



THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE APPROVAL GRANTED ⁽¹⁾ TO A COMPONENT TYPE-
APPROVAL CERTIFICATE IN RESPECT OF A NON-ORIGINAL EXHAUST SYSTEM FOR A TYPE
OF MOTORCYCLE PURSUANT TO COUNCIL DIRECTIVE 97/24/EC – CHAPTER 9 AS LAST
AMENDED BY 2009/108/EC.

EC Component type-approval No: e11*97/24/9/III*2009/108*0902*00

Report No 14-00020-CM-MIL-00, by technical service TÜV SÜD Auto Service, date 13 June 2014

Reason(s) for extension: Not applicable

1. Make of exhaust: Termignoni
2. Type of exhaust: D147
3. Name and address of manufacturer:
Termignoni S.p.A.
Via della Rampina, 1
15077 Predosa (AL)
ITALY
4. If applicable, name and address of the manufacturer's authorized representative:
Not applicable
5. Make(s) and type(s) and any variant(s) or version(s) of the vehicle(s) for which the exhaust system is designed: See list enclosed
6. Date system submitted for testing: See enclosure
7. Component type-approval GRANTED

8. Place: BRISTOL

9. Date: 02 JULY 2014

10. Signature:  A. W. STENNING
Head of Technical and Quality Support Group

(1) Delete as appropriate





THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

APPROVAL NUMBER: e11*97/24/9/III*2009/108*0902*00

INFORMATION PACKAGE CONTENTS

INDEX REVISION NUMBER: Not applicable

Total number of sheets: 10 (Ten)


Reasons for Revision: Not applicable

Revision date
&
Office stamp

EAQ302910

An executive agency of the Department for Transport
April 2013 Revision 3



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Information Document relating to EC type approval as separate technical unit of exhaust systems for motorcycles (Directive 97/24/EC amended 2009/108/EC)

1. *Make (trade name of manufacturer):* Termignoni
2. *Type and general commercial description:* D147
3. *Name and address of manufacturer:* Termignoni S.p.A.
via della Rampina, 1
I-15077 Predosa (AL)
4. *Name and address of manufacturer's authorized representative:* Not applicable
5. *Parts list:* Notice enclosure 1 of the test report
6. *Make and motorcycle type of the field of application:* See list enclosed
7. *Restriction and instructions for installing:* Notice assembly manual and field of application

Further details according to directive 97/24/EC, chapter 9, annex III, enclosure 2 A including amendment 2009/108/EC are mentioned in the motorcycle homologation (notice enclosure 2 of the test report).



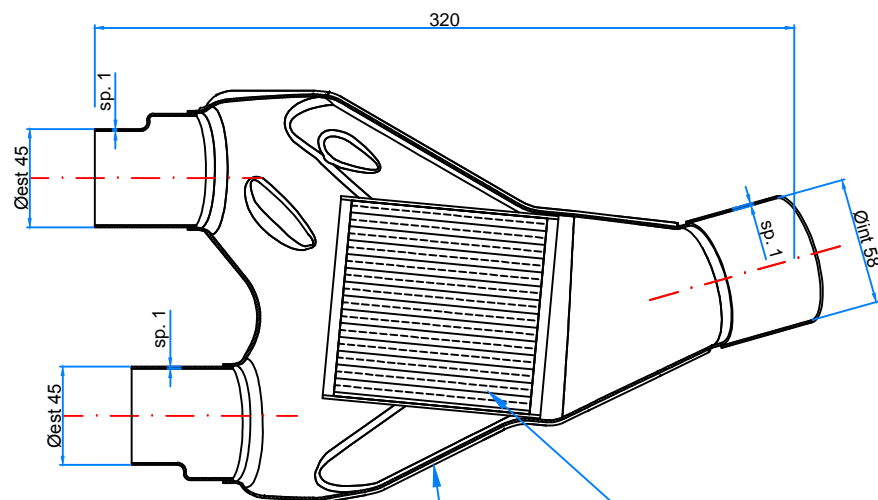
INFORMATION DOCUMENT
N° D147/97/24 rev. 00

Date: 13/06/2014
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Information Document relating to EC type approval as separate technical unit of exhaust systems for motorcycles (Directive 97/24/EC amended 2009/108/EC)

