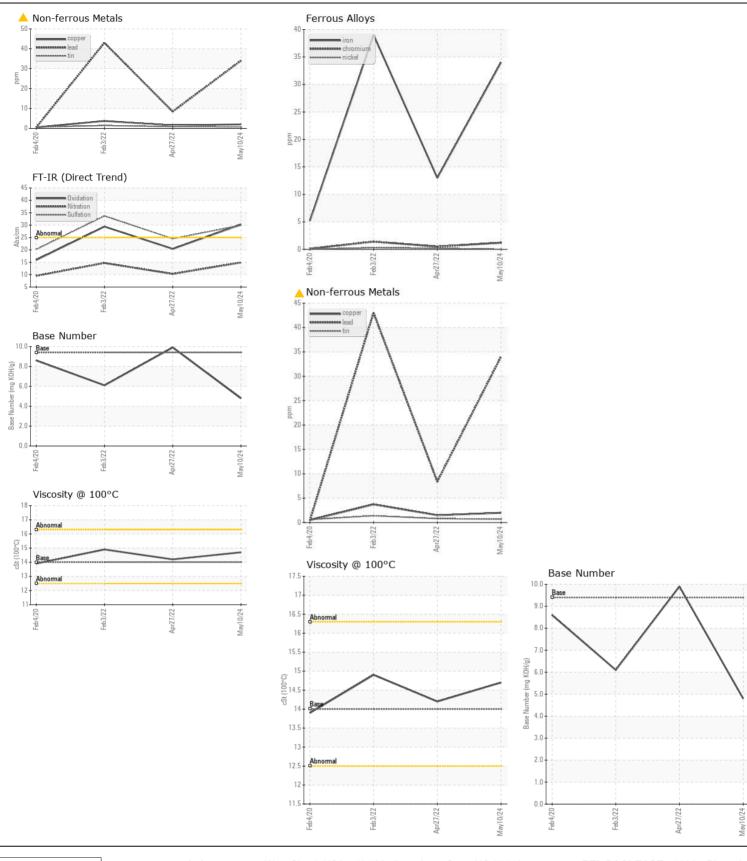


**WEAR** CONTAMINATION **FLUID CONDITION**  **ABNORMAL** NORMAL **NORMAL** 

Machine Id

## 8571822 Component Diesel Engine

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.  WEAR  The lead level is abnormal. All other component wear rates are normal.  WEAR  The lead level is abnormal. All other component wear rates are normal.  WEAR  The lead level is abnormal. All other component wear rates are normal.  Nickel ppm AST Nickel ppm AST Aluminum ppm AST Silver ppm AST Aluminum ppm AST Silver ppm AST Aluminum ppm AST Copper ppm AST Aluminum ppm AST Vanadium ppm AST Valuminum ppm AST Silicon ppm AST Manganese ppm AST Mangan	lient Info	Limit/Abn	Current	History1	History2
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.  WEAR The lead level is abnormal. All other component wear rates are normal.  WEAR The lead level is abnormal. All other component wear rates are normal.  If on pm AST Chromium ppm AST Nickel ppm AST Aluminum ppm AST Silver ppm AST Aluminum ppm AST Vanadium ppm AST Van			RPL0017061	RPL0001802	
service interval to monitor.    Machine Age   mis   Cili     Oil Age   mis   Cili     Filter Age   mis   Cili     Filter Age   mis   Cili     Filter Age   mis   Cili     Filter Changed   Cili     Filter Changed   Cili     Filter Changed   Chromium   ppm   AST     Nickel   ppm   AST     Nickel   ppm   AST     Nickel   ppm   AST     Aluminum   ppm   AST     Aluminum   ppm   AST     Aluminum   ppm   AST     Aluminum   ppm   AST     Vanadium   pp	lient Info		10 May 2024	27 Apr 2022	03 Feb 2022
WEAR The lead level is abnormal. All other component wear rates are normal.  WEAR The lead level is abnormal. All other component wear rates are normal.  Nickel ppm AST Noll Assimal Nickel ppm AST Nick	lient Info		210338	174003	0
WEAR  The lead level is abnormal. All other component wear rates are normal.  The lead level is abnormal. All other component wear rates are normal.  Iron ppm AST Chromium ppm AST Ritanium ppm AST Aluminum ppm AST Lead ppm AST Copper ppm AST Vanadium ppm AST Valuation Abs/cm As Sulfation Abs/cm As As Sulfation Abs/cm As Sulfa	lient Info		0	0	25937
WEAR The lead level is abnormal. All other component wear rates are normal.  Iron ppm AST Chromium ppm AST Titanium ppm AST Silver ppm AST Aluminum ppm AST Copper ppm AST Tin ppm AST Tin ppm AST Vanadium ppm AST Tin ppm AST Vanadium ppm AST Vanadium ppm AST Valuminum ppm AST Vanadium ppm AST Valuminum ppm AST Vanadium ppm AST Valuminum ppm AST Silicon ppm AST Sulfation Abs/tom *AS Sulfation Abs/tom	lient Info		0	0	25937
WEAR The lead level is abnormal. All other component wear rates are normal.  The lead level is abnormal. All other component wear rates are normal.  The lead level is abnormal. All other component wear rates are normal.  Titanium ppm AST Silver ppm AST Aluminum ppm AST Copper ppm AST Tin ppm AST Vanadium ppm AST Vanadium ppm AST Vanadium ppm AST Vanadium ppm AST Valow Metal scalar "Vi Vellow Metal Scalar "Vi Ve	lient Info		Changed	Changed	Changed
WEAR  The lead level is abnormal. All other component wear rates are normal.  The lead level is abnormal. All other component wear rates are normal.  Nickel ppm AST Titanium ppm AST Silver ppm AST Aluminum ppm AST Lead ppm AST Copper ppm AST Copper ppm AST Vanadium White Metal vellow Metal	lient Info		Changed	Not Changd	Changed
The lead level is abnormal. All other component wear rates are normal.    Chromium   ppm   AST   Nickel   ppm   AST   Silver   ppm   AST   Silver   ppm   AST   Aluminum   ppm   AST   Copper   ppm   AST   Tin   ppm   AST   Vanadium   ppm   AST   Vanadium   ppm   AST   Vanadium   ppm   AST   Valow Metal   scalar "Vi   Vellow Metal   Silicon   ppm   AST   Fuel   WC   Glycol   WC   Soot %   %   ASS   Alfation   Abs/cm "ASS   Sulfation   A			ABNORMAL	NORMAL	ABNORMA
The lead level is abnormal. All other component wear rates are normal.    Chromium   ppm   AST   Nickel   ppm   AST   Silver   ppm   AST   Silver   ppm   AST   Aluminum   ppm   AST   Copper   ppm   AST   Tin   ppm   AST   Vanadium   ppm   AST   Vanadium   ppm   AST   Vanadium   ppm   AST   Valow Metal   scalar "Vi   Vellow Metal   Scalar "Vi   Scalar "	STM D5185m	>100	34	13	39
Titanium ppm AST Silver ppm AST Aluminum ppm AST Lead ppm AST Copper ppm AST Tin ppm AST Vanadium ppm AST White Metal scalar "Vi Yellow Metal scalar "	STM D5185m	>20	1	<1	1
Silver ppm AST Aluminum ppm AST Copper ppm AST Tin ppm AST Vanadium ppm AST White Metal scalar "Vi Yellow Metal scalar "Vi Yellow Indication of any contamination in the oil.  Silicon ppm AST Potassium ppm AST Fuel WC Water WC Glycol Soot % % "AS Nitration Abs/cm "AS Sulfation Abs/cm "AS Abs/cm "	STM D5185m	>4	0	<1	<1
Aluminum ppm AST Lead ppm AST Tin ppm AST Vanadium ppm AST Vanadium ppm AST Vallow Metal scalar "Vi Yellow Metal scalar "Vi Water WC Glycol WC Soot % % "AS Nitration Abs/cm "AS Sulfation Abs/cm "AS Sulfation Abs/cm "AS Sulfation Abs/cm "AS Sulfation Abs/cm "AS Silt scalar "Vi Debris scalar "Vi Sand/Dirt scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Codor scalar "Vi Emulsified Water scalar "Vi Appearance scalar "Vi	STM D5185m		0	<1	0
Lead ppm AST Copper ppm AST Tin ppm AST Vanadium ppm AST White Metal scalar "Vi Yellow Metal scalar "Vi Potassium ppm AST Fuel WC Water WC Glycol WC Soot % % "AS Nitration Abs/cm "AS Sulfation Abs/cm "AS Sulfation Abs/cm "AS Sulfation Abs/cm "AS Silt scalar "Vi Debris scalar "Vi Debris scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Emulsified Water scalar "Vi Emulsified Water scalar "Vi Appearance scalar "Vi	STM D5185m	>3	<1	0	<1
Copper ppm AST Tin ppm AST Tin ppm AST Vanadium ppm AST White Metal scalar "Vi Yellow Metal Scalar "Wi Glycol Water WC Glycol Soot % % "ASS Nitration Abs/cm "AS Sulfation Abs/cm "AS Sulfation Abs/mm "AS Silt scalar "Vi Debris scalar "Vi Debris scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Emulsified Water scalar "Vi Emulsified Water scalar "Vi Emulsified Water scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Emulsified Water scalar "Vi Emulsifie	STM D5185m	>20	4	1	3
Tin ppm AST Vanadium ppm AST White Metal scalar "Vi Yellow Metal scalar "Vi Yellow Metal scalar "Vi Yellow Metal scalar "Vi Yellow Metal scalar "Vi Potassium ppm AST Fuel WC Glycol WC Soot % % "ASS Nitration Abs/imm "AS Silt scalar "Vi Debris scalar "Vi Debris scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Emulsified Water scalar "Vi Emulsified Water scalar "Vi Sand/Dirt scalar "Vi Sand/Dirt scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi Appearance scalar "Vi Cdor scalar "Vi Appearance scalar "Vi	STM D5185m	>40	<b>4</b> 34	8	<b>4</b> 3
Vanadium ppm AST White Metal scalar *Vi Yellow Metal scalar *Vi Potassium ppm AST Fuel WC Water WC Glycol WC Soot % % 'AS Nitration Abs/cm 'AS Sulfation Abs/cm 'AS Sulfation Abs/cm 'AS Silt scalar *Vi Appearance scalar *Vi Appeara	STM D5185m		2	2	4
White Metal Yellow Metal Scalar *Vi Yellow Metal Scalar *Vi Yellow Metal Scalar *Vi Scalar *Vi Yellow Metal Scalar *Vi Yellow Metal Scalar *Vi Potassium ppm AST Fuel WC Water Glycol WC Soot % % 'AS Nitration Abs/cm 'AS Sulfation Abs/Imm 'AS Silt Scalar *Vi Poebris Scalar *Vi Poe	STM D5185m	>15	<1	<1	1
There is no indication of any contamination in the oil.  Silicon ppm AST Potassium ppm AST Fuel WC Water Glycol Soot % % 'AS Nitration Abs/cm 'AS Sulfation Abs/cm 'AS Sulfation Abs/cm 'AS Sulfation Abs/cm 'AS Silt scalar 'Vi Debris scalar 'Vi Appearance scalar 'Vi Appearance scalar 'Vi Emulsified Water scalar 'Vi Emulsified Water scalar 'Vi Boron ppm AST Molybdenum ppm AST Manganese ppm AST Manganese ppm AST Magnesium ppm AST Calcium ppm AST Calcium ppm AST Calcium ppm AST Phosphorus ppm AST	STM D5185m		0	0	<1
There is no indication of any contamination in the oil.  Silicon ppm AST Potassium ppm AST Fuel WC Water Glycol WC Soot % % 'AS Nitration Abs/cm 'AS Sulfation Abs/cm 'AS Sulfation Abs/cm 'AS Sulfation Abs/cm 'AS Silt scalar 'Vi Debris scalar 'Vi Appearance scalar 'Vi Appearance scalar 'Vi Odor scalar 'Vi Emulsified Water scalar 'Vi Sand/Dirt scalar 'Vi Appearance scalar 'Vi		NONE	NONE	NONE	NONE
There is no indication of any contamination in the oil.  Potassium ppm AST Fuel WC Water Glycol WC Soot % % 'AS Nitration Abs/.1mm 'AS Sulfation Abs/.1mm 'AS Silt scalar *Vi Debris scalar *Vi Debris scalar *Vi Appearance scalar *Vi Appearance scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Debris S	Visual	NONE	NONE	NONE	NONE
There is no indication of any contamination in the oil.  Potassium ppm AST Fuel WC Water Glycol WC Soot % % 'AS Nitration Abs/.1mm 'AS Sulfation Abs/.1mm 'AS Silt scalar *Vi Debris scalar *Vi Debris scalar *Vi Appearance scalar *Vi Appearance scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Debris S	STM D5185m	>25	19	6	8
There is no indication of any contamination in the oil.  Fuel Water Glycol WC Soot % /* AS Nitration Abs/cm *AS Sulfation Abs/.1mm *AS Silt scalar *Vi Debris scalar *Vi Sand/Dirt scalar *Vi Appearance scalar *Vi Appearance scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Sodium ppm AST Boron ppm AST Boron ppm AST Barium ppm AST Molybdenum ppm AST Manganese ppm AST Manganese ppm AST Magnesium ppm AST Calcium ppm AST Calcium ppm AST Phosphorus ppm AST	STM D5185m		14	6	15
Glycol WC Soot % % *AS Nitration Abs/cm *AS Sulfation Abs/.1mm *AS Sulfation Abs/.1mm *AS Silt scalar *Vi Debris scalar *Vi Appearance scalar *Vi Appearance scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Boor scalar *Vi Appearance scalar *Vi Ap		>5	<1.0	<1.0	<1.0
Soot % % *AS Nitration Abs/cm *AS Sulfation Abs/.1mm *AS Silt scalar *Vi Debris scalar *Vi Sand/Dirt scalar *Vi Appearance scalar *Vi Appearance scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Boron scalar *Vi Boron ppm AST Molybdenum ppm AST Manganese ppm AST Manganese ppm AST Calcium ppm AST Phosphorus ppm AST	/C Method	>0.2	NEG	NEG	NEG
Nitration Abs/cm *AS Sulfation Abs/.1mm *AS Silt scalar *Vi Debris scalar *Vi Sand/Dirt scalar *Vi Appearance scalar *Vi Emulsified Water scal	/C Method		NEG	NEG	NEG
Sulfation Abs/.1mm *ASS Silt scalar *Vi Debris scalar *Vi Sand/Dirt scalar *Vi Appearance scalar *Vi Appearance scalar *Vi Emulsified Water sc	ASTM D7844	>3	1.3	0.4	1.2
Silt scalar *Vi Debris scalar *Vi Sand/Dirt scalar *Vi Appearance scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Sand/Dirt scalar *Vi Odor scalar *Vi Sand/Dirt scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Boron scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Appearance scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Odor scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Emulsified Water scalar *Vi Boron scalar *Vi Boron ppm AST Molybdenum ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST	ASTM D7624	>20	14.9	10.3	14.7
Debris scalar *Vi Sand/Dirt scalar *Vi Appearance scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Sodium ppm AST Boron ppm AST Molybdenum ppm AST Magnesium ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST	ASTM D7415	>30	29.9	24.5	33.7
Sand/Dirt scalar *Vi Appearance scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi Boron ppm AST Molybdenum ppm AST Magnesium ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST	Visual	NONE	NONE	NONE	NONE
Appearance scalar *Vi Odor scalar *Vi Emulsified Water scalar *Vi  FLUID CONDITION  The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.  Sodium ppm AST Boron ppm AST Molybdenum ppm AST Molybdenum ppm AST Magnesium ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST		NONE	NONE	NONE	NONE
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.  Sodium ppm AST Boron ppm AST Molybdenum ppm AST Molybdenum ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST		NONE	NONE	NONE	NONE
FLUID CONDITION  The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.  Sodium ppm AST Boron ppm AST Molybdenum ppm AST Molybdenum ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST		NORML	NORML	NORML	NORMI
FLUID CONDITION  The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.  Sodium ppm AST Boron ppm AST Molybdenum ppm AST Manganese ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST		NORML	NORML	NORML	NORM
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.  Boron Barium ppm AST Molybdenum ppm AST Manganese ppm AST Calcium ppm AST Phosphorus ppm AST	visuai	>0.2	NEG	NEG	NEG
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 AST Molybdenum ppm AST Manganese ppm AST Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST	STM D5185m		24	9	27
oil. The condition of the oil is suitable for further service.    Molybdenum   ppm   AST	STM D5185m	0	37	65	69
Molybdenum ppm AST  Manganese ppm AST  Magnesium ppm AST  Calcium ppm AST  Phosphorus ppm AST	STM D5185m	0	0	0	0
Magnesium ppm AST Calcium ppm AST Phosphorus ppm AST	STM D5185m	0	58	29	50
CalciumppmASTPhosphorusppmAST	STM D5185m		<1	<1	<1
Phosphorus ppm AST	STM D5185m	0	741	659	826
	STM D5185m		1578	1540	1682
Zinc nom AST	STM D5185m		858	789	844
11	STM D5185m		1019	903	967
	STM D5185m	0=	3093	2567	2675
	STM D7414		30.2	20.4	29.4
Base Number (BN)   mg KOH/g   AST Visc @ 100°C   cSt   AST	STM D2896 STM D445		4.8 14.7	9.9 14.2	6.1







Laboratory Sample No. Lab Number : 06187267

Unique Number : 11044019 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : RPL0017061 **Tested** 

Diagnosed

: 23 May 2024 : 24 May 2024 - Sean Felton

: 22 May 2024

RTL PACLEASE - 7008 - Phoenix

625 South 27th Ave Phoenix, AZ US 85009

Contact: Maurice Pilotte

PilotteM@rushenterprises.com T: (602)566-5712

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)

Report Id: PAC7008 [WUSCAR] 06187267 (Generated: 05/24/2024 08:47:38) Rev: 1