OIL ANALYSIS REPORT

WEAR CONTAMINATION FLUID CONDITION **ABNORMAL ABNORMAL NORMAL**

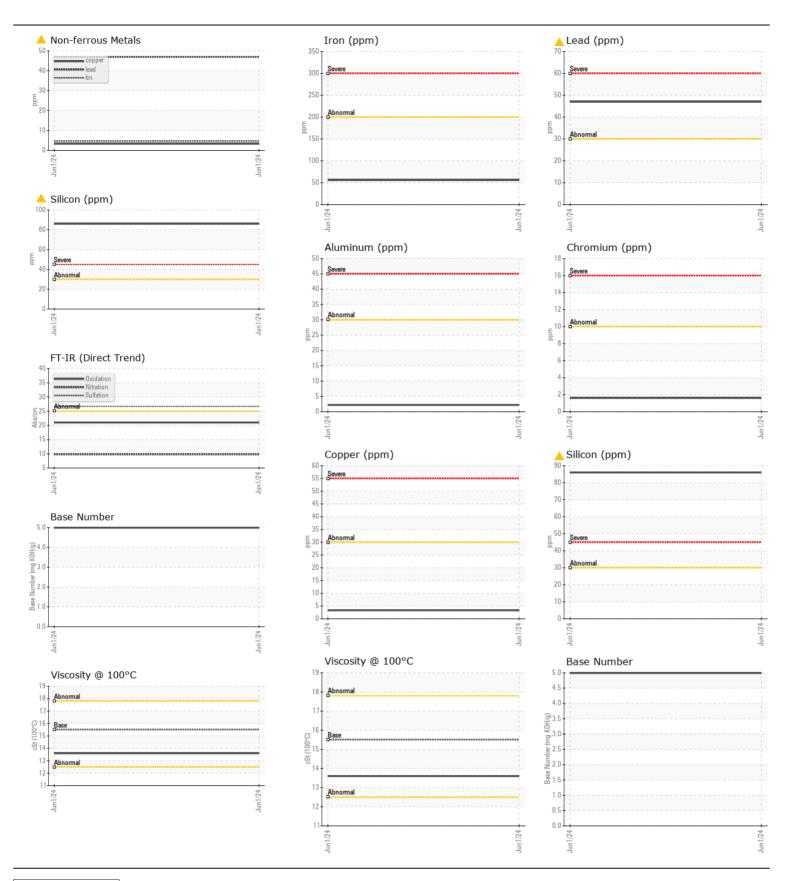
Machine Id

KENWORTH 11

Diesel Engine

TRC PRO-SPEC III SYNTHETIC BLEND 15W40 (11 GAL)

