

OIL ANALYSIS REPORT

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TURNPIKE INDUSTRIAL NSC TURNPIKE IND

Component Propane Engine

Fluid SHELL ROTELLA T 15W40 (4 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

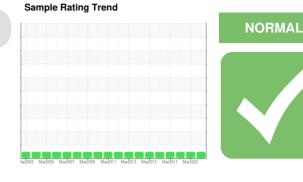
Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

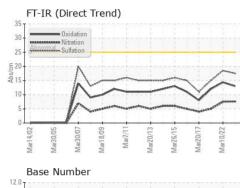
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

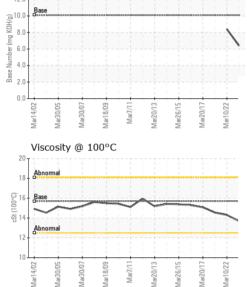


SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0887897	WC0628396	WCM1395128
Sample Date		Client Info		18 Apr 2024	10 Mar 2022	14 Mar 2018
Machine Age	hrs	Client Info		414	383	325
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<1	2	2
Chromium	ppm	ASTM D5185m	>25	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>5	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	1	2	1
Lead	ppm	ASTM D5185m	>25	0	0	2
Copper	ppm	ASTM D5185m	>35	0	<1	<1
Tin	ppm	ASTM D5185m	>8	0	0	0
Antimony	ppm	ASTM D5185m				1
Vanadium	ppm	ASTM D5185m		0	0	1
Cadmium	ppm	ASTM D5185m		0	0	<1
Caumum	ppiii	AOTIM DOTOSIII		U	0	
ADDITIVES	ppin	method	limit/base	current	history1	history2
	ppm		limit/base 316			
ADDITIVES		method		current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	316	current 65	history1 97	history2 21
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	method ASTM D5185m ASTM D5185m	316 0.0	current 65 0	history1 97 <1	history2 21 0
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0	current 65 0 85	history1 97 <1 74	history2 21 0 59
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2	current 65 0 85 0	history1 97 <1 74 0	history2 21 0 59 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24	Current 65 0 85 0 143	history1 97 <1 74 0 275	history2 21 0 59 <1 817
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292	Current 65 0 85 0 143 2368	history1 97 <1 74 0 275 1886	history2 21 0 59 <1 817 1074
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	316 0.0 1.2 24 2292 1064	Current 65 0 85 0 143 2368 1105	history1 97 <1 74 0 275 1886 1036	history2 21 0 59 <1 817 1074 949
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292 1064 1160	Current 65 0 85 0 143 2368 1105 1361	history1 97 <1 74 0 275 1886 1036 1245	history2 21 0 59 <1 817 1074 949 1087
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	316 0.0 1.2 24 2292 1064 1160 4996	Current 65 0 85 0 143 2368 1105 1361 4618	history1 97 <1 74 0 275 1886 1036 1245 3594	history2 21 0 59 <1 817 1074 949 1087 2549
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	Current 65 0 85 0 143 2368 1105 1361 4618 Current	history1 97 <1 74 0 275 1886 1036 1245 3594 history1	history2 21 0 59 <1 817 1074 949 1087 2549 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996	current 65 0 85 0 143 2368 1105 1361 4618 current 2	history1 97 <1 74 0 275 1886 1036 1245 3594 history1 4	history2 21 0 59 <1 817 1074 949 1087 2549 history2 3
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50	current 65 0 85 0 143 2368 1105 1361 4618 current 2 1	history1 97 <1 74 0 275 1886 1036 1245 3594 history1 4 2	history2 21 0 59 <1 817 1074 949 1087 2549 history2 3 1
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	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50	current 65 0 85 0 143 2368 1105 1361 4618 current 2 1 2 1 2 1 <1	history1 97 <1 74 0 275 1886 1036 1245 3594 history1 4 2 2	history2 21 0 59 <1 817 1074 949 1087 2549 history2 3 1 8
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	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20	Current 65 0 85 0 143 2368 1105 1361 4618 Current 2 1 <1 <1	history1 97 <1 74 0 275 1886 1036 1245 3594 history1 4 2 2 history1	history2 21 0 59 <1 817 1074 949 1087 2549 history2 3 1 8 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20	current 65 0 85 0 143 2368 1105 1361 4618 current 2 1 <1 current 0	history1 97 <1 74 0 275 1886 1036 1245 3594 history1 4 2 history1 0 0 0	history2 21 0 59 <1 817 1074 949 1087 2549 history2 3 1 8 history2 0
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	316 0.0 1.2 24 2292 1064 1160 4996 limit/base >50 >20 limit/base	current 65 0 85 0 143 2368 1105 1361 4618 current 2 1 <1 current 0 7.6	history1 97 <1 74 0 275 1886 1036 1245 3594 history1 4 2 history1 0 7.5	history2 21 0 59 <1 817 1074 949 1087 2549 history2 3 1 8 history2 0 5.
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	316 0.0 1.2 24 2292 1064 1160 4996 imit/base >50 imit/base >20 imit/base >20	current 65 0 85 0 143 2368 1105 1361 4618 current 2 1 <1 current 0 7.6 17.5	history1 97 <1 74 0 275 1886 1036 1245 3594 history1 4 2 history1 0 7.5 18.5	history2 21 0 59 <1 817 1074 949 1087 2549 history2 3 1 8 history2 0 5. 15.



