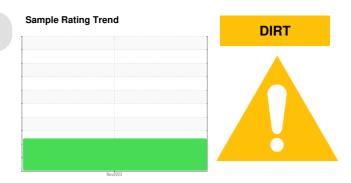


PROBLEM SUMMARY

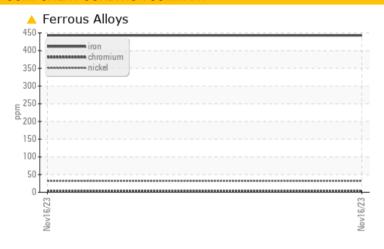
Area {UNASSIGNED} Machine Id 3468

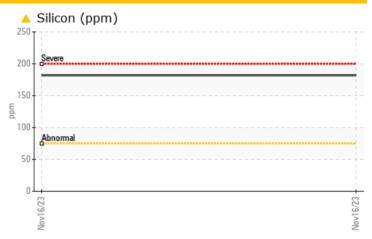
Component **Differential**

NOT GIVEN (--- GAL)



COMPONENT CONDITION SUMMARY





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. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL				
Nickel	ppm	ASTM D5185m	>10	<u> </u>				
Silicon	maa	ASTM D5185m	>75	182				

Customer Id: APPLEVW Sample No.: WC0832970 Lab Number: 06011761 Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Check Dirt Access			?	We advise that you check all areas where dirt can enter the system.			

HISTORICAL DIAGNOSIS



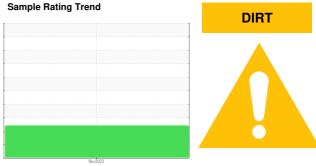
OIL ANALYSIS REPORT

Area {UNASSIGNED} Machine Id 3468

Component

Differential

NOT GIVEN (--- GAL)



DIAGNOSIS

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. Resample at the next service interval to monitor.

Wear

The nickel level is abnormal. All other component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

