

# **OIL ANALYSIS REPORT**

## Sample Rating Trend



# FRICK TYSMON 1 BOOSTER (S/N TDSH283L1002H)

**Refrigeration Compressor** 

USPI ALT-68 SC (--- GAL)

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

### **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	AATION.	method	15 Jun2016 0ct2017 limit/base	Janž019 Junž020 Octž021 . Current	history1	history2
	MATION		IIIIII/Dase			•
Sample Number		Client Info		USP0005086	USP0001912	USP244660
Sample Date		Client Info		09 Jan 2024	19 Sep 2023	11 Jul 2023
Machine Age	hrs	Client Info		12665	11941	11405
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>8	0	4	4
Chromium	ppm	ASTM D5185m	>2	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>3	0	0	<1
Lead	ppm	ASTM D5185m	>2	0	0	0
Copper	ppm	ASTM D5185m	>8	<1	<1	<1
Tin	ppm	ASTM D5185m	>4	0	0	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		0	0	0
	ppm	ASTM D5185m ASTM D5185m		0	0	0
Molybdenum	ppm			-		
Molybdenum Manganese	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m		0 <1	0 <1	0 <1
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 <1 <1	0 <1 0	0 <1 <1
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 <1 <1 <1 0	0 <1 0 0 <1	0 <1 <1 0
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50	0 <1 <1 <1	0 <1 0	0 <1 <1 <0 0 1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 limit/base	0 <1 <1 <1 <0 3	0 <1 0 0 <1 0 76	0 <1 <1 0 1 0 89
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 <1 <1 <1 <0 3 87 current	0 <1 0 0 <1 0 76 history1	0 <1 <1 0 1 0 89 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod ASTM D5185m		0 <1 <1 <1 <0 <1 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0 <1 0 0 <1 0 76 history1 2	0 <1 <1 <0 0 89 history2 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >15	0 <1 <1 <1 <0 <1 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0	0 <1 <1 <0 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >15 >20	0 <1 <1 <1 <0 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0	0 <1 <1 <0 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >15 >20 >0.01	0 <1 <1 <1 <1 0 3 87 current 2 0 0 0.004	0 <1 0 0 <1 0 76 history1 2 0 0 0.006	0 <1 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304	limit/base >15 >20 >0.01 >100	0	0	0 <1 <1 <1 0 1 0 89 history2 2 0 0 0 0.009 95.3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304	limit/base >15 >20 >0.01	0	0 <1 0 0 <1 0 76 history1 2 0 0 0.006 65.8 history1	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304	limit/base >15 >20 >0.01 >100 limit/base	0 <1 <1 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water ppm Water  FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >2500	0 <1 <1 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water ppm Water  FLUID CLEANLIN Particles >4µm Particles >14µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >2500 >320	0 <1 <1 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0	0 <1 <1 <1 0 1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water ppm Water  FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >2500 >320 >80	0 <1 <1 <1 <0 <1 <1 <0 <1 <1 <0 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0	0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water ppm Water FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >2500 >320 >80 >20	0	0 <1 0	0 <1 <1 <1 0 1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Water ppm Water  FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D6304 ASTM D6304 ASTM D6304 ASTM D7647 ASTM D7647 ASTM D7647	limit/base >15 >20 >0.01 >100 limit/base >2500 >320 >80 >20 >4	0 <1 <1 <1 <0 <1 <1 <0 <1 <1 <0 <1 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	0	0 <1 <1 <1 0 1

FLUID DEGRADATION

Acid Number (AN)

mg KOH/g ASTM D974 0.005

0.015

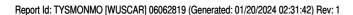
0.014

0.014



## OIL ANALYSIS REPORT





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)

Certificate L2367

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