OIL ANALYSIS REPORT





	method	limit/base	current	history1	history2
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NORML	NORML	NORML	NORML
scalar	*Visual	NORML	NORML	NORML	NORML
			-		NEG
scalar	*Visual	2011	NEG	NEG	NEG
ES	method	limit/base	current	history1	history2
cSt	ASTM D445	15.7	13.7	14.3	14.55
		50	Lead (ppm)		
			Severe		
		E 30	Abnormal		
7/11-	3/15 -		4/02 -	3/09	3/15 - 3/17 -
Mar Mar20	Mar26 Mar20	Mar1(Mar14 Mar30 Mar30	Mar18 Mari	Mar26/15 Mar20/17 Mar10/22
		_			
		50	Severe	····	
		40	P		- +
		e 30	Abnormal		
		d 20			$-\frac{1}{1} \left \frac{1}{1} \right \frac{1}{1}$
		0			10
ar7/1 20/13	26/15 r20/17	10/22	14/02 30/05	r18/05 ar7/1 20/13	Mar26/15 Mar20/17 Mar10/22
Mar	Mar Mar	Mai	Mar Mar	Mar	Mai Mai
			Silicon (ppm)		
			Severe		
		80			
		E 60	Abnormal		
		40			
		20			
13	15.		05	13	15 +
Mar7, ar20/	lar26/ lar20/	lar10/	lar30/ lar30/	lar18/ Mar7/	Mar26/15 Mar20/17 Mar10/22
Σ	N N	N			M M M
		12 0	Base Number	r	
Ulananananana		B 10.0	Base		
		08.0 ge			
		- in 6.0			
		4.0 N			
		& 2.0			
0/13	6/15 -		4/02 0/05	lar18/09 - Mar7/11 - lar20/13 -	6/15 · 0/17 ·
Mar7/11 Mar20/13	Mar26/15 Mar20/17	Mar10/22	Mar14/02 Mar30/05 Mar30/07	Mar1 8/09 Mar7/11 Mar2 0/13	Mar26/15 Mar20/17 Mar10/22
	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	scalar *Visual scalar	scalar *Visual NONE scalar *Visual NONE scalar *Visual NORML scalar *Visual NORML scalar *Visual NORML scalar *Visual >0.1 scalar *Visual >0.1 scalar *Visual Scalar *Visual *Scalar *Scal	scalar *Visual NONE NONE scalar *Visual NONE NONE scalar *Visual NORML NORML scalar *Visual NORML NORML scalar *Visual >0.1 NEG scalar *Visual	scalar 'Visual NONE NONE NONE NONE scalar 'Visual NONE NONE NONE NONE scalar 'Visual NORML NORML NORML NORML scalar 'Visual NORML NORML NORML NORML scalar 'Visual >0.1 NEG NEG scalar 'Visual 'Scalar 'Visual 'Scalar 'Nistory1 cSt ASTM D445 15.7 13.7 14.3

To discuss this sample report, co * - 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: PIEJUL [WUSCAR] 06158762 (Generated: 04/25/2024 14:19:04) Rev: 1

Certificate L2367

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

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