



Tribology and
 Petroleum Test
 Equipment for
 Over 80 Years

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Falex Tribology N.V.
 Rotselaar, Belgium

Company: **Archoil**
 Date: September 16, 2016
 Technician: A. Todd

Page: 1
 Project No. 16-111
 Test No. 0012998
 Test Date: September 16, 2016

Method: ASTM D3233, Method B, Measurement of Extreme Pressure Properties of Fluid Lubricants

Machine: Falex Pin and Vee Block Test Machine
 Serial No. 900036114318

TEST PARAMETERS	
Speed (rpm):	290 (± 10)
Temperature (°C):	49 (± 3)
Load (lb-reference):	300 Break-In to 4500
Duration (min):	5 / 1 per 250 lb Increase

TEST LUBRICANT	
Lubricant ID:	Royal Purple MaxGear 75W-140
Falex TL No.	7062

TEST SPECIMENS	
Pin ID:	000-503-017
Falex TL No.	759
Material:	SAE 3135 Steel
Finish (rms):	5-10
Hardness (Rb):	87-91
Vee Block ID:	000-502-100
Falex TL No.	759
Material:	AISI C-1137
Finish (rms):	5-10
Hardness (Rc):	20-24

TEST RESULTS				
Load (lb)	Failure Load	Duration (min)	Torque (in-lb)	Temperature (°C)
300		0	10.1	48.7
300		5	7.2	70.8
500		1	9.7	72.9
750		1	14.3	76.1
1000		1	15.3	79.9
1250		1	18.6	84.2
1500		1	19.9	87.9
1750		1	21.4	91.6
2000		1	23.8	95.0
2250		1	23.8	98.8
2500		1	25.6	102.3
2750		1	24.5	105.0
3000		1	26.1	107.7
3250		1	26.5	110.7
3500		1	28.8	114.1
3750		1	30.3	117.5
4000	3964	1	74.9	121.5
4250		1		
4500		1		

COMMENTS: The test pin snapped at 3964 lb load.



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Page: 2
Project No. 16-111
Test No. 0012999
Test Date: September 16, 2016

Method: ASTM D3233, Method B, Measurement of Extreme Pressure Properties of Fluid Lubricants

Machine: Falex Pin and Vee Block Test Machine
Serial No. 900036114318

TEST PARAMETERS	
Speed (rpm):	290 (± 10)
Temperature (°C):	49 (± 3)
Load (lb-reference):	300 Break-In to 4500
Duration (min):	5 / 1 per 250 lb Increase

TEST LUBRICANT	
Lubricant ID:	Royal Purple MaxGear 75W-140 w/Archoil AR9100
Falex TL No.	7063

TEST SPECIMENS	
Pin ID:	000-503-017
Falex TL No.	759
Material:	SAE 3135 Steel
Finish (rms):	5-10
Hardness (Rb):	87-91
Vee Block ID:	000-502-100
Falex TL No.	759
Material:	AISI C-1137
Finish (rms):	5-10
Hardness (Rc):	20-24

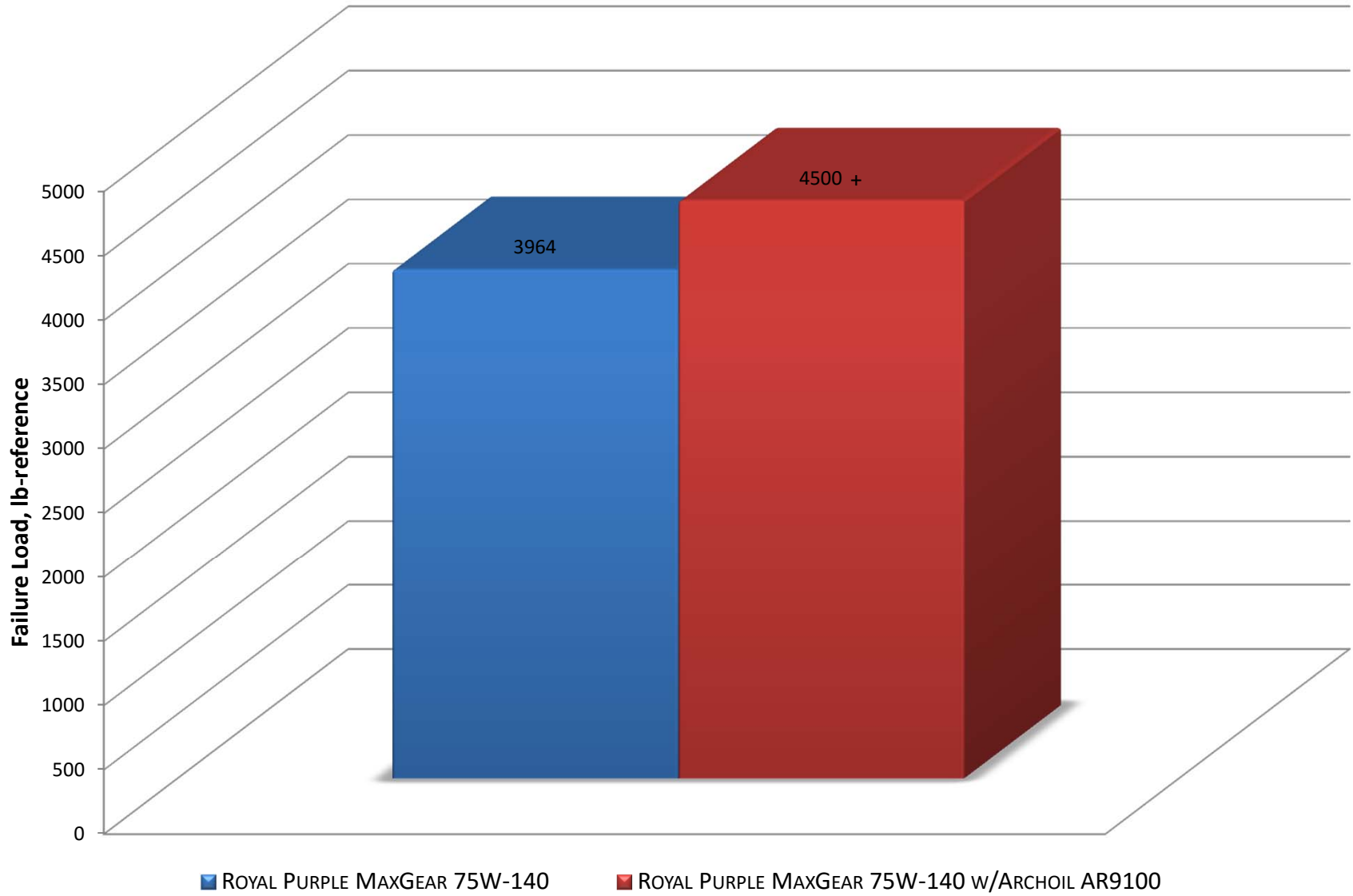
TEST RESULTS				
Load (lb)	Failure Load	Duration (min)	Torque (in-lb)	Temperature (°C)
300		0	8.3	50.7
300		5	8.1	70.1
500		1	10.3	72.3
750		1	14.2	75.9
1000		1	16.1	80.0
1250		1	17.3	84.0
1500		1	20.6	88.2
1750		1	21.5	92.6
2000		1	21.9	96.5
2250		1	22.7	100.6
2500		1	23.3	103.8
2750		1	24.1	107.2
3000		1	25.9	110.9
3250		1	25.4	114.3
3500		1	26.8	117.5
3750		1	27.0	120.4
4000		1	28.3	123.1
4250		1	28.1	126.3
4500	4500+	1	31.5	129.5

COMMENTS: The test completed successfully.

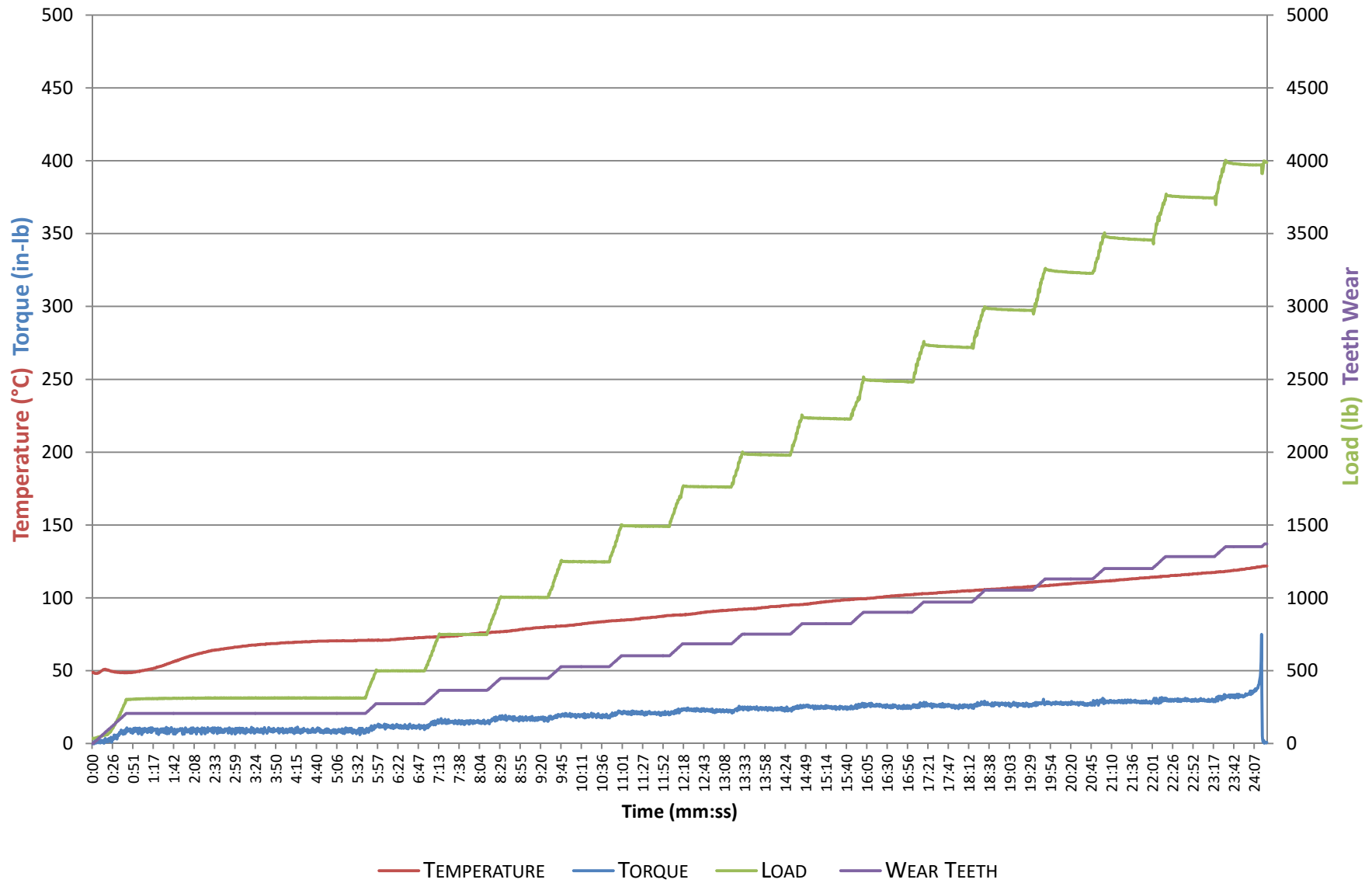
Archoil Project 16-111 Test No. 0012998-999

ASTM D3233B

Failure Load Summary



Archoil Project 16-111 Test No. 0012998
Lubricant: Royal Purple MaxGear 75W-140 TL No. 7062
ASTM D3233B



Archoil Project 16-111 Test No. 0012999
Lubricant: Royal Purple MaxGear 75W-140 with Archoil AR9100 TL No. 7063
ASTM D3233B

