



Tribology and
 Petroleum Test
 Equipment for
 Over 80 Years

Falex Corporation

1020 Airpark Drive
 Sugar Grove, IL 60554 U.S.A.
 Phone: (630) 556-3669
 Fax: (630) 556-3679
 E-mail: lab@falex.com
 Website: www.falex.com

Falex Tribology N.V.

Rotselaar, Belgium

Company: **AmberTech**
 Date: January 16, 2012
 Technician: T. LeValley

Page: 1
 Project No. 12-03
 Test No. 0012045
 Test Date: January 16, 2012

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

Machine: Falex Pin and Vee Block Test Machine
 Serial No. 9-000-361-1431-8

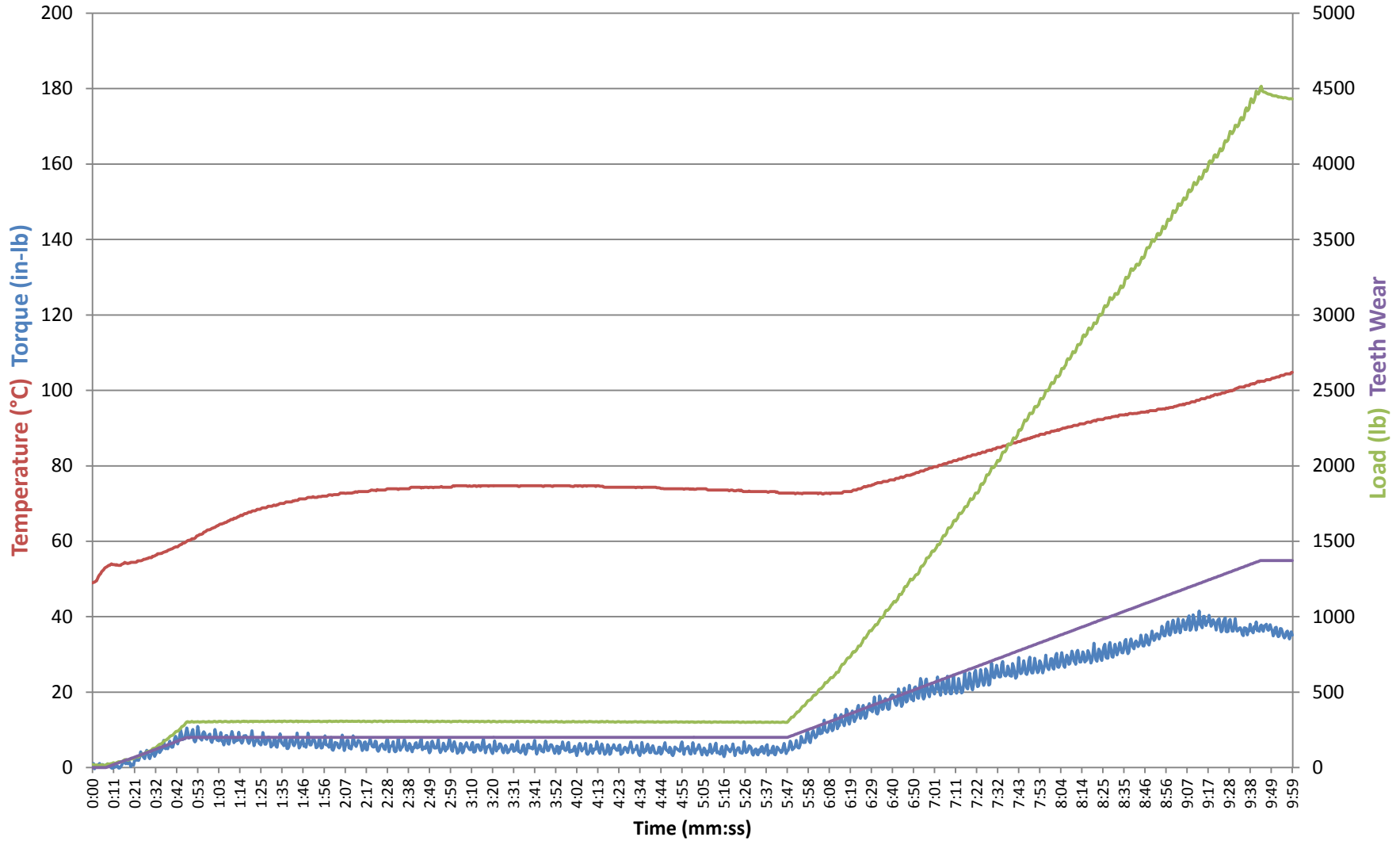
TEST PARAMETERS	
Speed (rpm):	290 (± 10)
Temperature (°C):	49 (± 3)
Load (lb-reference):	300 Break-In to 4500
Duration (min):	5 / To Failure
Lubricant ID:	AmberTech Concentrate
Falex TL No.	4128

TEST SPECIMENS	
Pin ID:	000-503-017
Falex TL No.	3585
Material:	SAE 3135 Steel
Finish (rms):	5-10
Hardness (Rb):	87-91
Vee Block ID:	000-502-100
Falex TL No.	3585
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)
<u>300</u>		0	10.5	60.0
<u>300</u>		5	3.7	72.8
<u>500</u>		0	10.6	72.6
<u>750</u>		0	15.0	73.4
<u>1000</u>		0	15.6	75.9
<u>1250</u>		0	17.7	77.9
<u>1500</u>		0	21.8	80.2
<u>1750</u>		0	23.0	82.5
<u>2000</u>		0	25.4	84.5
<u>2250</u>		0	26.3	86.8
<u>2500</u>		0	27.2	88.8
<u>2750</u>		0	28.2	90.7
<u>3000</u>		0	30.9	92.3
<u>3250</u>		0	30.7	93.8
<u>3500</u>		0	35.4	94.6
<u>3750</u>		0	39.2	96.4
<u>4000</u>		0	40.4	98.2
<u>4250</u>		0	36.5	100.7
<u>4500</u>	4500	0	37.5	102.4

COMMENTS: The test completed successfully.

AmberTech Project 12-03 Test No. 0012045
Lubricant: AmberTech Concentrate TL No. 4128
ASTM D3233A



— TEMPERATURE — TORQUE — LOAD — WEAR TEETH