WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

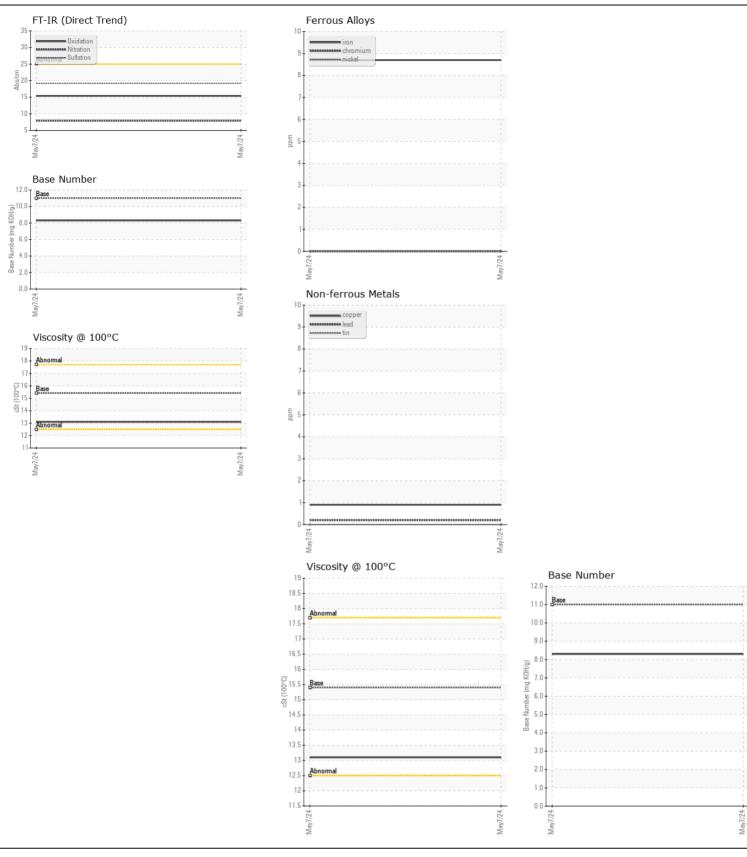
Machine Id

4581

Component
Diesel Engine

CITGO CITGUARD 600 15W40 (--- GAL)