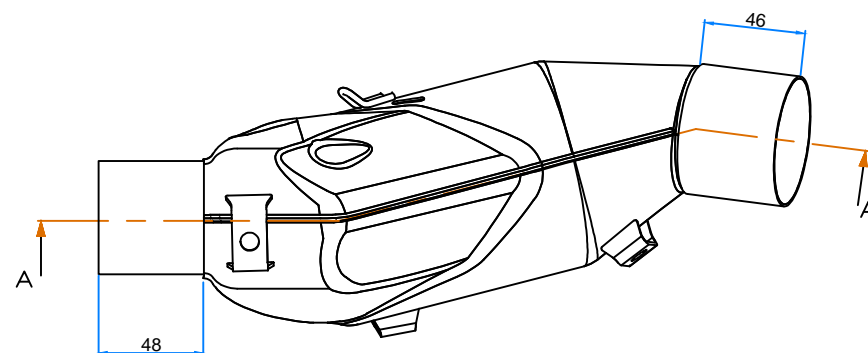
<i>Enclosures</i>	<i>Drawing no.</i>	<i>Date</i>
<i>Drawing of collectors</i>	D147: FINAL BODY	05/06/2014
<i>Drawing of silencer</i>	D147: LOWER SILENCER D147: UPPER SILENCER	05/06/2014 05/06/2014
<i>Drawing of catalytic converter</i>	D147: CATALYTIC CONVERTER	05/06/2014
<i>Drawing of reduction</i>	D147: TAPPO	05/06/2014
<i>Drawing of composition</i>	D147: ASSEMBLY	05/06/2014
<i>List of vehicles</i>		
<i>Fitting instructions</i>		





see drawing "D147:Catalytic converter"

TERMIGNONI
D147 e₁₁ 0902 ⑤



SCALE:

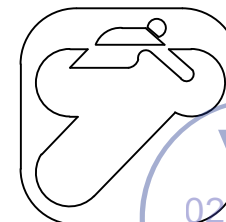
DATE: 05/06/2014

DES: M. Garampazzi

TYPE: D147: Final body

MODEL:

DUCATI Monster 821
Final body code D147
D147 e₁₁ 0902 ⑤⑨



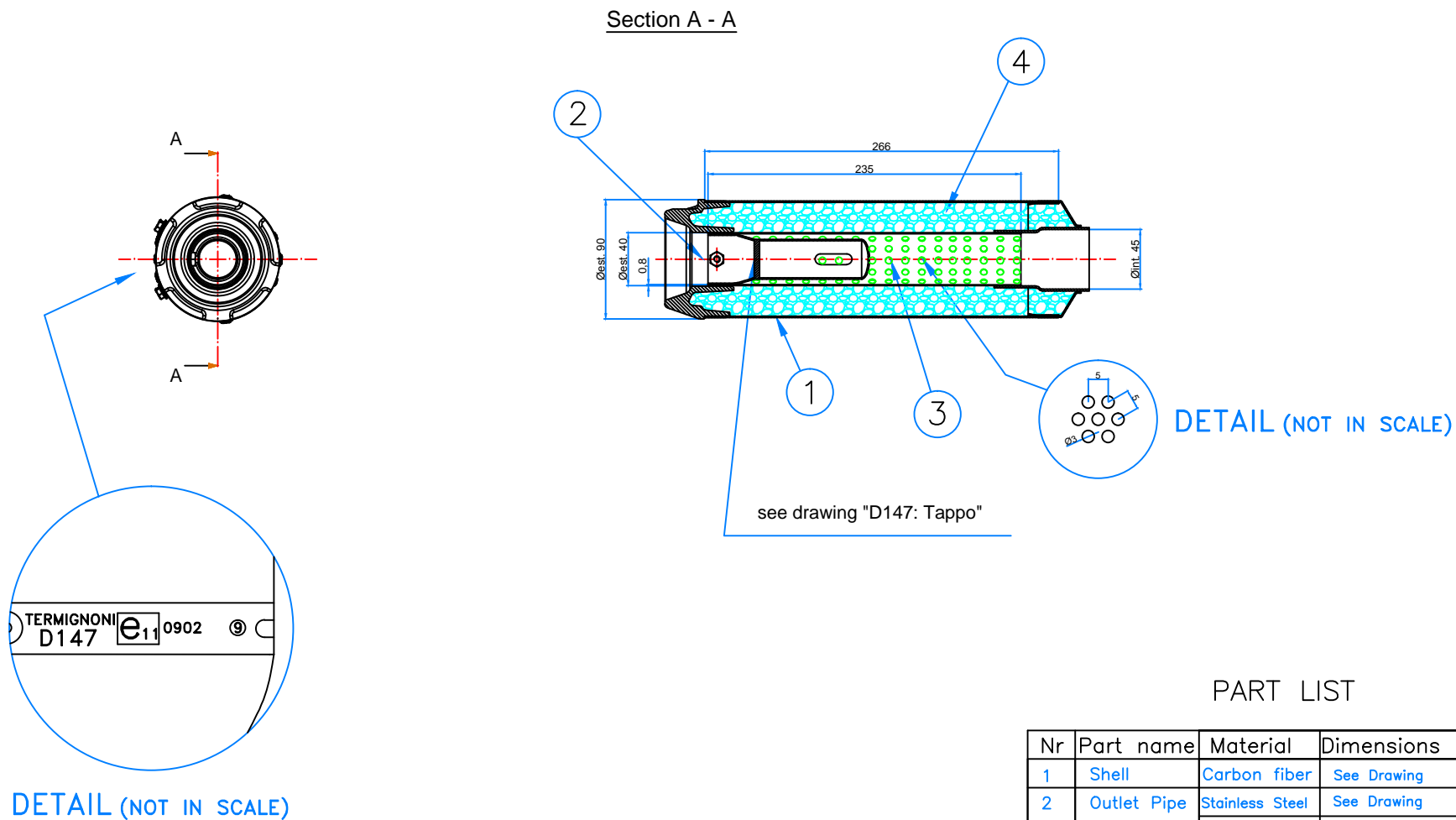
Termignoni S.p.A.