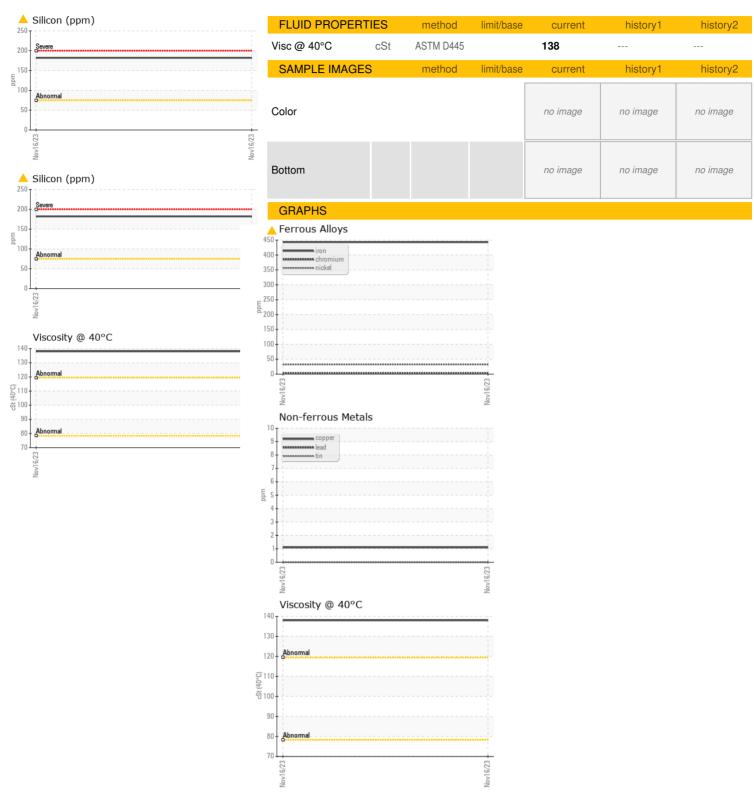
Fluid Condition

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

SAMPLE INFORMATION method limit/base current history1 history2 Sample Number Client Info 16 Nov 2023 Sample Date Client Info 0 Oil Age hrs Client Info 0 Oil Changed Client Info Changed Sample Status Manormal ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method NEG Iron ppm ASTM D5185m >500 443 Nickel ppm ASTM D5185m >10 3 Nickel ppm ASTM D5185m >10 3 Alluminum ppm ASTM D5185m >50 6 Lead ppm ASTM D5					Nov2023		
Sample Date	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Date Insignation of the control of	Sample Number		Client Info		WC0832970		
Oil Age hrs Client Info 0	·		Client Info		16 Nov 2023		
Oil Changed Sample Status Client Info Changed ABNORMAL	Machine Age	hrs	Client Info		0		
CONTAMINATION	Oil Age	hrs	Client Info		0		
CONTAMINATION method limit/base current history1 history2 Water WC Method >.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 443 Chromium ppm ASTM D5185m >10 3 Nickel ppm ASTM D5185m >10 32 Silver ppm ASTM D5185m >10 Aluminum ppm ASTM D5185m 0 Aluminum ppm ASTM D5185m >25 6 Aluminum ppm ASTM D5185m >10 1 Copper ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0	Oil Changed		Client Info		Changed		
Water WC Method >.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 443 Chromium ppm ASTM D5185m >10 3 Nickel ppm ASTM D5185m >10 32 Titanium ppm ASTM D5185m 0 Aluminum ppm ASTM D5185m 25 6 Aluminum ppm ASTM D5185m >25 0 Aluminum ppm ASTM D5185m 10 1 Lead ppm ASTM D5185m 10 1 Copper ppm ASTM D5185m 0 1 Asamana ppm ASTM D5185m 118 <	Sample Status				ABNORMAL		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 443 Chromium ppm ASTM D5185m >10 3 Nickel ppm ASTM D5185m >10 32 Titanium ppm ASTM D5185m 0 Silver ppm ASTM D5185m 25 6 Aluminum ppm ASTM D5185m >25 0 Lead ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m >10 0 Lead ppm ASTM D5185m 0 0 Academium ppm ASTM D5185m 0 0 ADD1TVES method limit/base current history1	CONTAMINATION	J	method	limit/base	current	history1	history2
Iron	Water		WC Method	>.2	NEG		
Chromium ppm ASTM D5185m >10 3 Nickel ppm ASTM D5185m >10 32 Titanium ppm ASTM D5185m >10 32 Silver ppm ASTM D5185m >25 6 Aluminum ppm ASTM D5185m >25 0 Lead ppm ASTM D5185m >100 1 Copper ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 8 Barium ppm ASTM D5185m 6	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>500	443		
Titanium ppm ASTM D5185m <1 Silver ppm ASTM D5185m 0 Aluminum ppm ASTM D5185m >25 6 Lead ppm ASTM D5185m >25 0 Copper ppm ASTM D5185m 100 1 Tin ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 8 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 74	Chromium	ppm	ASTM D5185m	>10	3		
Stilver	Nickel	ppm	ASTM D5185m	>10	4 32		
Aluminum ppm ASTM D5185m >25 6 Lead ppm ASTM D5185m >25 0 Copper ppm ASTM D5185m >100 1 Tin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 Boron ppm ASTM D5185m 118 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 6 Manganese ppm ASTM D5185m 9 Manganese ppm ASTM D5185m 9 Manganesium ppm ASTM D5185m 74 Phosphorus ppm ASTM D5185m	Titanium	ppm	ASTM D5185m		<1		
Aluminum ppm ASTM D5185m >25 6 Lead ppm ASTM D5185m >25 0 Copper ppm ASTM D5185m >10 0 Trin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 118 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 9 Magnesium ppm ASTM D5185m 74 Phosphorus ppm ASTM D5	Silver		ASTM D5185m		0		
Lead ppm ASTM D5185m >25 0 Copper ppm ASTM D5185m >100 1 Tin ppm ASTM D5185m 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 8 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 9 Magnesium ppm ASTM D5185m 9 Calcium ppm ASTM D5185m 36 Phosphorus ppm	Aluminum	ppm	ASTM D5185m	>25	6		
Copper ppm ASTM D5185m >100 1 Tin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 ACAdmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 118 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 41 Manganese ppm ASTM D5185m 9 Manganesium ppm ASTM D5185m 9 Calcium ppm ASTM D5185m 74 Phosphorus ppm ASTM D5185m 36 Sulfur ppm ASTM D5185m 25632	Lead				0		
Tin ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m 0 Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 118 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 6 Manganese ppm ASTM D5185m 9 Magnesium ppm ASTM D5185m 9 Calcium ppm ASTM D5185m 9 Phosphorus ppm ASTM D5185m 36 Sulfur ppm ASTM D5185m 25632 Sulfur ppm ASTM D5185m >75 182	Copper		ASTM D5185m	>100	1		
Vanadium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 118 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 6 Manganese ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 9 Calcium ppm ASTM D5185m 9 Phosphorus ppm ASTM D5185m 36 Zinc ppm ASTM D5185m 25632 Zinc ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 182			ASTM D5185m	>10	0		
Cadmium ppm ASTM D5185m 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 118 Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m 41 Manganese ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 9 Calcium ppm ASTM D5185m 876 Phosphorus ppm ASTM D5185m 36 Silfur ppm ASTM D5185m 25632 Visicon ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 182	Vanadium				0		
Boron			ASTM D5185m		0		
Boron	ADDITIVES		method	limit/base	current	historv1	history2
Barium ppm ASTM D5185m 8 Molybdenum ppm ASTM D5185m <1		nnm			110		
Molybdenum ppm ASTM D5185m <1 Manganese ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 9 Calcium ppm ASTM D5185m 876 Phosphorus ppm ASTM D5185m 36 Zinc ppm ASTM D5185m 25632 Sulfur ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 182 Sodium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal sca					_		
Manganese ppm ASTM D5185m 6 Calcium ppm ASTM D5185m 9 Phosphorus ppm ASTM D5185m 876 Zinc ppm ASTM D5185m 36 Sulfur ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 182 Sodium ppm ASTM D5185m >20 5 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE					_		
Magnesium ppm ASTM D5185m 9 Phosphorus ppm ASTM D5185m 876 Zinc ppm ASTM D5185m 36 Sulfur ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 182 Sodium ppm ASTM D5185m >20 5 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE	·						
Calcium ppm ASTM D5185m 74 Phosphorus ppm ASTM D5185m 876 Zinc ppm ASTM D5185m 36 Sulfur ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 182 Sodium ppm ASTM D5185m >20 5 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE <	-				-		
Phosphorus ppm ASTM D5185m 876 Zinc ppm ASTM D5185m 36 Sulfur ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 182 Sodium ppm ASTM D5185m >20 5 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE							
Zinc ppm ASTM D5185m 36 Sulfur ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 182 Sodium ppm ASTM D5185m >20 5 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Sulfur ppm ASTM D5185m 25632 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 182 Sodium ppm ASTM D5185m >20 5 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Vis							
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 182 Sodium ppm ASTM D5185m 12 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Codor							
Silicon ppm ASTM D5185m >75 ▲ 182 Sodium ppm ASTM D5185m 12 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORML NORML Appearance scalar *Visual NORML NORML Godor scalar *Visual		ppm			25632		
Sodium ppm ASTM D5185m 12 Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual	CONTAMINANTS			limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG		• •		>75			
White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG		ppm			12		
White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NORM NORML Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Potassium	ppm	ASTM D5185m	>20	5		
Yellow Metal scalar *Visual NONE NONE Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NORML Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG							
Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Yellow Metal		*Visual	NONE			
Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >.2 NEG	Precipitate	scalar	*Visual	NONE	NONE		
Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Silt		*Visual	NONE	NONE		
Appearance scalar *Visual NORML NORML Codor scalar *Visual NORML NORML NORML Compute the scalar *Visual NORML NORML Compute the scalar *Visual >.2 NEG Compute the scalar *Visual >.2 NEG Compute the scalar *Visual Scalar *Vis	Debris	scalar	*Visual	NONE			
Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >.2 NEG	Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water scalar *Visual >.2 NEG	Appearance	scalar	*Visual	NORML	NORML		
	Odor	scalar	*Visual	NORML	NORML		
Free Water scalar *Visual NEG	Emulsified Water	scalar	*Visual	>.2	NEG		
	Free Water	scalar	*Visual		NEG		



OIL ANALYSIS REPORT







Laboratory Sample No. Lab Number **Unique Number**

: WC0832970 : 06011761 : 10750905 Test Package : CONST

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 17 Nov 2023 : 21 Nov 2023 Diagnostician : Don Baldridge **Apple Valley Waste - Corporate** 771 James Burr Blvd Kearneysville, WV

US 25430 Contact: Frank Hottle

Frank.hottle@applevalleywaste.com

T: (717)977-3920 F: (304)724-1890

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)