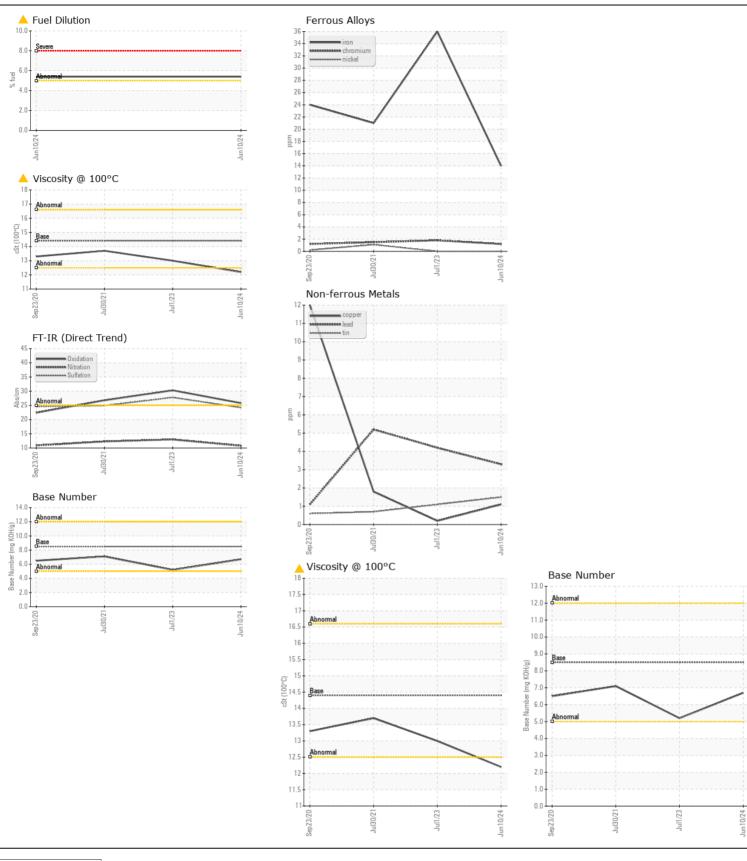
WEAR CONTAMINATION FLUID CONDITION

NORMAL ABNORMAL ABNORMAL

Machine Id **7273R** 

Front Diesel Engine

Test Sample Number Sample Date Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status  Iron Chromium Nickel Titanium Silver Aluminum Lead Copper	mls mls mls ppm ppm ppm ppm ppm ppm ppm	Method Client Info ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20	Current IL06214162 10 Jun 2024 3 0 0 N/A N/A ABNORMAL 14 1 0	History1 IL0032305 01 Jul 2023 169366 0 0 Changed N/A NORMAL 36 2	History2 IL0022180 30 Jul 2021 113837 0 0 N/A N/A NORMAL
Sample Date Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status  Iron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm ppm	Client Info ASTM D5185m ASTM D5185m ASTM D5185m	>20	10 Jun 2024 3 0 0 N/A N/A ABNORMAL	01 Jul 2023 169366 0 0 Changed N/A NORMAL 36 2	30 Jul 2021 113837 0 0 N/A N/A NORMAL 21 2
Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status  Iron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm ppm	Client Info Client Info Client Info Client Info Client Info ASTM D5185m ASTM D5185m ASTM D5185m	>20	3 0 0 N/A N/A ABNORMAL	169366 0 0 Changed N/A NORMAL 36 2	113837 0 0 N/A N/A NORMAL 21 2
Oil Age Filter Age Oil Changed Filter Changed Sample Status  Iron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm ppm	Client Info Client Info Client Info Client Info ASTM D5185m ASTM D5185m ASTM D5185m	>20	0 0 N/A N/A ABNORMAL	0 0 Changed N/A NORMAL 36 2	0 0 N/A N/A NORMAL 21 2
Filter Age Oil Changed Filter Changed Sample Status Iron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm ppm	Client Info Client Info ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20	N/A N/A ABNORMAL 14	Changed N/A NORMAL 36 2	N/A N/A NORMAL 21 2
Filter Changed Sample Status Iron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20	N/A ABNORMAL 14 1	N/A NORMAL 36 2	N/A NORMAL 21 2
Sample Status  Iron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20	ABNORMAL 14 1	NORMAL 36 2	NORMAL 21 2
Sample Status  Iron Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>20	14 1	36 2	21
Chromium Nickel Titanium Silver Aluminum Lead	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>20	1	2	2
Nickel Titanium Silver Aluminum Lead	ppm ppm ppm	ASTM D5185m ASTM D5185m				
Titanium Silver Aluminum Lead	ppm ppm	ASTM D5185m	>4	0	Ο	4
Silver Aluminum Lead	ppm ppm				U	1
Aluminum Lead	ppm	ASTM D5185m		0	0	<1
Lead			>3	<1	0	0
		ASTM D5185m	>20	3	4	3
Copper	ppm	ASTM D5185m	>40	3	4	5
	ppm	ASTM D5185m	>330	1	<1	2
Tin	ppm	ASTM D5185m	>15	2	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	5	8
Potassium		ASTM D5185m	>20	3	0	5
Fuel	%			<b>5.4</b>	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.8	13.0	12.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2	27.8	24.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>158	2	<1	3
Boron	ppm	ASTM D5185m	250	4	10	22
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	57	59	39
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	932	924	546
Calcium	ppm	ASTM D5185m	3000	1054	1268	1798
Phosphorus	ppm	ASTM D5185m	1150	1033	965	733
Zinc	ppm			1206	1273	881
Sulfur	ppm			3687	3624	1844
Oxidation	Abs/.1mm			25.8	30.3	26.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.7	5.2	7.1
	White Metal Yellow Metal Yellow Metal Silicon Potassium Fuel Water Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Oxidation	White Metal scalar Yellow Metal scalar Yellow Metal scalar  Silicon ppm Potassium ppm Fuel % Water Glycol Soot % % Nitration Abs/cm Sulfation Abs/.1mm Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Sodium ppm Boron ppm Barium ppm Molybdenum ppm Manganese ppm Magnesium ppm Calcium ppm Calcium ppm Phosphorus ppm Sulfur ppm Sulfur ppm Sulfur ppm Oxidation Abs/.1mm Base Number (BN) mg KOH/g	White Metal scalar *Visual Yellow Metal scalar *Visual  *ASTM D3524  *Visual  *ASTM D7844  *ASTM D7844  *ASTM D7624  *Sulfation Abs/cm *ASTM D7624  *Sulfation Abs/cm *ASTM D7415  *Silt scalar *Visual  *Visual  *Debris scalar *Visual  *Sand/Dirt scalar *Visual  *Appearance scalar *Visual  *Appearance scalar *Visual  *Sodium *Visual  *Sodium *	White Metal Yellow Metal         scalar scalar         *Visual *Visual         NONE           Silicon         ppm         ASTM D5185m         >25           Potassium         ppm         ASTM D5185m         >20           Fuel         %         ASTM D3524         >5           Water         WC Method         >0.2           Glycol         WC Method         >0.2           Soot %         %         *ASTM D7844         >3           Nitration         Abs/cm         *ASTM D7624         >20           Sulfation         Abs/.1mm         *ASTM D7415         >30           Silt         scalar         *Visual         NONE           Debris         scalar         *Visual         NONE           Sand/Dirt         scalar         *Visual         NONE           Appearance         scalar         *Visual         NORML           Appearance         scalar         *Visual         NORML           Emulsified Water         scalar         *Visual         NORML           Emulsified Water         scalar         *Visual         NORML           Boron         ppm         ASTM D5185m         250           Barium         ppm         ASTM D5185m	White Metal         scalar         *Visual         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE           Silicon         ppm         ASTM D5185m         >25         4           Potassium         ppm         ASTM D5185m         >20         3           Fuel         %         ASTM D3524         >5         ▲ 5.4           Water         WC Method         No.2         NEG           Glycol         WC Method         No.2         NEG           Soot %         %         *ASTM D7844         >3         0.5           Nitration         Abs/cm         *ASTM D7624         >20         10.8           Sulfation         Abs/.1mm         *ASTM D7624         >20         10.8           Sulfation         Abs/.1mm         *ASTM D7624         >20         10.8           Sulfation         Abs/.1mm         *ASTM D7415         >30         24.2           Silt         scalar         *Visual         NONE         NONE           Sulfation         *Visual         NONE         NONE           Appearance         scalar         *Visual         NORML         NORML           Appearance	White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE           Silicon         ppm         ASTM D5185m         >25         4         5           Potassium         ppm         ASTM D5185m         >20         3         0           Fuel         %         ASTM D5185m         >20         3         0           Water         WC Method         >0.2         NEG         NEG           Glycol         WC Method         NEG         NEG         NEG           Soot %         %         *ASTM D7844         >3         0.5         0.4           Nitration         Abs/cm         *ASTM D7624         >20         10.8         13.0           Sulfation         Abs/cmm         *ASTM D7415         >30         24.2         27.8







Certificate L2367

Laboratory Sample No. Lab Number : 06214162

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : IL06214162

Unique Number : 11087026

Received : 18 Jun 2024 **Tested** : 21 Jun 2024 Diagnosed

: 21 Jun 2024 - Sean Felton Test Package: FLEET (Additional Tests: FuelDilution, PercentFuel)

**RUSH TRUCK CENTER - CHICAGO IDEALEASE** 4655 SOUTH CENTRAL AVENUE CHICAGO, IL US 60638

> Contact: BRUCE VAUGHN VaughnB@RushEnterprises.com T:

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)

F: (708)496-8818