info@termignoni.it

02-Jul-14

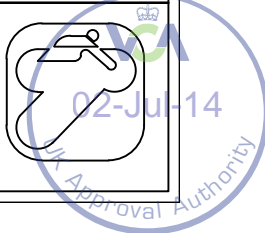
Approval Authority

General tolerance: ±1mm



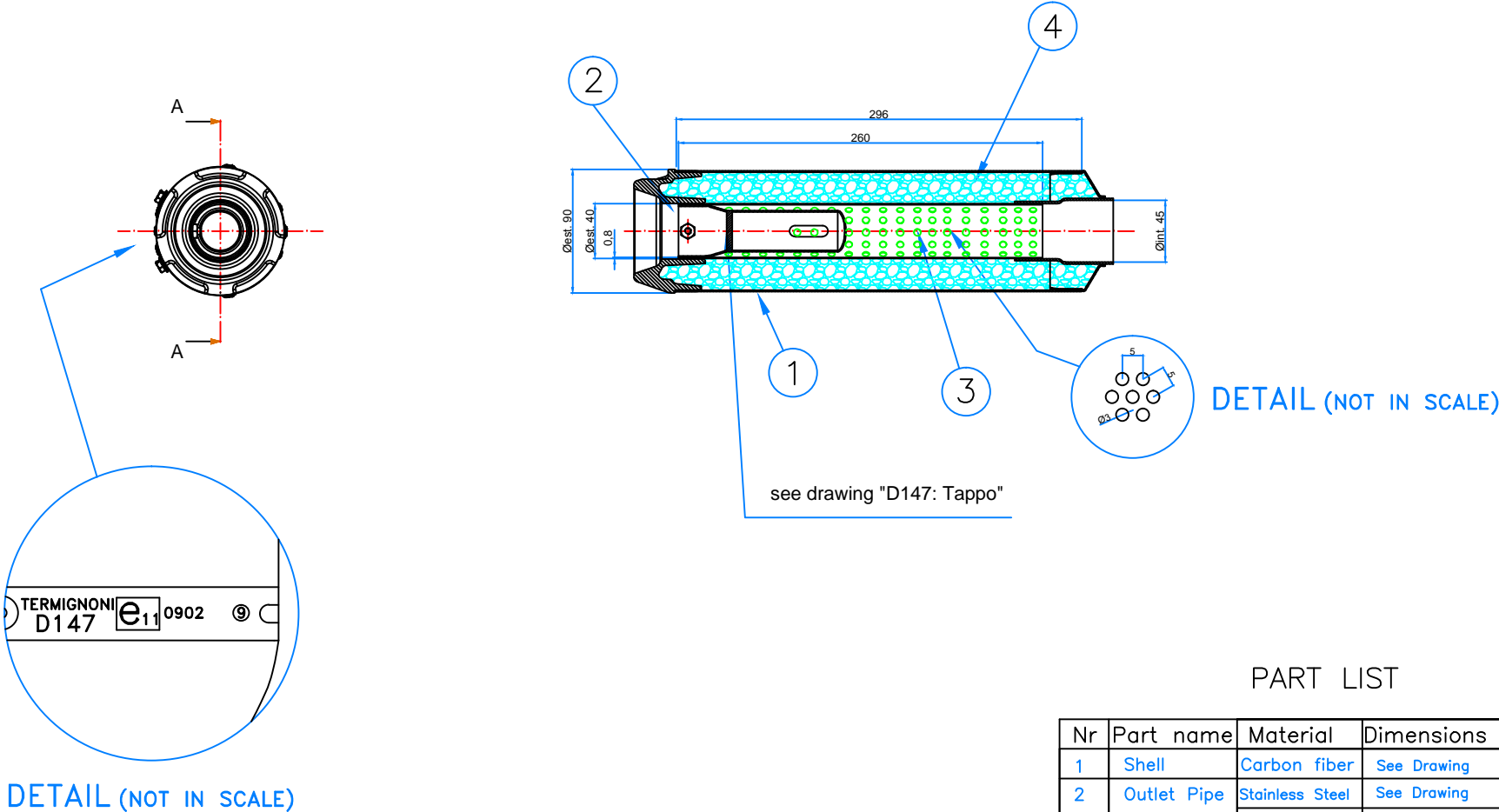
PART LIST

Nr	Part name	Material	Dimensions	QT
1	Shell	Carbon fiber	See Drawing	1x
2	Outlet Pipe	Stainless Steel	See Drawing	1x
	or	Titanium	See Drawing	1x
3	Punched-holes pipe	Stainless Steel	Ø 40x0,8	1x
	or	Titanium	Ø 40x0,8	1x
4	Sound deadener	Fiberglass	635 gr.	1x
SCALE:		MODEL:		
DATE: 05/06/2014		Ducati Monster 821		
NAME: M. Garampazzi		Lower silencer code D147		
TYPE: D147: Lower Silencer		D147 e11 0902 ⑤ ⑥		
Termignoni		s.p.a.		



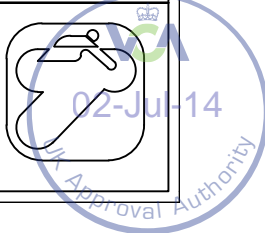
General tolerance: ±1mm

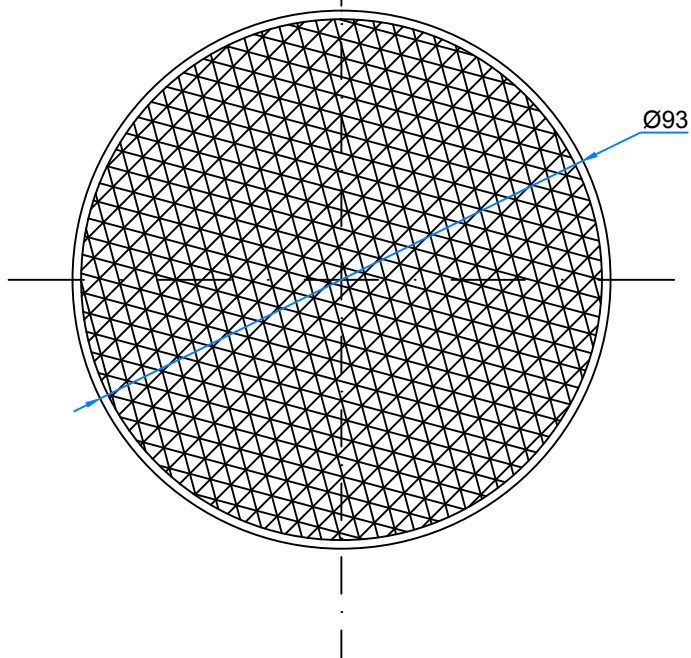
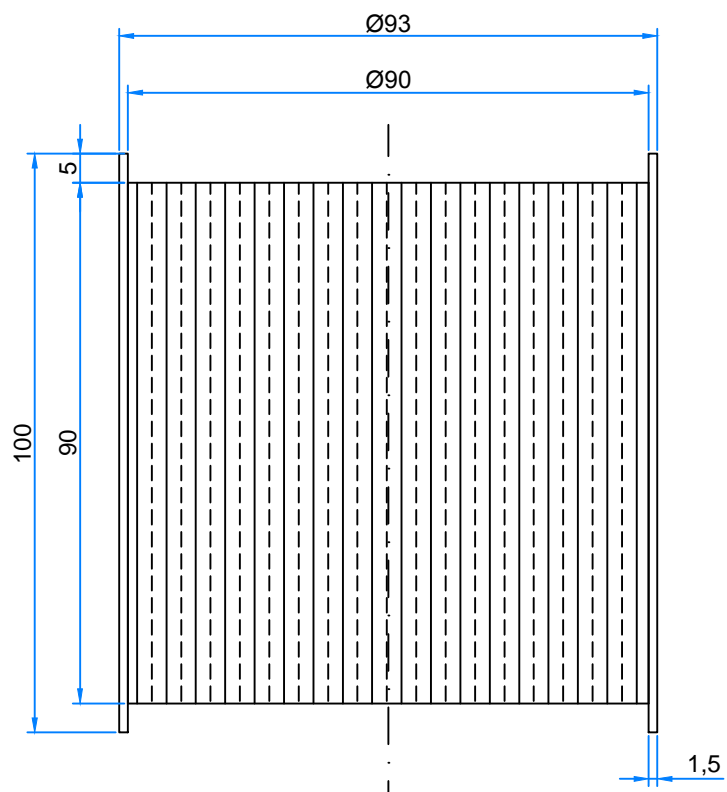
Section A - A



PART LIST

Nr	Part name	Material	Dimensions	QT
1	Shell	Carbon fiber	See Drawing	1x
2	Outlet Pipe	Stainless Steel	See Drawing	1x
	or	Titanium	See Drawing	1x
3	Punched-holes pipe	Stainless Steel	Ø 40x0,8	1x
	or	Titanium	Ø 40x0,8	1x
4	Sound deadener	Fiberglass	635 gr.	1x
SCALE:		MODEL:		
DATE: 05/06/2014		Ducati Monster 821		
NAME: M. Garampazzi		Upper silencer code D147		
TYPE: D147: Upper Silencer		D147 e11 0902 ⑤ ⑥		