Sample Number Sample Date Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status Iron Chromium Nickel	mls mls mls	Client Info Client Info Client Info Client Info Client Info Client Info Client Info		TR06231876 01 Jun 2024 344000 18000 18000 Changed Changed ABNORMAL	 	
Machine Age Oil Age Filter Age Oil Changed Filter Changed Sample Status Iron Chromium	mls mls	Client Info Client Info Client Info Client Info Client Info		344000 18000 18000 Changed Changed	 	
Oil Age Filter Age Oil Changed Filter Changed Sample Status Iron Chromium	mls mls	Client Info Client Info Client Info Client Info		18000 18000 Changed Changed		
Filter Age Oil Changed Filter Changed Sample Status Iron Chromium	mls	Client Info Client Info Client Info		18000 Changed Changed		
Oil Changed Filter Changed Sample Status Iron Chromium		Client Info		Changed Changed		
Filter Changed Sample Status Iron Chromium	ppm	Client Info		Changed		
Sample Status Iron Chromium	ppm			_		
Iron Chromium	ppm			ABNORMAL		
Chromium	ppm					
		ASTM D5185m	>200	56		
Minkel	ppm	ASTM D5185m	>10	2		
INICKEI	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m	>2	<1		
Silver				0		
Aluminum		ASTM D5185m	>30	2		
Lead	ppm			4 7		
Copper	ppm			3		
Tin	ppm	ASTM D5185m	>4	5		
Vanadium	ppm	ASTM D5185m		0		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
0.11.		AOTM DEGOE				
	ppm					
			>0.2			
-	0/		0			
	Scalai	Visuai	>0.2			
Sodium	ppm	ASTM D5185m		8		
Boron	ppm	ASTM D5185m		4		
Barium	ppm	ASTM D5185m		0		
Molybdenum	ppm	ASTM D5185m		2		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m		23		
Calcium	ppm	ASTM D5185m		2449		
Phosphorus	ppm			873		
Zinc	ppm	ASTM D5185m		1027		
Sulfur	ppm	ASTM D5185m		4085		
Oxidation	Abs/.1mm		>25	21.0		
Base Number (BN)	mg KOH/g	ASTM D2896		4.99		
	Aluminum Lead Copper Tin Vanadium White 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	Aluminum ppm Lead ppm Copper ppm Tin ppm Vanadium ppm White 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 Sulfur ppm Sulfur ppm Cyidation Abs/.1mm Base Number (BN) mg KOH/g	Aluminum ppm ASTM D5185m Lead ppm ASTM D5185m Copper ppm ASTM D5185m Tin ppm ASTM D5185m Vanadium ppm ASTM D5185m White Metal scalar *Visual Yellow Metal scalar *Visual Silicon ppm ASTM D5185m Potassium ppm ASTM D5185m Fuel WC Method Water WC Method Glycol WC Method Soot % % *ASTM D7844 Nitration Abs/cm *ASTM D7844 Nitration Abs/cm *ASTM D7415 Silt scalar *Visual Debris scalar *Visual Sand/Dirt scalar *Visual Appearance scalar *Visual Appearance scalar *Visual Emulsified Water scalar *Visual Sodium ppm ASTM D5185m Boron ppm ASTM D5185m Barium ppm ASTM D5185m Molybdenum ppm ASTM D5185m Magnesium ppm ASTM D5185m Magnesium ppm ASTM D5185m Magnesium ppm ASTM D5185m Magnesium ppm ASTM D5185m Calcium ppm ASTM D5185m Phosphorus ppm ASTM D5185m Calcium ppm ASTM D5185m Suffur ppm ASTM D5185m Sulfur ppm ASTM D5185m AST	AluminumppmASTM D5185m>30LeadppmASTM D5185m>30CopperppmASTM D5185m>4TinppmASTM D5185m>4VanadiumppmASTM D5185m>4White Metalscalar*VisualNONEYellow Metalscalar*VisualNONESiliconppmASTM D5185m>30PotassiumppmASTM D5185m>20FuelWC Method>3.0WaterWC Method>0.2GlycolWC Method>0.2Soot %%*ASTM D7844>3NitrationAbs/cm*ASTM D7624>20SulfationAbs/.1mm*ASTM D7415>30Siltscalar*VisualNONESand/Dirtscalar*VisualNONEAppearancescalar*VisualNORMLOdorscalar*VisualNORMLEmulsified Waterscalar*VisualNORMLEmulsified Waterscalar*VisualNORMLSodiumppmASTM D5185mBariumppmASTM D5185mMolybdenumppmASTM D5185mMagnesiumppmASTM D5185mCalciumppmASTM D5185mPhosphorusppmASTM D5185mSulfurppmASTM D5185mOxidationAbs/.1mm*ASTM D7414>25Base Number (BN)mg KOH/gASTM D2896	Aluminum ppm ASTM D5185m >30 2 Lead ppm ASTM D5185m >30 ▲ 47 Copper ppm ASTM D5185m >30 ₃ Tin ppm ASTM D5185m >4 ₅ Vanadium ppm ASTM D5185m >0 NONE White Metal scalar *Visual NONE NONE Yellow Metal scalar *Visual NONE NONE Silicon ppm ASTM D5185m >30 ♣ 86 Potassium ppm ASTM D5185m >20 ♣ Fuel WC Method >3.0 <1.0	Aluminum





Laboratory Sample No.

: TR06231876 Lab Number : 06231876

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

Unique Number : 11115369 Diagnosed Test Package : MOB 2 (Additional Tests: TAN MAN)

: 09 Jul 2024 : 11 Jul 2024 : 11 Jul 2024 - Jonathan Hester

DN HINES CO LLC PO BOX 901 NAPAVINE, WA US 98565 Contact: JEFF WARREN

Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - 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: