oil.         Silicon         ppm         ASTM D5185m         -20         2             Water         Wolo         NO21         NEG               Silicon         ppm         ASTM D5185m         -20         2              Silicon         potentis         Scalar         Visual         NONE         NORE <th></th> <td></td> <td></td> <td></td> <th></th> <td></td> <td></td>								
Copper         ppm         ASTM D5185m         >26         22             Tin         ppm         ASTM D5185m          0             Vanadium         ppm         ASTM D5185m          0             White Metal         scalar         Visual         NONE         NONE         NONE             CONTAMINATION         Scalar         Visual         NONE         PO         2             There is no indication of any contamination in the oil.         Silicon         ppm         ASTM D5185m         >20         2             Water         WC Method         sol 21         NEG              Glycol         WC Method         sol 21         NEG              Sol 3''s         %6         ASTM D7844         sol 20         9.2             Sol 3''s         %6''s MSTM D7844         sol 21         NONE         NONE             Sol 3''s         %107244         sol 21         NONE          <								
Tin         ppm         ASTM 0586m         >4         1             Vanadium         ppm         ASTM 0516m         0         0             Vanadium         ppm         ASTM 0516m         NONE         NONE         NONE             Valoa         NONE         NONE         NONE         NONE             CONTAMINATION         Silicon         pm         ASTM 0516m         >22         6             There is no indication of any contamination in the oil.         Silicon         pm         ASTM 0516m         >22         6             Water         Cu         WC Method         >0.21         NEG             Glycol         WC Method         Soft %         %         'ASTM 078/4         3         0.1             Sulfation         Asbicm         'ASTM 078/4         3         0.1             Sulfation         Asbicm         'ASTM 078/4         3         0.1             Sulfation         Ascalar         'Visual         NONE								
Vanadium White Metal scalar         Visual Visual         NONE         NONE             CONTAMINATION         Solar         Visual         NONE         NONE             There is no indication of any contamination in the oil.         Silicon         ppm         ASTM D516m         -22         6             Water         Water         Worketon         -0.21         -1.0             Water         Water         Worketon         -0.21         NEG             Sol 5%         %         *ASTM D516m         -20         2             Water         Worker         WC Method         -0.21         NEG             Sol 5%         %         *ASTM D516m         -0.21         NEG             Sol 5%         %         *ASTM D715         -0.21         NEG             Sultation         Ast/Imm 75:ASTM D745         -0.20         2.23         1.6            Solar         visual         NORE         NONE         NONE						1		
Yellow Metal         scalar         *Visual         NONE         NONE            CONTAMINATION           There is no indication of any contamination in the oil.         Silicon         ppm         ASTM D518m         >20         2             Visual         ppm         ASTM D518m         >20         2             Visual         ppm         ASTM D518m         >20         2             Water         W         WC Method         NEG             Glycol         WC Method         NEG             Sott %         %         'ASTM D724         -30         0.1            Sulfation         Abs/cm         'ASTM D724         -20         9.2            Sulfation         Abs/cm         'ASTM D7145         >30         23.1            Sulfation         Abs/cm         'Nisual         NONE         NONE         NONE		Vanadium		ASTM D5185m		0		
CONTAMINATION         Silicon         ppm         ASTM D5185m         >22         6            There is no indication of any contamination in the oil.         Potassium         ppm         ASTM D5185m         >20         2             Water         WC Method         >0.21         NEG              Water         WC Method         >0.21         NEG              Glycol         WC Method         >0.21         NEG              Water         WC Method         >0.21         NEG              Silitation         Abs/tm         Yisual         NONE              Silitation         Abs/tm         Yisual         NONE         NONE             Debris         scalar         Yisual         NORM         NORML             Appearance         scalar         Yisual         NORML             Debris         scalar         Yisual         NORML		White Metal	scalar	*Visual	NONE	NONE		
Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >2.1         <1.0             Water         WC Method         >0.21         NEG              Glycol         WC Method         >0.21         NEG              Soot %         %         *ASTM D744         >3         0.1             Nitration         Abs/tml         *ASTM D745         >30         23.1		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium         ppm         ASTM D5185m         >20         2             Fuel         %         ASTM D5185m         >2.1         <1.0             Water         WC Method         >0.21         NEG              Glycol         WC Method         >0.21         NEG              Soot %         %         *ASTM D744         >3         0.1             Nitration         Abs/tml         *ASTM D745         >30         23.1								
There is no indication of any contamination in the oil.       Fuel       %       ASTM D3824       >2.1       <1.0           Water       W       WC Method       >0.21       NEG           Glycol       WC Method       >0.21       NEG           Soot %       %StM D7624       >0       9.2           Nitration       Abs/tm       'ASTM D7624       >20       9.2           Sulfation       Abs/tm       'Stall       NORE       NORE           Sulfation       scalar       'Visual       NORM       NORM	CONTAMINATION	Silicon	ppm					
FLUID         Nome         Section         Sec	There is no indication of any contamination in the oil.							
Glycol         WC Method         NEG             Soot %         %         *ASTM D78/4         <3         0.1             Nitration         Abs/tm         *ASTM D78/2         >20         9.2             Nitration         Abs/tm         *ASTM D715         >30         23.1         More            Slift         scalar         *Visual         NONE         NONE             Debris         scalar         *Visual         NONE         NONE             Sand/Dirt         scalar         *Visual         NORM         NORML             Odor         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             The BN result indicates that there is suitable alkalinity remaining in the oil is acceptable for the time in service.         Sodium         pm         ASTM D5165m         <             Magnesium         pm         ASTM D5165m          -1			%					
Soot %         %         *ASTM D7844         >3         0.1             Nitration         Abs/cm         *ASTM D762         >20         9.2             Sulfation         Abs/cm         *ASTM D762         >30         23.1             Sulfation         Abs/cm         *Visual         NONE         NONE         NONE             Sift         scalar         *Visual         NONE         NONE              Debris         scalar         *Visual         NONE         NONE             Appearance         scalar         *Visual         NORM         NORML             Odor         scalar         *Visual         NORML         NORML             Odor         scalar         *Visual         NORML         NORML             Debris         scalar         *Visual         NORML         NORML             Maperance         scalar         *Visual         NORML					>0.21			
NitrationAbs/cm'ASTM D7624>209.2SulfationAbs/1mm'ASTM D7115>3023.1Siltscalar'VisualNONENONEDebrisscalar'VisualNONENONESand/Dirtscalar'VisualNONENONEAppearancescalar'VisualNORMLNORMLNORMLOdorscalar'VisualNORMLNORMLDebrisscalar'VisualNORMLNORMLAppearancescalar'VisualNORMLNORMLOdorscalar'VisualNORMLNORMLBoronppmASTM D6185m>-316BariumppmASTM D6185mMalganeseppmASTM D6185mMalganesiumppmASTM D6185mPhosphorusppmASTM D6185m1430ZincppmASTM D6185m364SulfurppmASTM D6185m1430Base Number (BN)ppmASTM D6185m364					-			
SulfationAbs:/im'ASTM D7415>3023.1Siltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLDebrisscalar*VisualNORMLOdorscalar*VisualNORMLDebrisscalar*VisualNORMLOdorscalar*VisualNORMLDebrisscalar*VisualNORMLMagified Waterscalar*VisualNORMLBoronppmASTM D5185m6MaganeseppmASTM D5185m1430MagnesiumppmASTM D5185m894PhosphorusppmASTM D5185m894SulfurppmASTM D5185m814 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>								
Siltscalar*VisualNONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORLNORLOdorscalar*VisualNORLNORLEmulsified Watescalar*VisualNORLNORLFLUID CONDITIONSodiumppmASTM D5185m>316BoronppmASTM D5185m>316BariumppmASTM D5185m <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>								
Debris       scalar       *Visual       NONE           Sand/Dirt       scalar       *Visual       NONE       NONE          Appearance       scalar       *Visual       NORL       NORL          Appearance       scalar       *Visual       NORL       NORL          Odor       scalar       *Visual       NORL       NORL          Odor       scalar       *Visual       NORL       NORL          Odor       scalar       *Visual       NORL       NORL          FUDD CONDITION       Sodium       pp       ASTM D5185m       >31       6          Boron       pp       ASTM D5185m        159           Barium       pp       ASTM D5185m        <1           Molybdenum       pm       ASTM D5185m        <1           Magneses       pm       ASTM D5185m        <1           Calcium       pm       ASTM D5185m        <1430								