Termignoni		s.p.a.		





CHARACTERISTICS

DIMENSIONS : Øi 90x90 mm.

CPSI : 200

FORMULATION : Pt/Pd/Rh

RATIO : 4/25/1

LOADING : 30 gr/ft 3

SCALE:	MODEL:
DATE: 05/06/14	DUCATI MONSTER 821
DES: M. Garampazzi	silencer code D147
	D147 e11 0902 (5) (9)
TYPE:	D147: Catalytic converter
Termignoni s.p.a.	



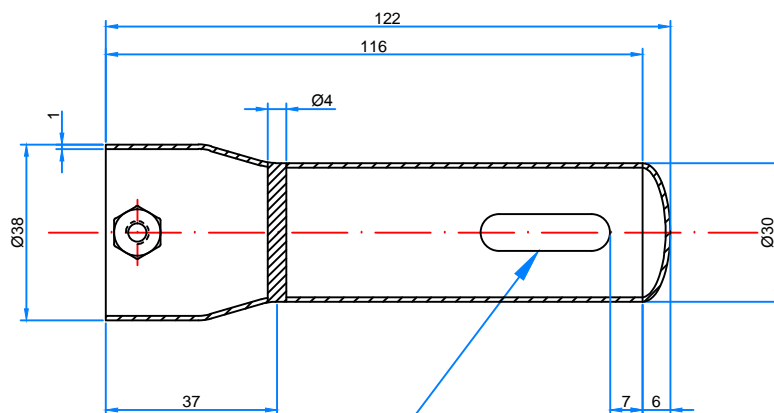
info@termignoni.it

UK Approval Authority

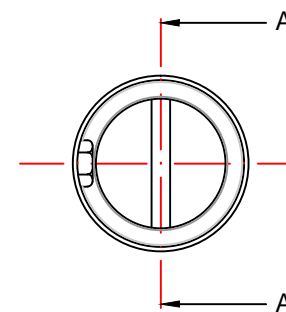
General tolerance: $\pm 1\text{mm}$

MATERIAL: S.Steel or Titanium

Section A - A



3 air slot 120°, Ø8x28



SCALA:

