

OIL ANALYSIS REPORT

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Sample Rating Trend

NORMAL

Machine Id

INTERNATIONAL TH279692

Component Front Diesel Engine

TRC MOLY XL PRO-SPEC IV 15W40 (10 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

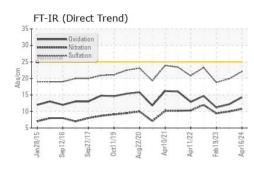
Fluid Condition

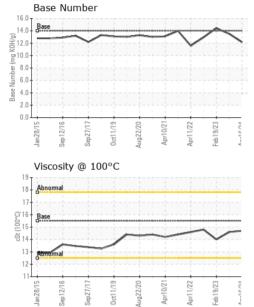
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		TR06157133	TR05967196	TR05783278
Sample Date		Client Info		16 Apr 2024	17 Sep 2023	19 Feb 2023
Machine Age	mls	Client Info		598728	583648	579969
Oil Age	mls	Client Info		15180	10652	6973
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>65	23	19	23
Chromium	ppm	ASTM D5185m	>10	3	4	4
Nickel	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	<1	1
Aluminum	ppm	ASTM D5185m	>10	3	0	4
Lead	ppm	ASTM D5185m	>30	3	2	<1
Copper	ppm	ASTM D5185m	>30	2	6	3
Tin	ppm	ASTM D5185m	>4	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	0 history2
	ppm ppm		limit/base	-	-	-
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 7	history1 <1	history2 2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 7 0	history1 <1 0	history2 2 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 7 0 121	history1 <1 0 113	history2 2 0 114
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		Current 7 0 121 <1 29 4300	history1 <1 0 113 <1 25 4069	history2 2 0 114 <1 19 4385
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300	current 7 0 121 <1 29	history1 <1 0 113 <1 25 4069 833	history2 2 0 114 <1 19 4385 860
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300	Current 7 0 121 <1 29 4300 883 1011	history1 <1 0 113 <1 25 4069 833 1019	history2 2 0 114 <1 19 4385 860 1042
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 1300	Current 7 0 121 <1 29 4300 883 1011 4603	history1 <1 0 113 <1 25 4069 833 1019 3992	history2 2 0 114 <1 19 4385 860 1042 4164
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300	Current 7 0 121 <1 29 4300 883 1011	history1 <1 0 113 <1 25 4069 833 1019	history2 2 0 114 <1 19 4385 860 1042
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 1300	current 7 0 121 <1 29 4300 883 1011 4603 current 7	history1 <1 0 113 <1 25 4069 833 1019 3992 history1 8	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1300 1300 limit/base	current 7 0 121 <1 29 4300 883 1011 4603 current	history1 <1 0 113 <1 25 4069 833 1019 3992 history1	history2 2 0 114 <1 19 4385 860 1042 4164 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300 1300 limit/base >20	current 7 0 121 <1 29 4300 883 1011 4603 current 7	history1 <1 0 113 <1 25 4069 833 1019 3992 history1 8	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300 1300 limit/base >20	current 7 0 121 <1 29 4300 883 1011 4603 current 7 4	history1 <1 0 113 <1 25 4069 833 1019 3992 history1 8 3	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9 2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300 1300 limit/base >20 >20	current 7 0 121 <1 29 4300 883 1011 4603 current 7 4 <1	history1 <1 0 113 <1 25 4069 833 1019 3992 history1 8 3 1	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9 2 4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300 1300 limit/base >20 >20 limit/base >6	current 7 0 121 <1 29 4300 883 1011 4603 current 7 4 <1 <1 current	history1 <1 0 113 <1 25 4069 833 1019 3992 history1 8 3 1 bistory1	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9 2 4 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300 1300 limit/base >20 >20 limit/base >6	current 7 0 121 <1 29 4300 883 1011 4603 current 7 4 <1 current 0.7	history1 <1 0 113 <1 25 4069 833 1019 3992 history1 8 3 1 bistory1 0.4	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9 2 4 history2 0.3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	1300 1300 1300 limit/base >20 >20 limit/base >6 >20	current 7 0 121 <1 29 4300 883 1011 4603 current 7 4 <1 current 0.7 10.8	history1 <1 0 113 <1 25 4069 833 1019 3992 history1 8 3 1 bistory1 0.4 10.0	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9 2 4 history2 0.3 9.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	1300 1300 1300 1300 1300 20 20 100 20 100 20 20 20 20 20 20 20 20 20 20 20 20 2	current 7 0 121 <1 29 4300 883 1011 4603 current 7 4 <1 current 0.7 10.8 22.1	<1 0 113 <1 25 4069 833 1019 3992 history1 8 3 1 0.4 10.0 19.9	history2 2 0 114 <1 19 4385 860 1042 4164 history2 9 2 4 history2 0.3 9.4 18.8



