



The Industry Pioneer in  
Tribology and Test Equipment

### Falex Corporation

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Sugar Grove, IL 60554 U.S.A.  
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Falex Tribology N.V.  
Rotselaar, Belgium

Company: **Fuel Ox Inc.**  
Date: February 2, 2021  
Technician: N.Davies

Page: 1  
Project No. 21-023  
Test No. 00081244  
Test Date: January 28, 2021

Method: ASTM D4170, Fretting Wear Protection By Lubricating Greases

Machine: Falex Fretting Wear Test Machine

TEST PARAMETERS	
Speed (cpm):	1800
Temperature (°C):	Ambient
Load (lb):	550
Duration (hours):	22 (± 0.1)
Oscillation Angle (°):	12
Shim Thickness (in):	0.061

TEST SPECIMENS	
Test Bearing Type:	Thrust
Bearing ID:	F1581-50
Falex TL No.	Lot 106

TEST LUBRICANT	
Lubricant ID:	Fuel Ox Infinity Lubes Super Grease
Falex TL No.	9393

TEST RESULTS					
MASS DATA					
Mass (mg)	Upper Race	Upper Middle Race	Lower Race	Lower Middle Race	
Initial	29725.8	29465.1	29626.5	29629.3	
Final	<u>29725.6</u>	<u>29463.4</u>	<u>29625.3</u>	<u>29629.2</u>	
Loss	<b>0.2</b>	<b>1.7</b>	<b>1.2</b>	<b>0.1</b>	
Mass Loss (Upper Pair):	1.9	Mass Loss (Lower Pair):	1.3	Mean Mass Loss:	1.6
				Mass Loss Ratio:	1.5

**COMMENTS:**



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### Falex Tribology N.V.

Rotselaar, Belgium

Company: **Fuel Ox Inc.**  
Date: February 2, 2021  
Technician: N.Davies

Page: 2  
Project No. 21-023  
Test No. 00081245  
Test Date: January 29, 2021

Method: ASTM D4170, Fretting Wear Protection By Lubricating Greases

Machine: Falex Fretting Wear Test Machine

TEST PARAMETERS	
Speed (cpm):	1800
Temperature (°C):	Ambient
Load (lb):	550
Duration (hours):	22 (± 0.1)
Oscillation Angle (°):	12
Shim Thickness (in):	0.0615

TEST SPECIMENS	
Test Bearing Type:	Thrust
Bearing ID:	F1581-50
Falex TL No.	Lot 106

TEST LUBRICANT	
Lubricant ID:	Kluber Isoflex NB 52
Falex TL No.	9394

TEST RESULTS					
MASS DATA					
Mass (mg)	Upper Race	Upper Middle Race	Lower Race	Lower Middle Race	
Initial	29634.0	29731.7	29479.9	29542.1	
Final	<u>29628.2</u>	<u>29724.5</u>	<u>29470.6</u>	<u>29534.0</u>	
Loss	<b>5.8</b>	<b>7.2</b>	<b>9.3</b>	<b>8.1</b>	
Mass Loss (Upper Pair):	13.0	Mass Loss (Lower Pair):	17.4	Mean Mass Loss: 15.2	Mass Loss Ratio: 0.7

### COMMENTS:



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### Falex Tribology N.V.

Rotselaar, Belgium

Company: **Fuel Ox Inc.**  
Date: February 2, 2021  
Technician: N.Davies

Page: 3  
Project No. 21-023  
Test No. 00081246  
Test Date: February 1, 2021

Method: ASTM D4170, Fretting Wear Protection By Lubricating Greases

Machine: Falex Fretting Wear Test Machine

#### TEST PARAMETERS

Speed (cpm):	1800
Temperature (°C):	Ambient
Load (lb):	550
Duration (hours):	22 (± 0.1)
Oscillation Angle (°):	12
Shim Thickness (in):	0.684

#### TEST SPECIMENS

Test Bearing Type:	Thrust
Bearing ID:	F1581-50
Falex TL No.	Lot 106

#### TEST LUBRICANT

Lubricant ID:	Valvoline Moly Fortified Gray Grease
Falex TL No.	9395

#### TEST RESULTS

##### MASS DATA

Mass (mg)	Upper Race	Upper Middle Race	Lower Race	Lower Middle Race			
Initial	29760.1	29797.5	29456.7	29590.1			
Final	<u>29753.7</u>	<u>29789.6</u>	<u>29452.1</u>	<u>29583.9</u>			
Loss	<b>6.4</b>	<b>7.9</b>	<b>4.6</b>	<b>6.2</b>			
Mass Loss (Upper Pair):	14.3	Mass Loss (Lower Pair):	10.8	Mean Mass Loss:	12.6	Mass Loss Ratio:	1.3

**COMMENTS:**

Fuel Ox Inc. Project 21-018 Test No. 00081244-246

ASTM D4170

Mass Loss Summary