Sand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*VisualNORMLNORMLNegoscalar*Visual>0.21NEGSodiumppmASTM D5185m>316BoronppmASTM D5185m>316BariumppmASTM D5185m<<1MolybdenumppmASTM D5185m<<1MagnesiumppmASTM D5185m<<1MagnesiumppmASTM D5185m<1430CalciumppmASTM D5185m<1430MagnesiumppmASTM D5185m<3112ZincppmASTM D5185m<3112SulfurppmASTM D5185m<3112OxidationAbs/Imm'ASTM D5185m<167.5Base Number (BN)mg K0HgASTM D289613.67.5ASTM D5185mmg K0HgASTM D5185mASTM D5185m<								
Appearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.21NEGFLUID CONDITIONSodiumppmASTM D5185m>316BoronppmASTM D5185m>316BariumppmASTM D5185m<159MalybdenumppmASTM D5185m<228MagnesizeppmASTM D5185m<21MagnesiumppmASTM D5185m<1430CalciumppmASTM D5185m1430PhosphorusppmASTM D5185m3112SulfurppmASTM D5185m3112DxidationAbs/Imm'ASTM D5185m13.67.5								
Odorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.21NEGFLUID CONDITIONSodiumppmASTM D5185m>316BoronppmASTM D5185m>316BariumppmASTM D5185m<<159MolybdenumppmASTM D5185m<<11MaganeseeppmASTM D5185m<<11MagnesiumppmASTM D5185m<<14MagnesiumppmASTM D5185m<<14MagnesiumppmASTM D5185m<<1430PhosphorusppmASTM D5185m<894SulfurppmASTM D5185m<894OxidationAb:/1mm'ASTM D5185m<18.2Base Number (BN)mg KOHgASTM D28613.67.5								
Emulsified Waterscalar*Visual>0.21NEGFLUID CONDITIONThe BN result indicates that there is suitable alkalinity remaining in the oil is acceptable for the time in service.SodiumppmASTM D5185m>316BariumppmASTM D5185m<159MolybdenumppmASTM D5185m<228ManganeseppmASTM D5185m<<1MagnesiumppmASTM D5185m<<1MagnesiumppmASTM D5185m<1430CalciumppmASTM D5185m1430PhosphorusppmASTM D5185m894SulfurppmASTM D5185m3112OxidationAbs/:tmm*ASTM D7414>2518.2Base Number (BN)mg KOHgASTM D289613.67.5								
Sodium       ppm       ASTM D5185m       >31       6          Boron       ppm       ASTM D5185m       >31       6          Barium       ppm       ASTM D5185m       159          Barium       ppm       ASTM D5185m       <11          Molybdenum       ppm       ASTM D5185m       <11          Manganese       ppm       ASTM D5185m       <11          Magnesium       ppm       ASTM D5185m       <14          Phosphorus       ppm       ASTM D5185m       <11          Zinc       ppm       ASTM D5185m       <1430          Zinc       ppm       ASTM D5185m       3112          Qxidation       Abs/.tmm       *ASTM D5185m       3112          Oxidation       Abs/.tmm       *ASTM D5185m       3112								
Boron       ppm       ASTM D5185m       159           Barium       ppm       ASTM D5185m			Scalai	visuai	20.21			
Boron       ppm       ASTM D5185m       159           Barium       ppm       ASTM D5185m	FLUID CONDITION	Sodium	ppm	ASTM D5185m	>31	6		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.       Barium       ppm       ASTM D5185m       <1           Molybdenum       ppm       ASTM D5185m       <1           Manganese       ppm       ASTM D5185m       <1           Magnesium       ppm       ASTM D5185m       <1           Calcium       ppm       ASTM D5185m       <1           Calcium       ppm       ASTM D5185m       <1430           Phosphorus       ppm       ASTM D5185m       <1430           Zinc       ppm       ASTM D5185m       <1894           Sulfur       ppm       ASTM D5185m       <18.2           Oxidation       Abs/.1mm       *ASTM D5185m       <18.2           Base Number (BN)       mg KOHg       ASTM D2896       13.6       7.5		Boron		ASTM D5185m		159		
