



Auto Service

Laboratory test report
Laborbericht

Nr. 18-00294-CX-GBM

Static test on lashing rings
Statische Prüfungen von Zurrösen.

TÜV SÜD Auto Service GmbH
Westendstr. 199
80686 München

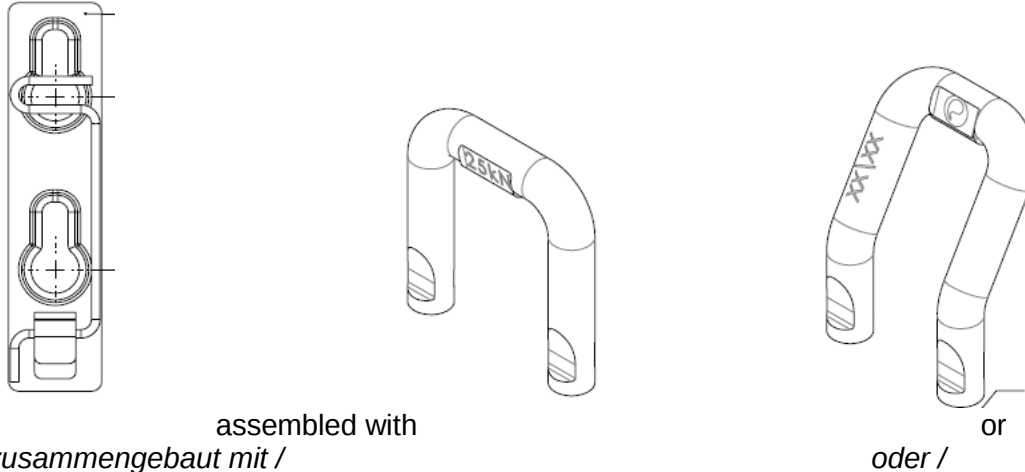
Applicant:



POMMIER
innovative solutions for trucks

Pommier S.A.
7 avenue de la Mare
Z.A des Bethunes
Saint-Quen-l'Aumone
B.P. 5909
95072 Cergy Pontoise Cedex
France

1 Test samples / Prüfobjekte



Drawing *Zeichnung* / 54260003 B und / and 54260054 C
(Partnumber P/N 3643930, 3643932, 3643934 und / and 3643935;
differing in total height and interaxle) *Unterscheiden sich in Bügelhöhe und Breite*
 $F_{nominal}=2,5t$ due to EN12640

2 Test bench Prüfstand

Hydraulic actuator Zwick HB 500, Tec Euro Lab, I-Campogalliano
under witness TÜV SÜD Auto Service GmbH
Hydraulischer Zylinder Zwick HB 500, Tec Euro Lab, I-Campogalliano
under witness TÜV SÜD Auto Service GmbH

3 Test procedure Prüfverfahren

with each configuration / *Mit jeder Konfiguration* /
54340064 / 9616 004 und / and 54260054 / 9616 012

3.1.

According to / *Entsprechend* EN 12640 :2000,
(application of a force with 25% safety margin:
Aufbringung einer Kraft mit 25% Sicherheit,

$F_{test} = 1,25 \cdot F_{nom}$ (here / *hier* 37 kN)
Pulling speed / *Kraftaufbringung* 0,5 kN/s,
test load constant for / *Konstantkraft* 3 minutes,

Prüfwinkel / *Test angles of* $\alpha=60^\circ$, + $\beta=0^\circ$
Prüfwinkel / *Test angle of* $\alpha=0^\circ$, + $\beta=60^\circ$

3.2. Maximalkraft bis Versagen / Maximum load until failure

Prüfwinkel / *Test angles of* $\alpha=60^\circ$, + $\beta=0^\circ$ and $\alpha=0^\circ$, + $\beta=60^\circ$



4 Test result Prüfergebnis

4.1. according to / entsprechend ISO 12460

After the application of the force and the following relax the deformation had no influence on the functionality of the lashing ring. No cracks occur. No Influence on the articulation

Nach der Aufbringung der Last und der Entlastung wurde die Funktionalität nicht durch die Deformierung beeinflusst. Es wurden keine Brüche festgestellt.

Keine Beeinträchtigung der Beweglichkeit

POSITIVE

4.2. maximum load Maximallast

It was achieved a maximum load of **45 /40 kN** until influence on the articulation, no cracks occur (test according to 3.2)

Es wurde eine Maxmallast von 45 / 40 kN erreicht bis zur Beeinträchtigung der Beweglichkeit, es wurden keine Brüche festgestellt

A handwritten signature in blue ink, 'Westphäling', is written next to a circular blue stamp. The stamp contains the text 'Technischer Dienst' at the top, 'Technical Service' in the middle, and 'TÜV SÜD Auto Service GmbH' at the bottom. In the center of the stamp is a smaller octagon with 'TÜV SÜD' and the number '061' below it.

Dipl. Ing. Jürgen Westphäling
München, den 24.09.2018

Annex 1 documentation (4 pages)

Anlage 1: Bilddokumentation (4 Seiten):

Test arrangement

ID Sample	Testing configuration	
54340064 9616 004	$\beta = 60^\circ$	Figure 1
	$\alpha = 60^\circ$	Figure 2
54260054 9616 012	$\beta = 60^\circ$	Figure 3
	$\alpha = 60^\circ$	Figure 4



Figure 1



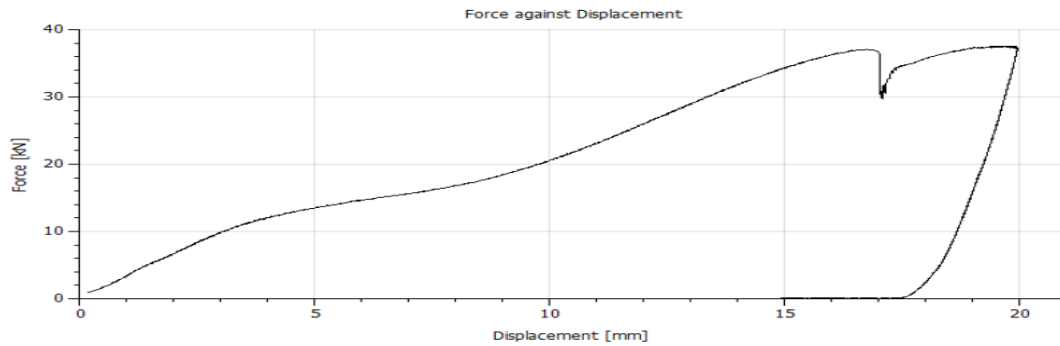
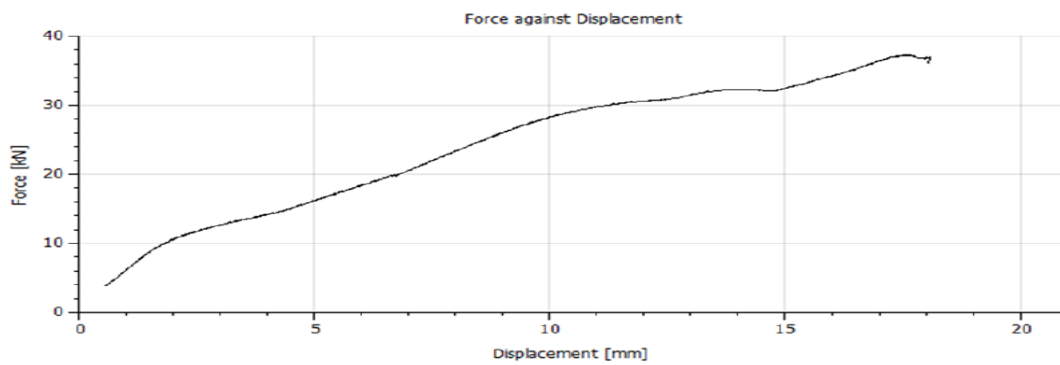
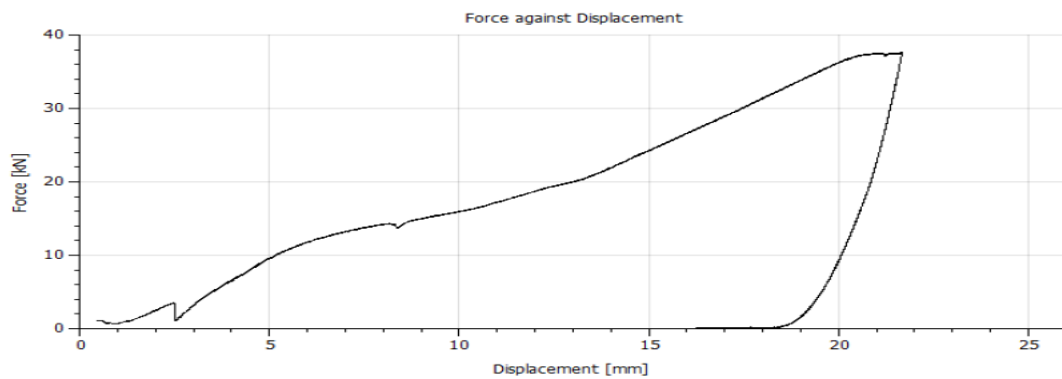
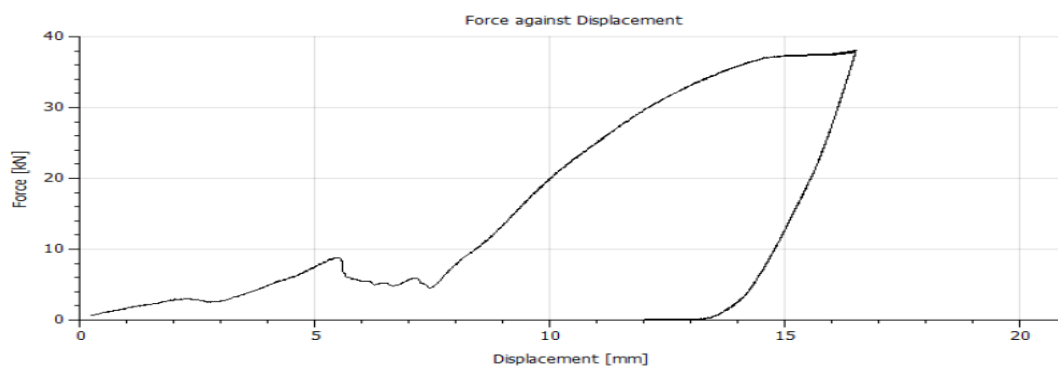
Figure 2

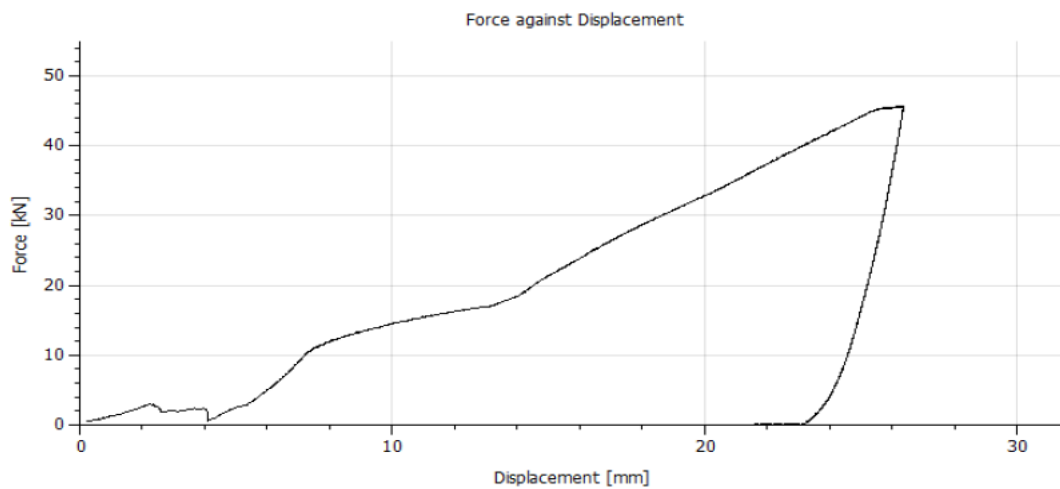


Figure 3

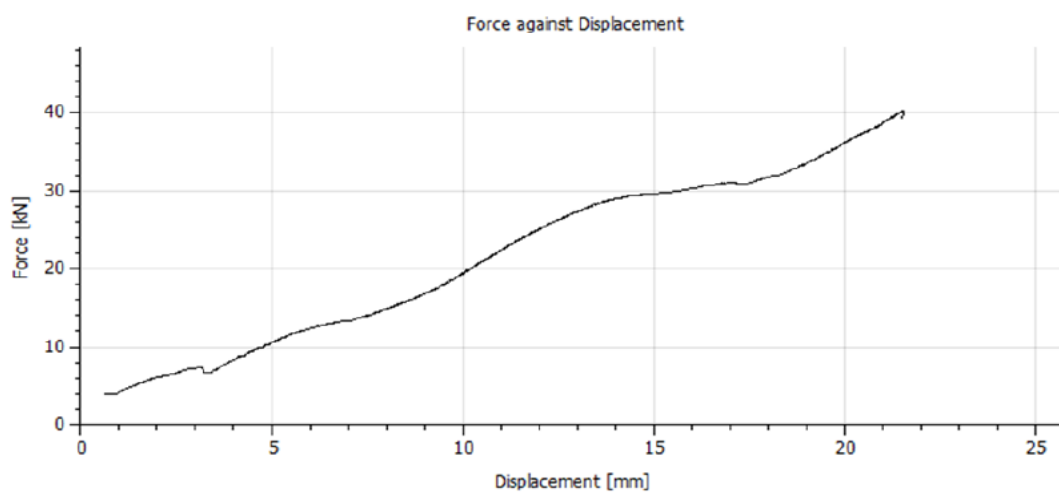


Figure 4

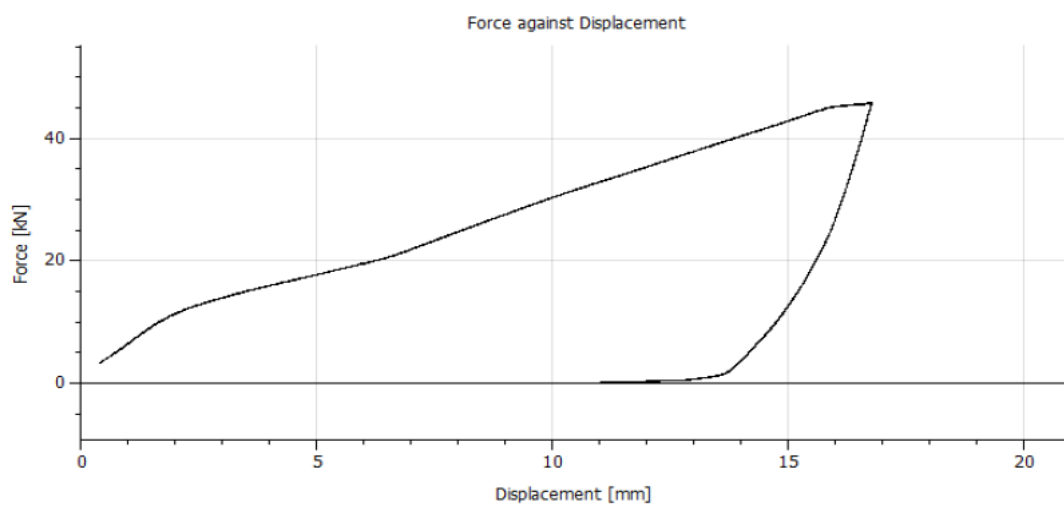
Deformation curve at F (see 3.1.)54340064 / 9616 004 ; $\alpha=0^\circ$, + $\beta= 60^\circ$ 54340064 / 9616 004 ; $\alpha=60^\circ$, + $\beta= 0^\circ$ 54260054 / 9616 012 $\alpha=0^\circ$, + $\beta= 60^\circ$ 54260054 / 9616 012 $\alpha=60^\circ$, + $\beta= 0^\circ$