Sample Number Cilent Info Sample Number Cilent Info Calent Inf	CITGO CITGUARD 600 15W40 (GAL)							
Sample Number Collent Into W00091419 Component make and model with your next sample. Sample Date Collent Into College Collent Into College College	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Date Common Commo		Sample Number		Client Info		WC0901419		
Machine Age mis Client Info 12758 Oil Age mis Client Info 12758 Oil Changed Client Info 12758 Oil Changed Client Info Changed Filter Changed Client Info Changed Filter Changed Client Info Changed Changed Client Info Changed Changed Filter Changed Client Info Changed Changed Chromium ppm ASTM 05185m > 20 0 Titanium ppm ASTM 05185m > 20 0 Copper ppm ASTM 05185m > 20 3 Lead ppm ASTM 05185m > 30 3 Copper ppm ASTM 05185m > 30 3 Copper ppm ASTM 05185m > 30 3 Tin ppm ASTM 05185m > 30 3 Tin ppm ASTM 05185m > 15 0 Vanadium ppm ASTM 05185m > 15 0 Vanadium ppm ASTM 05185m > 25 4 Vanadium ppm ASTM 05185m > 25 4 Fuel Wc Method > 2 Water Wc Method > 2 Water Wc Method > 2 Silicon ppm ASTM 05185m > 25 4 Fuel Wc Method > 2 Water Wc Method > 2 Silicon Abeliam Abel	Resample at the next service interval to monitor. Please specify the component make and model with your next sample.	Sample Date		Client Info		07 May 2024		
Filter Age		Machine Age	mls	Client Info		290928		
Colic Changed Cilinat Info Changed Cilinat Info Changed Cilinat Info Changed Changed Cilinat Info Changed Changed Cilinat Info Changed Changed Cilinat Info Changed		Oil Age	mls	Client Info		12758		
Filter Changed Client Info Changed		Filter Age	mls	Client Info		12758		
Filter Changed Client Info Changed		Oil Changed		Client Info		Changed		
Normal N				Client Info		Changed		
All component wear rates are normal. Chromium ppm ASTM 26186m >20 0 Nickel ppm ASTM 26186m >4 0 Titanium ppm ASTM 26186m >4 0 Silver ppm ASTM 26186m >0 Aluminum ppm ASTM 26186m >20 3 Aluminum ppm ASTM 26186m >20 3 Lead ppm ASTM 26186m >20 3 Lead ppm ASTM 26186m >20 3 Lead ppm ASTM 26186m >40 <1 Tin ppm ASTM 26186m >15 0 Vanadium ppm ASTM 26186m >15 0 Vanadium ppm ASTM 26186m >15 0 Valuer Vellow Metal scalar Visual NONE NONE Vellow Metal scalar Visual NONE Neg Solition Asitam Visual NONE Solition Asitam Visual NONE Neg Appearance scalar Visual NONE Appearance scalar Visual NONE Agancales Visual NONE Agancales Visual NONE		Sample Status				NORMAL		
All component wear rates are normal. Chromium ppm ASTM 26186m >20 0 Nickel ppm ASTM 26186m >4 0 Titanium ppm ASTM 26186m >4 0 Silver ppm ASTM 26186m >0 Aluminum ppm ASTM 26186m >20 3 Aluminum ppm ASTM 26186m >20 3 Lead ppm ASTM 26186m >20 3 Lead ppm ASTM 26186m >20 3 Lead ppm ASTM 26186m >40 <1 Tin ppm ASTM 26186m >15 0 Vanadium ppm ASTM 26186m >15 0 Vanadium ppm ASTM 26186m >15 0 Valuer Vellow Metal scalar Visual NONE NONE Vellow Metal scalar Visual NONE Neg Solition Asitam Visual NONE Solition Asitam Visual NONE Neg Appearance scalar Visual NONE Appearance scalar Visual NONE Agancales Visual NONE Agancales Visual NONE	WEAR	Iron	nnm	ΔSTM D5185m	>100	٥		
Nickel ppm ASTM D5185m >4 0	WEAR							
Titanium ppm	All component wear rates are normal.							
Silver ppm					>4			
Aluminum					0			
Lead								
Copper ppm ASTM D5185m >3.30 <1								
Tin ppm ASTM D5185m 3-15 0 0 Vanadium ppm ASTM D5185m NONE NONE Visual NONE NONE NONE Visual NONE Vi								
Vanadium ppm ASTM D\$185m NONE NONE With the Metal Scalar Visual NONE NONE Scalar Visual NONE NONE Scalar Visual NONE NONE Scalar Visual NORML NORML NORML Scalar Visual NORML NORML NORML NORML NORML Scalar Visual NORML NORML								
White Metal Yellow Metal Scalar "Visual NONE NON					>15	-		
Vellow Metal Scalar Visual NONE NONE						-		
Silicon ppm ASTM D5185m >25 4						_		
Potassium ppm ASTM D5185m >20 2		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium ppm ASTM D5185m >20 2	CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	4		
Valer	There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	2		
Glycol Soot % % * *ASTM D7844 >3		Fuel		WC Method	>5	<1.0		
Soot %		Water		WC Method	>0.2	NEG		