MolybodenumppmASIM D5185m228ManganeseppmASTM D5185m<1MagnesiumppmASTM D5185m0744CalciumppmASTM D5185m1430PhosphorusppmASTM D5185m1430ZincppmASTM D5185m1894SulfurppmASTM D5185m13112OxidationAbs/.1mm*ASTM D7414>2518.2Base Number (BN)mg KOHgASTM D289613.67.5		Barium		ASTM D5185m		<1		
Magnesium       ppm       ASTM D5185m       744          Calcium       ppm       ASTM D5185m       1430           Phosphorus       ppm       ASTM D5185m       1430           Zinc       ppm       ASTM D5185m       1430           Sulfur       ppm       ASTM D5185m       1430           Sulfur       ppm       ASTM D5185m       1894           Oxidation       Abs/.1mm       *ASTM D7414       >25       18.2           Base Number (BN)       mg KOHg       ASTM D2896       13.6       7.5		Molybdenum		ASTM D5185m		228		
Calcium       ppm       ASTM D5185m       1430           Phosphorus       ppm       ASTM D5185m       Image: Comparison of the symbolic compar		Manganese	ppm	ASTM D5185m		<1		
Phosphorus         ppm         ASTM D5185m         760             Zinc         ppm         ASTM D5185m         894             Sulfur         ppm         ASTM D5185m         3112             Oxidation         Abs/.1mm         *ASTM D7414         >25         18.2             Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.5		Magnesium	ppm	ASTM D5185m		744		
Zinc       ppm       ASTM D5185m       894           Sulfur       ppm       ASTM D5185m       3112           Oxidation       Abs/.1mm       *ASTM D7414       >25       18.2           Base Number (BN)       mg KOH/g       ASTM D2896       13.6       7.5		Calcium	ppm	ASTM D5185m		1430		
Sulfur         ppm         ASTM D5185m         3112             Oxidation         Abs/.1mm         *ASTM D7414         >25         18.2             Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.5		Phosphorus	ppm	ASTM D5185m		760		
Oxidation         Abs/.1mm         *ASTM D7414         >25         18.2             Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.5		Zinc	ppm	ASTM D5185m		894		
Base Number (BN)         mg KOH/g         ASTM D2896         13.6         7.5		Sulfur	ppm	ASTM D5185m		3112		
		Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2		
Visc @ 100°C cSt ASTM D445 15.4 (12.6)		Base Number (BN)	mg KOH/g	ASTM D2896	13.6	7.5		
		Visc @ 100°C	cSt	ASTM D445	15.4	12.6	)	



JRE - ASHLAND Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : JR0224549 Received 11047 LEADBETTER RD : 11 Jul 2024 Lab Number : 06234156 Tested ASHLAND, VA : 12 Jul 2024 Unique Number : 11122990 Diagnosed : 14 Jul 2024 - Don Baldridge US 23005 Test Package : CONST (Additional Tests: FuelDilution, TBN) Contact: DAVID ZIEG Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dzieg@jamesriverequipment.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (804)798-6001 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (804)798-0292

Contact/Location: DAVID ZIEG - JAMASH Page 2 of 2