Maximum load see 3.2.

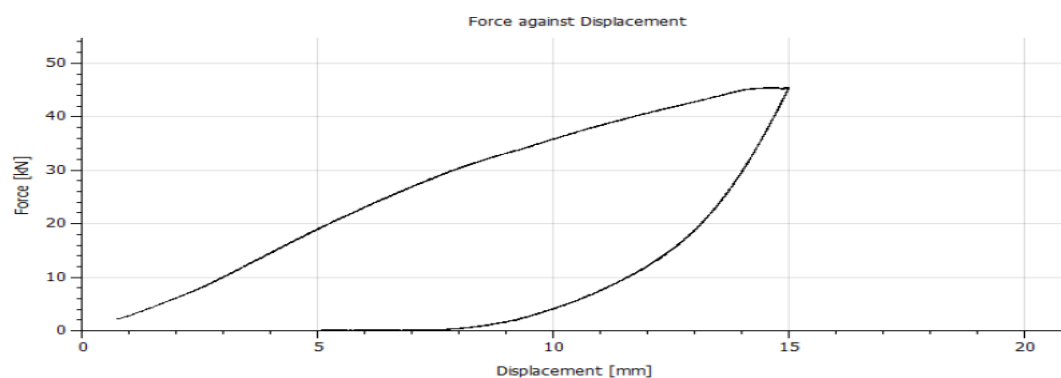
54340064 / 9616 004 ; $\alpha=0^\circ$, $+\beta=60^\circ$, $F_{\max}=40\text{kN}$



54260054 / 9616 012 $\alpha=60^\circ$, $+\beta=0^\circ$



54260054 / 9616 012 $\alpha=0^\circ$, $+\beta=60^\circ$



54260054 / 9616 012 $\alpha=60^\circ$, + $\beta=0^\circ$