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VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
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
Free Water	scalar	*Visual	20.L	NEG	NEG	NEG
FLUID PROPER	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		14.7	14.6	14.0
GRAPHS						
Iron (ppm)				Lead (ppm)		
20 Severe				Sminn		
			60	- Gevere		
Abnormal			특.40	Abnormal		
0-		~~	20	-		
	\sim					
		Apr10/21 Apr11/22		Jan 28/15	0ct11/19 - 4022/20 - 4000/20000 + 4000/2000000000000000000000000000000000	Aprilu/21 April1/22 Feb19/23 -
Jan 28/15 Sep 12/16 Sep 27/17	Aug2	Apr10/21 Apr11/22 Feb19/23	Apr16/24	Jan 28/15 Sep 1 2/16 Sep 2 7/17	Oct11/19	Apri 1/22 Apri 1/22 Feb 1 9/23 Apri 6/24
Aluminum (ppm				Chromium (p		
⁵ T 3 - 5 - 5 - 5 - 5 - 5 - 5 - 5			20			
0 - Asevere				Severe		Α
5			톮 10	Abnormal		/ \
0 - Abnormal						
5	$\neg \land$					15
		5 5				3 3
Jan 28/15 Sep 12/16 Sep 27/17	uct 1/13 Aug 22/20	Apr10/21 Apr11/22 Feb19/23	Apr16/24	Jan 28/15 Sep 12/16 Sep 27/17	Oct11/19 . Aug22/20 .	Apr11/21 Apr11/22 Feb19/23 Apr16/24
	Au	A A A	A	, ,, ,,	4	A F A A
Copper (ppm)			40	Silicon (ppm))	
Smoon				Smarn		
- u			30	-		
Abnormal			<u>특</u> 20	- Abnormal		\wedge
0		~	10			
0		\sim	$ \rightarrow $	\checkmark	\sim	/
Jan 28/15 - Sep 12/16 - Sep 27/17 -	4ug22/20	Apr10/21. Apr11/22.		Jan 28/15 - Sep 12/16 - Sep 27/17 -	Oct11/19 - Aug22/20 -	Apr11/22 - Apr11/22 - Feb19/23 - Apr16/24 -
Janź Sep1 Sep2	Aug2	Apr Apr1 Feb1	Apr1	Janá Sep1 Sep2	0ct1 Aug2	Apr1 Apr1 Feb1 Apr1
Viscosity @ 100	°C			Base Numbe	r	
0 T 3 5 - 5 - 5 - 5 - 5 - 7 -			15.0 S	Base		$\sim \sim$
8 - Abnormal			Base Number (mg KOH(g)			\checkmark
6 - Base			E			
Abnormal			quin 5.0			
2-			ase			
	20	21+	0.0		20	22
Jan 28/15 Sep 12/16 Sep 27/17	. ucti 1/1 3	Apr10/21- Apr11/22 - Feb19/23 -	Apr16/24	Jan 28/15 Sep 12/16 Sep 27/17	Oct11/19 Aug22/20	Apr1 U/21 Apr1 1/22 Feb 1 9/23 Apr1 6/24
Se Se	Au Au	A B	Ai	Ja Se Se	Au 0	Ar Ar An An
VearCheck USA - 5						TERPRISES LLC
R06157133	Rece		2 Apr 2024		5126 VALL	EY DRIVE EAST
06157133 0992556	Teste		3 Apr 2024 3 Apr 2024 - W	es Davis		MILES CITY, MT US 59301
0332000	Diag	nosed : 2	JADI∠UZ4 - W			05 59301
/IOB 2	•				Contact: K	ELLY ZIETTLOW

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:

Certificate L2367

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Laboratory

Sample No.

Lab Number Unique Number Test Package

Contact/Location: KELLY ZIETTLOW - BEGMIL