

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id JOHN Generation Fluid

JOHN DEERE 410E 1DW410EBAMF709486

Rear Differential

{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

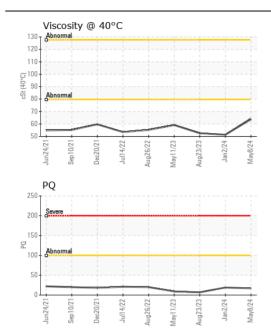
There is no indication of any contamination in the oil.

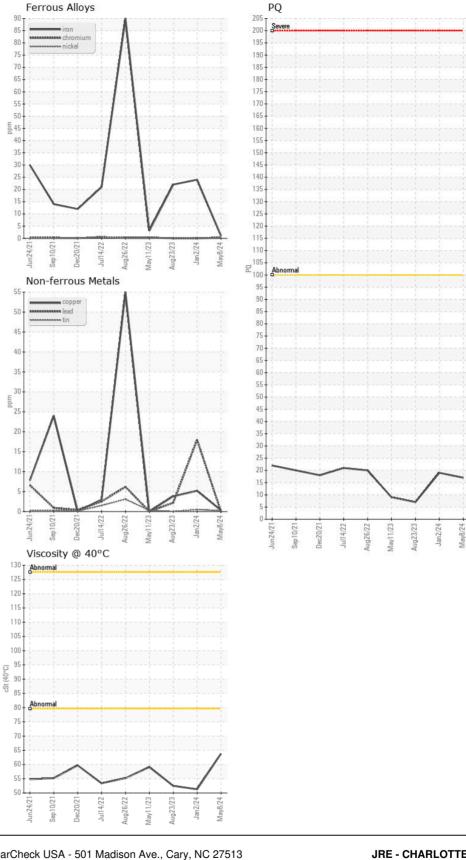
FLUID CONDITION

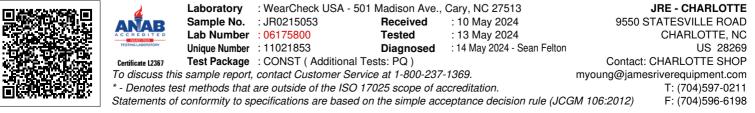
The condition of the oil is acceptable for the time in service.

Sample Date Client Info 08 May 2024 02 Jan 2024 23 Aug 2023 Machine Age hrs Client Info 105218 10661 4031 Oil Age hrs Client Info 0 0 0 Filter Age hrs Client Info Not Change Not Change Changed Filter Changed Client Info Not Change Not Change Changed Changed Filter Changed Client Info Not Change Not Change Changed Changed Sample Status Client Info Not Change Not Change Changed Changed PQ ASTM D8185m S00 1 24 22 Chromium ppm ASTM D5185m >10 1 24 22 Chromium ppm ASTM D5185m >10 1 24 22 Chromium ppm ASTM D5185m >10 0 0 1 Silver ppm ASTM D5185m >25 Q 2 2<							
Sample Date Client Info 08 May 2024 02 Jan 2024 23 Aug 2023 Machine Age hrs Client Info 105218 10661 4031 Oil Age hrs Client Info 0 0 0 Filter Age hrs Client Info Not Changd Not Changd Changd Changd Filter Changed Client Info Not Changd Not Changd Nor MAL NORMAL Sample Status Vor STM D5185 NORMAL NORMAL NORMAL NORMAL PQ ASTM D5185 >10 0 0 0 0 Nickel ppm ASTM D5185 >10 0 0 0 Nickel ppm ASTM D5185 >10 2 2 2 Lead ppm ASTM D5185 >10 21 0 0 Vanadium ppm ASTM D5185 >100 21 2 2 Lead ppm ASTM D5185 >100 21 0 <th< th=""><th>Test</th><th>UOM</th><th>Method</th><th>Limit/Abn</th><th>Current</th><th>History1</th><th>History2</th></th<>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info105218106614031Oil AgehrsClient Info000Filter AgehrsClient InfoNot ChangedNot ChangedChangedGli ChangedClient InfoNot ChangedNot ChangedChangedFilter ChangedClient InfoNot ChangedNot ChangedChangedSample StatusClient InfoNot ChangedNot ChangedChangedPQASTM D818417197IronppmASTM D5185>50012422ChromiumppmASTM D5185>10<100NickelppmASTM D5185>10<100<1SilverppmASTM D5185>252222LeadppmASTM D5185>10<1<100VanadiumppmASTM D5185>10<1000VanadiumppmASTM D5185>10<1000VanadiumppmASTM D5185>2020202SiliconppmASTM D5185>2020202SiliconppmASTM D5185>2020202SiliconppmASTM D5185>2020202SiliconppmASTM D5185>2020202S	Sample Number		Client Info		JR0215053	JR0193174	JR0178366
Oil Age Filter Age Filter Age (Lient InfoID5218 (Cient InfoID5218 (Cie	Sample Date		Client Info		08 May 2024	02 Jan 2024	23 Aug 2023
Filter Age OIhrsClient InfoOOOOil ChangedClient InfoNot ChangdNot ChangdChangedFilter ChangedClient InfoNot ChangdNot ChangdChangedSample StatusNORMALNORMALNORMALNORMALPQASTM D818417197IronppmASTM D8185>50012422ChromiumppmASTM D5185>10<100NickelppmASTM D5185>1000<1SilverppmASTM D5185>22222LeadppmASTM D5185>100<154TinppmASTM D5185>100<1<100VanadiumppmASTM D5185>100<1<100VanadiumppmASTM D5185>10<1<100VanadiumppmASTM D5185>10<1<100VanadiumppmASTM D5185>10<1<100VanadiumppmASTM D5185>10<1<100VanadiumppmASTM D5185>202022VanadiumppmASTM D5185>202020VanadiumppmASTM D5185>202020VanadiumppmASTM D5185>20202<	Machine Age	hrs	Client Info		105218	10661	4031
Oil Changed Filter ChangedClient InfoNot Changed Not ChangedNot Changed ChangedPQASTM D818417197IronppmASTM D8185m>50012422ChromiumppmASTM D5185m>10<100NickelppmASTM D5185m>10<100NickelppmASTM D5185m>100<100NickelppmASTM D5185m>1000<100ASTM D5185m>25222 </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>105218</th> <th>10661</th> <th>0</th>	Oil Age	hrs	Client Info		105218	10661	0
Filter Changed Sample StatusClient IntoNot Changed NORMALNot Changed NORMALChanged NORMALPQASTM D5185m50012422Chromium NickelppmASTM D5185m50012422Chromium NickelppmASTM D5185m10<100NickelppmASTM D5185m1000<1SilverppmASTM D5185m25222LeadppmASTM D5185m>2550182CopperppmASTM D5185m>250182CopperppmASTM D5185m>100<154TinppmASTM D5185m>100<100VanadiumppmASTM D5185m>100<100VanadiumppmASTM D5185m>10<100Vellow Metalscalar"VisualNONENONENONENONESiliconppmASTM D5185m>20202WaterWC Method>.2NEGNORENONESolidumppmASTM D5185m>20202Silitscalar"VisualNONENORENORENOREDebrisscalar"VisualNORMNORMNORMNORMAppearancescalar"VisualNORMNORMNORMNORMBoronppmASTM D5185m <td< th=""><th>Filter Age</th><th>hrs</th><th>Client Info</th><th></th><th>0</th><th>0</th><th>0</th></td<>	Filter Age	hrs	Client Info		0	0	0
Sample Status NORMAL NORMAL NORMAL NORMAL PQ ASTM D8184 17 19 7 Iron ppm ASTM D5185m >500 1 24 22 Chromium ppm ASTM D5185m >10 0 0 <1 Nickel ppm ASTM D5185m >10 0 0 <1 Silver ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >25 0 18 2 Copper ppm ASTM D5185m >25 0 1 0 0 Vanadium ppm ASTM D5185m >10 <1 1 0 0 Vanadium ppm ASTM D5185m >10 <1 0 0 0 Vanadium ppm ASTM D5185m >20 2 0 2 0 2 Yellow Metal scalar Visual NONE NONE<	Oil Changed		Client Info		Not Changd	Not Changd	Changed
PQ ASTM D8184 17 19 7 Iron ppm ASTM D5185m >500 1 24 22 Chromium ppm ASTM D5185m >10 C1 0 0 Nickel ppm ASTM D5185m >10 0 0 <1 Silver ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >25 2 2 2 Copper ppm ASTM D5185m >25 0 188 2 Copper ppm ASTM D5185m >25 0 18 2 Copper ppm ASTM D5185m >10 <1 0 0 Vanadium ppm ASTM D5185m >10 <1 0 0 Vanadium ppm ASTM D5185m >20 2 0 2 Valow Metal scalar Visual NONE NONE NONE NONE	Filter Changed		Client Info		Not Changd	Not Changd	Changed
Iron ppm ASTM D5185m >500 1 24 22 Chromium ppm ASTM D5185m >10 <1 0 0 Nickel ppm ASTM D5185m >10 0 0 <1	Sample Status				NORMAL	NORMAL	NORMAL
Iron ppm ASTM D5185m >500 1 24 22 Chromium ppm ASTM D5185m >10 <1 0 0 Nickel ppm ASTM D5185m >10 0 0 <1							
Chromium ppm ASTM D5185m >10 <1							
Nickel ppm ASTM D5185m >10 0 0 <1	-	ppm			-		
Titanium ppm ASTM D5185m <1							
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m<>25 2 2 2 Lead ppm ASTM D5185m<>25 0 18 2 Copper ppm ASTM D5185m<>100 <1 5 4 Tin ppm ASTM D5185m<>10 <1 <1 0 0 Vanadium ppm ASTM D5185m >10 <1 <1 0 0 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Silicon ppm ASTM D5185m<>75 5 3 4 Potassium ppm ASTM D5185m<>75 5 3 4 Potassium ppm ASTM D5185m >20 2 0 2 Water wc Method<>.2 NEG NEG NORE NORE				>10			
Aluminum ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >100 <1							
Lead ppm ASTM D5185m >25 0 18 2 Copper ppm ASTM D5185m >100 <1 5 4 Tin ppm ASTM D5185m >100 <1		ppm					
Copper ppm ASTM D5185m >100 <1	Aluminum	ppm	ASTM D5185m	>25			
Tin ppm ASTM D5185m >10 <1		ppm		>25	-		
VanadiumppmASTM D5185m<1	Copper	ppm		>100	<1	5	4
White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONENONESiliconppmASTM D5185m>75534PotassiumppmASTM D5185m>20202WaterWC Method>.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLBariumppmASTM D5185m011BariumppmASTM D5185m011MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m333331003746PhosphorusppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D44563.851.352.5		ppm		>10	<1	<1	
Yellow Metalscalar*VisualNONENONENONENONENONESiliconppmASTM D5185m>75534PotassiumppmASTM D5185m>20202WaterWC Method>.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENORMLNORMLNORMLAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m9689102CalciumppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D5185m367432163995	Vanadium	ppm	ASTM D5185m		<1	0	0
SiliconppmASTM D5185m>75534PotassiumppmASTM D5185m>20202WaterWC Method>.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGSodiumppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m011ManganeseppmASTM D5185m011ManganeseppmASTM D5185m9689102CalciumppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D5185m367432163995	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
PotassiumppmASTM D5185m>20202WaterWC Method>.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*Visual>.2NEGNEGSodiumppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m9689102CalciumppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D5185m63.851.352.5	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
PotassiumppmASTM D5185m>20202WaterWC Method>.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*Visual>.2NEGNEGSodiumppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m9689102CalciumppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D5185m63.851.352.5	Silicon	maa	ASTM D5185m	>75	5	3	4
WaterWC Method>.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGSodiumppmASTM D5185m0111BariumppmASTM D5185m0130MolybdenumppmASTM D5185m0111MagnesiumppmASTM D5185m0111MagnesiumppmASTM D5185m333331003746PhosphorusppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D5185m63.851.352.5	Potassium		ASTM D5185m	>20	-		2
Debrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGSodiumppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m013MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m011PhosphorusppmASTM D5185m333331003746PhosphorusppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D5185m63.851.352.5	Water		WC Method	>.2	NEG	NEG	NEG
Debrisscalar*VisualNONELIGHTNONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGSodiumppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m011PhosphorusppmASTM D5185m333331003746PhosphorusppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m63.851.352.5	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORML<	Debris		*Visual	NONE	LIGHT	NONE	NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGSodiumppmASTM D5185m030BoronppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m013MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m9689102CalciumppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163995Visc @ 40°CcStASTM D44563.851.352.5	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Odorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.2NEGNEGNEGNEGSodiumppmASTM D5185m030BoronppmASTM D5185m011BariumppmASTM D5185m013MolybdenumppmASTM D5185m013MagneseppmASTM D5185m011MagnesiumppmASTM D5185m011PhosphorusppmASTM D5185m333331003746PhosphorusppmASTM D5185m10849941116ZincppmASTM D5185m119611521302SulfurppmASTM D5185m367432163955Visc @ 40°CcStASTM D44563.851.352.5	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Sodium ppm ASTM D5185m 0 3 0 Boron ppm ASTM D5185m 0 1 1 Barium ppm ASTM D5185m 0 1 3 Molybdenum ppm ASTM D5185m 0 1 3 Molybdenum ppm ASTM D5185m 0 1 1 Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 96 89 102 Calcium ppm ASTM D5185m 3333 3100 3746 Phosphorus ppm ASTM D5185m 1084 994 1116 Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5		scalar	*Visual	NORML	NORML	NORML	NORML
Boron ppm ASTM D5185m 0 1 1 Barium ppm ASTM D5185m 0 1 3 Molybdenum ppm ASTM D5185m 0 1 3 Molybdenum ppm ASTM D5185m <1 0 <1 Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 96 89 102 Calcium ppm ASTM D5185m 3333 3100 3746 Phosphorus ppm ASTM D5185m 1084 994 1116 Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5	Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG
Boron ppm ASTM D5185m 0 1 1 Barium ppm ASTM D5185m 0 1 3 Molybdenum ppm ASTM D5185m 0 1 3 Molybdenum ppm ASTM D5185m <1 0 <1 Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 96 89 102 Calcium ppm ASTM D5185m 3333 3100 3746 Phosphorus ppm ASTM D5185m 1084 994 1116 Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5							
Barium ppm ASTM D5185m 0 1 3 Molybdenum ppm ASTM D5185m <1					-		
Molybdenum ppm ASTM D5185m <1							
Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 96 89 102 Calcium ppm ASTM D5185m 3333 3100 3746 Phosphorus ppm ASTM D5185m 1084 994 1116 Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5					-		
Magnesium ppm ASTM D5185m 96 89 102 Calcium ppm ASTM D5185m 3333 3100 3746 Phosphorus ppm ASTM D5185m 1084 994 1116 Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5	,						
Calcium ppm ASTM D5185m 3333 3100 3746 Phosphorus ppm ASTM D5185m 1084 994 1116 Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5		ppm					
Phosphorus ppm ASTM D5185m 1084 994 1116 Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5	Ū.	ppm					
Zinc ppm ASTM D5185m 1196 1152 1302 Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5		ppm					
Sulfur ppm ASTM D5185m 3674 3216 3995 Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5	Phosphorus	ppm			1084	994	1116
Visc @ 40°C cSt ASTM D445 63.8 51.3 52.5	Zinc	ppm				1152	1302
-	Sulfur	ppm	ASTM D5185m		3674	3216	3995
	Visc @ 40°C	cSt	ASTM D445		63.8		

Submitted By: Mike Young - CHARLOTTE SHOP







P

Submitted By: Mike Young - CHARLOTTE SHOP Page 2 of 2