Nitration Abs/cm *ASTM D7624 >20 7.9 Sulfation Abs/.tmm *ASTM D7415 >30 19.2 Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NON		Glycol		WC Method		NEG		
Sulfation Abs/Imm *ASTM D7415 >30 19.2 Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORM		Soot %	%	*ASTM D7844	>3	0.3		
Silt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NORML Sand/Dirt Scalar *Visual NORML NORML NORML NORML Scalar *Visual NORML NORM		Nitration	Abs/cm	*ASTM D7624	>20	7.9		
Debris Scalar *Visual NONE NONE NONE Sand/Dirt Scalar *Visual NONE NORML N		Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2		
Sand/Dirt Scalar *Visual NONE NONE NORML		Silt	scalar	*Visual	NONE	NONE		
Sand/Dirt Scalar *Visual NONE NONE NORML		Debris	scalar	*Visual	NONE	NONE		
Appearance Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual NORML NORML NORML NORML Emulsified Water Scalar *Visual NORML		Sand/Dirt	scalar			NONE		
Calcium Calc		Appearance		*Visual	NORML	NORML		
Emulsified Water scalar *Visual >0.2 NEG		• •	scalar			NORML		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. Boron ppm ASTM D5185m 13 1 Molybdenum ppm ASTM D5185m 57 59 Manganese ppm ASTM D5185m 57 59 Manganese ppm ASTM D5185m 825 431 Calcium ppm ASTM D5185m 1100 1891 Phosphorus ppm ASTM D5185m 1089 1310 Zinc ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3			scalar	*Visual	>0.2			
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. Boron ppm ASTM D5185m 13 1 Molybdenum ppm ASTM D5185m 57 59 Manganese ppm ASTM D5185m 57 59 Manganese ppm ASTM D5185m 825 431 Calcium ppm ASTM D5185m 1100 1891 Phosphorus ppm ASTM D5185m 1089 1310 Zinc ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3	ELLUD CONDITION			40714 05405				
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. Barium ppm ASTM D5185m 0 0 Molybdenum ppm ASTM D5185m 57 59 Manganese ppm ASTM D5185m 825 431 Calcium ppm ASTM D5185m 1100 1891 Phosphorus ppm ASTM D5185m 933 1114 Zinc ppm ASTM D5185m 1089 1310 Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3	FLUID CONDITION				10			
Molybdenum ppm ASTM D5185m 57 59 Manganese ppm ASTM D5185m 57 59 Magnesium ppm ASTM D5185m 825 431 Calcium ppm ASTM D5185m 1100 1891 Phosphorus ppm ASTM D5185m 933 1114 Zinc ppm ASTM D5185m 1089 1310 Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3	The BN result indicates that there is suitable alkalinity remaining in the							
Molybdenum ppm ASTM D5185m 57 59 Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m 825 431 Calcium ppm ASTM D5185m 1100 1891 Phosphorus ppm ASTM D5185m 933 1114 Zinc ppm ASTM D5185m 1089 1310 Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3	oil. The condition of the oil is suitable for further service.							
Magnesium ppm ASTM D5185m 825 431 Calcium ppm ASTM D5185m 1100 1891 Phosphorus ppm ASTM D5185m 933 1114 Zinc ppm ASTM D5185m 1089 1310 Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3		-			5/			
Calcium ppm ASTM D5185m 1100 1891 Phosphorus ppm ASTM D5185m 933 1114 Zinc ppm ASTM D5185m 1089 1310 Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3					0.5-			
Phosphorus ppm ASTM D5185m 933 1114 Zinc ppm ASTM D5185m 1089 1310 Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3								
Zinc ppm ASTM D5185m 1089 1310 Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3								
Sulfur ppm ASTM D5185m 2769 3869 Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3								
Oxidation Abs/.1mm *ASTM D7414 >25 15.4 Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3								
Base Number (BN) mg KOH/g ASTM D2896 11.0 8.3								
Visc @ 100°C cSt ASTM D445 15.4 13.1								
		Visc @ 100°C	cSt	ASTM D445	15.4	13.1		







Certificate L2367

Laboratory Sample No.

Lab Number : 06175153 Unique Number : 11021206 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0901419 Received : 10 May 2024 **Tested** : 13 May 2024

Diagnosed : 13 May 2024 - Wes Davis

OMNISOURCE SE 1426 WEST MAIN SHOP KERNERSVILLE, NC

US 27284 Contact: JEFF HENDRIX

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:

F: