



**FRICCIONES  
UNIVERSALES**



## Sample Lab Test Report

**Link Test Report #:** 170019-4  
**Test Description:** SAE J661 Rev Feb 1997 Brake Lining Quality Test  
**Purpose of Test** To Evaluate the Characteristics of Brake Materials  
**Program #:** BRW16008A0  
**Lining Material:** P.VO.165  
**Test Date(s):** 16/02/2017

### Requested By:

**Fricciones Universales S.A**  
**Alfredo Tomas Bertucci**  
Cuenca 678/80 - V.Lynch  
San Martin - Prov. Bs.As  
Código Postal B1672AHN  
Argentina

### Tested By:

#### Testing Coordination and Facility

Link South America  
Avenida Jaraguá, 89  
Sorocaba, SP  
[www.linkeng.com](http://www.linkeng.com)  
Phone: (55) 15-3416-0600

## SAE J661 Rev Feb 1997 Brake Lining Quality Test

### Test Information

Customer Name	Fricciones Universales S.A
Requestor	Alfredo Tomas Bertucci
Test Procedure	SAE J661
Program Number	BRW16008A0
Test Coordinator	Pedro Oliveira
Test Equipment	Chase Machine #3443
Test Dates	16/02/2017
Datalogger	v1.0.10
Template Version	3.00

### Setup Details

Sample Material	P.VO.165
Sample Size	25.4 mm x 25.4 mm
Sample Manufacturer	Fricciones Universales
Test Pressure	150 psi

### Sample Test Summary

Normal Friction Coefficient	0.383
Normal Friction Class	F
Hot Friction Coefficient	0.369
Hot Friction Class	F
Minimum Bold Coefficient	0.278
Max Variation Below Average for Bold Readings	0.000
Max % Variation for Bold Readings	0.00%

### Comments:

Processed by:	Henrique Rodrigues +55 (15) 3416 0607	Title:	T. Q. Engineer Trainee	Date:	16/02/2017
Reviewed by:	Pedro Oliveira +55 (15) 3416 0604	Title:	T.E. Coordinator	Date:	16/02/2017

Signed by:

Data applicable to the materials tested. Report can be copied in full. Uncertainty of measurement available upon request.

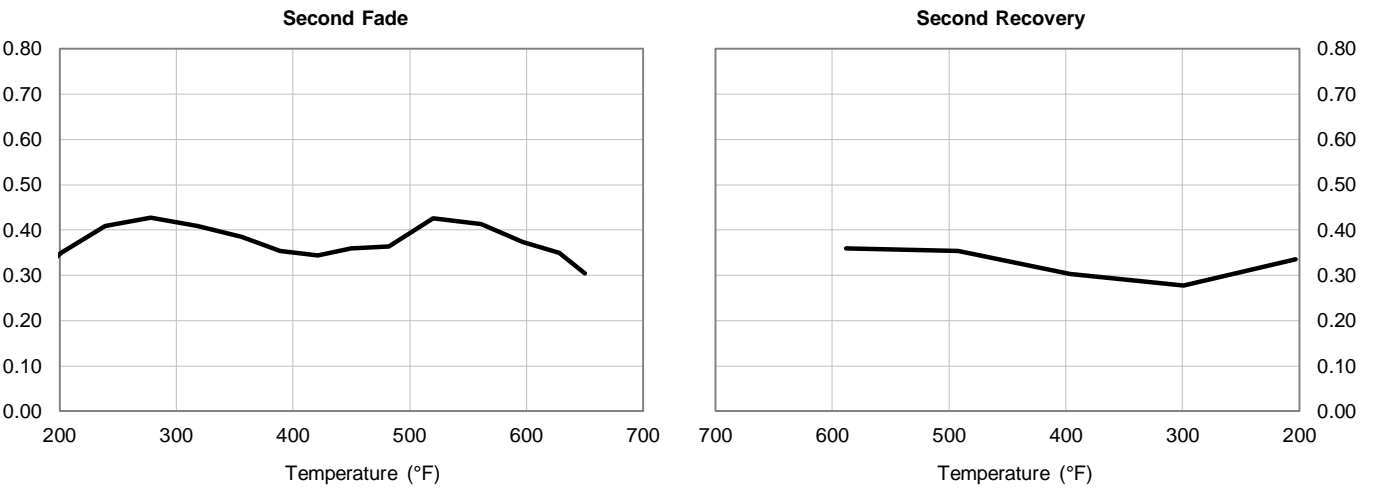
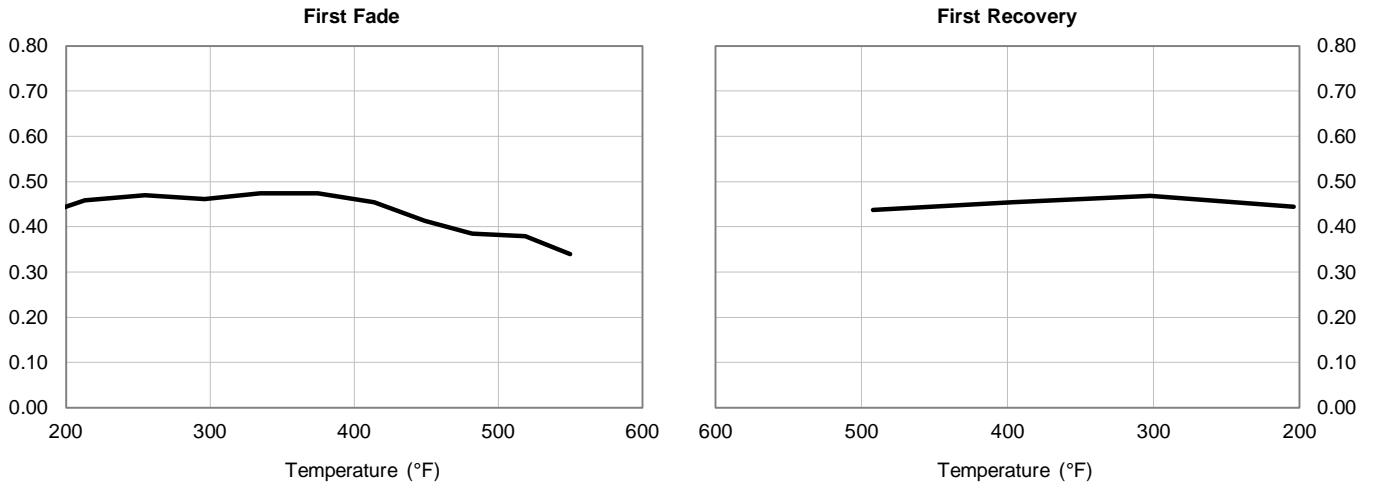
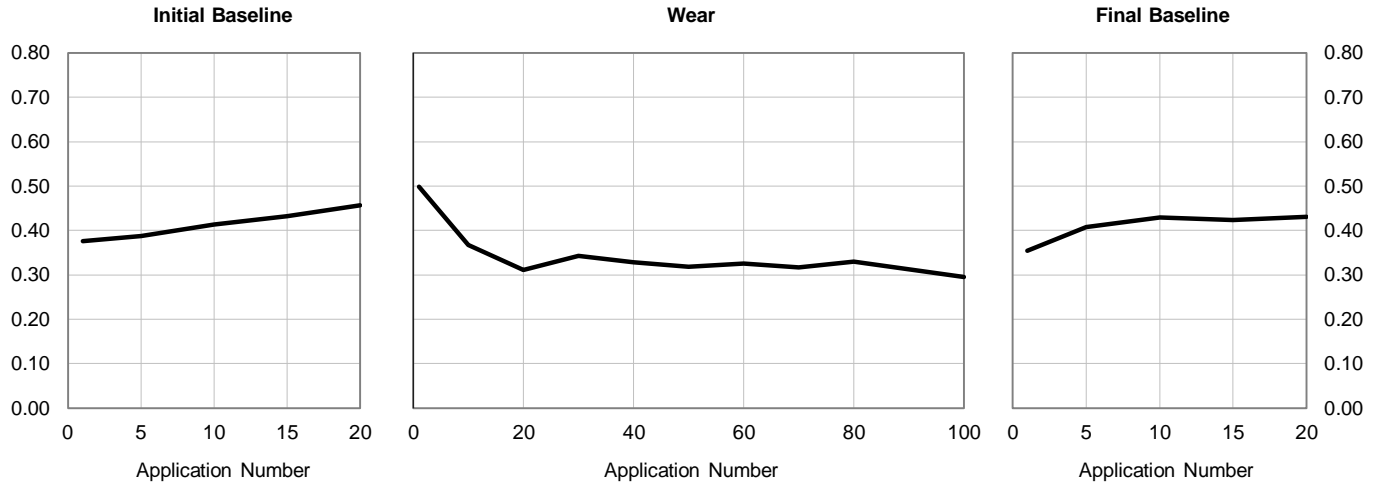
<u>Sample 1</u> 170019-4		Test Number	Manufacturer <b>Fricciones Universales</b>	
Application <u>Sample 1</u>		Initial Baseline	Material <b>P.VO.165</b>	
1	0.376		Normal	<b>0.383 F</b>
20	0.457			
Temp (°F) <u>Sample 1</u>		First Fade	Hot	<b>0.369 F</b>
200.0	0.453			
550.0	0.339			
(or Temp @ 10min)				
Temp (°F) <u>Sample 1</u>		First Recovery	<u>Average</u>	<u>Norm/Hot</u>
500.0	0.438		0.438	
400.0	0.454		0.454	Hot
300.0	0.468		0.468	Hot
200.0	0.445		0.445	
Application <u>Sample 1</u>		Wear		
1	0.498			
100	0.295			
Temp (°F) <u>Sample 1</u>		Second Fade	<u>Average</u>	Max Var. <u>&lt; Average</u> <u>Norm/Hot</u> <u>% Var</u>
<b>200.0</b>	<b>0.346</b>		<b>0.346</b>	<b>0.000 Normal 0%</b>
<b>250.0</b>	<b>0.413</b>		<b>0.413</b>	<b>0.000 Normal 0%</b>
<b>300.0</b>	<b>0.423</b>		<b>0.423</b>	<b>0.000 Normal 0%</b>
<b>350.0</b>	<b>0.389</b>		<b>0.389</b>	<b>0.000 - 0%</b>
<b>400.0</b>	<b>0.348</b>		<b>0.348</b>	<b>0.000 Normal 0%</b>
<b>450.0</b>	<b>0.360</b>		<b>0.360</b>	<b>0.000 Hot 0%</b>
<b>500.0</b>	<b>0.372</b>		<b>0.372</b>	<b>0.000 Hot 0%</b>
<b>550.0</b>	<b>0.425</b>		<b>0.425</b>	<b>0.000 Hot 0%</b>
600.0	0.372		0.372	0.000 Hot 0%
650.0	0.305		0.305	0.000 Hot 0%
(or Temp @ 10min)				
Temp (°F) <u>Sample 1</u>		Second Recovery	<u>Average</u>	Max Var. <u>&lt; Average</u> <u>Norm/Hot</u> <u>% Var</u>
600.0	0.359		0.359	0.000 - 0%
500.0	0.354		0.354	0.000 Hot 0%
400.0	0.302		0.302	0.000 Hot 0%
<b>300.0</b>	<b>0.278</b>		<b>0.278</b>	<b>0.000 Hot 0%</b>
<b>200.0</b>	<b>0.336</b>		<b>0.336</b>	<b>0.000 - 0%</b>
Application <u>Sample 1</u>		Final Baseline		
1	0.355			
20	0.430			



Manufacturer: Fricciones Universales  
Material: P.VO.165  
Test Pressure: 150 psi

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170019-4  
Sample 1 of 1

### Coefficient of Friction





## Sample Lab Test Report

**Link Test Report #:** 170019-6  
**Test Description:** SAE J661 Rev Feb 1997 Brake Lining Quality Test  
**Purpose of Test** To Evaluate the Characteristics of Brake Materials  
**Program #:** BRW16008A0  
**Lining Material:** B.VO.189  
**Test Date(s):** 16/02/2017

### Requested By:

**Fricciones Universales S.A**  
**Alfredo Tomas Bertucci**  
Cuenca 678/80 - V.Lynch  
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## SAE J661 Rev Feb 1997 Brake Lining Quality Test

### Test Information

Customer Name	Fricciones Universales S.A
Requestor	Alfredo Tomas Bertucci
Test Procedure	SAE J661
Program Number	BRW16008A0
Test Coordinator	Pedro Oliveira
Test Equipment	Chase Machine #3443
Test Dates	16/02/2017
Datalogger	v1.0.10
Template Version	3.00

### Setup Details

Sample Material	B.VO.189
Sample Size	25.4 mm x 25.4 mm
Sample Manufacturer	Fricciones Universales
Test Pressure	150 psi

### Sample Test Summary

Normal Friction Coefficient	0.470
Normal Friction Class	G
Hot Friction Coefficient	0.404
Hot Friction Class	F
Minimum Bold Coefficient	0.299
Max Variation Below Average for Bold Readings	0.000
Max % Variation for Bold Readings	0.00%

### Comments:

Processed by:	Henrique Rodrigues +55 (15) 3416 0607	Title:	T. Q. Engineer Trainee	Date:	16/02/2017
Reviewed by:	Pedro Oliveira +55 (15) 3416 0604	Title:	T.E. Coordinator	Date:	16/02/2017

Signed by:

Data applicable to the materials tested. Report can be copied in full. Uncertainty of measurement available upon request.



<u>Sample 1</u> 170019-6		Test Number	Manufacturer <b>Fricciones Universales</b>	
Application <u>Sample 1</u>		Initial Baseline	Material <b>B.VO.189</b>	
1	0.391		Normal	<b>0.470 G</b>
20	0.506		Hot	<b>0.404 F</b>
Temp (°F) <u>Sample 1</u>		First Fade		
200.0	0.500			
550.0	0.396			
(or Temp @ 10min)				
Temp (°F) <u>Sample 1</u>		First Recovery	<u>Average</u>	<u>Norm/Hot</u>
500.0	0.473		0.473	
400.0	0.498		0.498	Hot
300.0	0.493		0.493	Hot
200.0	0.454		0.454	
Application <u>Sample 1</u>		Wear		
1	0.498			
100	0.382			
Temp (°F) <u>Sample 1</u>		Second Fade	<u>Average</u>	Max Var. <u>&lt; Average</u> <u>Norm/Hot</u> <u>% Var</u>
<b>200.0</b>	<b>0.459</b>		<b>0.459</b>	<b>0.000 Normal 0%</b>
<b>250.0</b>	<b>0.480</b>		<b>0.480</b>	<b>0.000 Normal 0%</b>
<b>300.0</b>	<b>0.473</b>		<b>0.473</b>	<b>0.000 Normal 0%</b>
<b>350.0</b>	<b>0.464</b>		<b>0.464</b>	<b>0.000 - 0%</b>
<b>400.0</b>	<b>0.470</b>		<b>0.470</b>	<b>0.000 Normal 0%</b>
<b>450.0</b>	<b>0.516</b>		<b>0.516</b>	<b>0.000 Hot 0%</b>
<b>500.0</b>	<b>0.484</b>		<b>0.484</b>	<b>0.000 Hot 0%</b>
<b>550.0</b>	<b>0.414</b>		<b>0.414</b>	<b>0.000 Hot 0%</b>
600.0	0.369		0.369	0.000 Hot 0%
650.0	0.331		0.331	0.000 Hot 0%
(or Temp @ 10min)				
Temp (°F) <u>Sample 1</u>		Second Recovery	<u>Average</u>	Max Var. <u>&lt; Average</u> <u>Norm/Hot</u> <u>% Var</u>
600.0	0.372		0.372	0.000 - 0%
500.0	0.347		0.347	0.000 Hot 0%
400.0	0.293		0.293	0.000 Hot 0%
<b>300.0</b>	<b>0.299</b>		<b>0.299</b>	<b>0.000 Hot 0%</b>
<b>200.0</b>	<b>0.374</b>		<b>0.374</b>	<b>0.000 - 0%</b>
Application <u>Sample 1</u>		Final Baseline		
1	0.391			
20	0.454			



Manufacturer: Fricciones Universales  
 Material: B.VO.189  
 Test Pressure: 150 psi

16/02/2017  
 170019-6  
 Sample 1 of 1

**Coefficient of Friction**