DATUM: 05/06/2014

NAME: M. Garampazzi

MODEL:

Ducati Monster 821
Tappo code: D147
D147 e11 0902 ⑤⑨

Tipe:

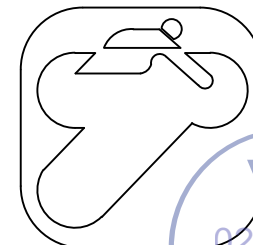
D147: Tappo

Code TERMIGNONI: TER525

Termignoni

s.p.a.

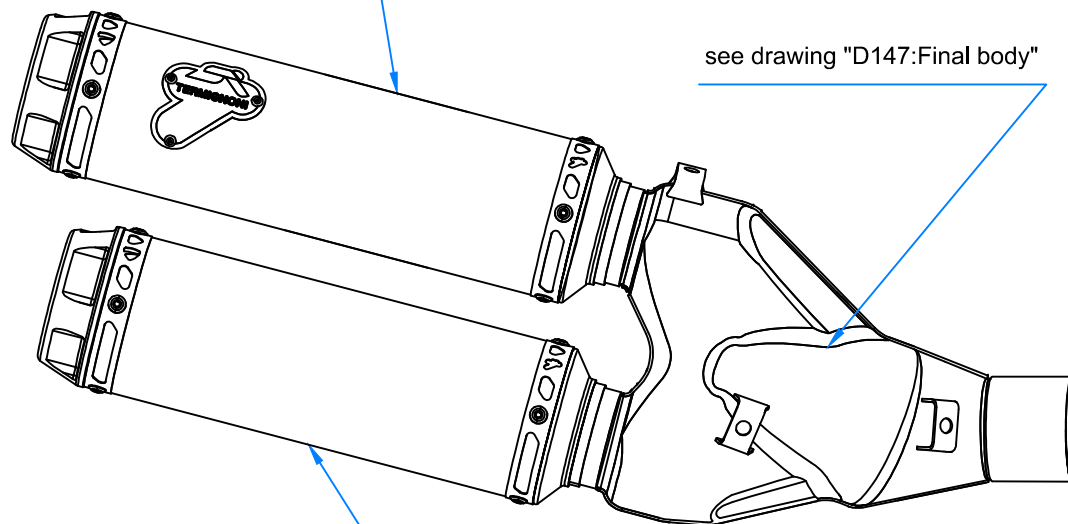
info@termignoni.it



02-Jul-14



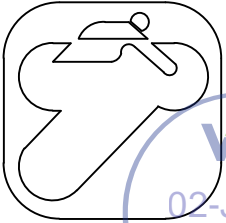
see drawing "D147:Upper silencer"



see drawing "D147:Final body"

Original collectors

see drawing "D147:Lower silencer"

SCALE:	MODEL:	 02-Jul-14 VCA Approval Authority
DATE: 05/06/2014	DUCATI Monster 821	
DES: M. Garampazzi	Silencer code D147	
TYPE: D147: Assembly	D147 e11 0902 ⑤⑨	
Termignoni S.p.A.		info@termignoni.it

INFORMATION DOCUMENT N° D147/97/24 rev. 00 - List of the vehicles

No. of vehicle	Manufacturer	Make	Commercial name	Vehicle type (and no. of homologation)	Engine type	Stroke	Engine capacity in cm ³	Rated maximum engine power in kW/min ⁻¹	Additional remarks:	Composition as shown in enclosure no. 1
1)	DUCATI Motor Holding S.p.A..	DUCATI	Monster 821	M6 e9*2002/24*6025*01	821W4D	4-stroke	821	79 / 9250	with cat	1) 2) 3) 4)
2)								35 / 8000		
3)								25 / 8250		



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15077 PREDOSA (AL) Italy
Telef. +39 0131.71666
Fax +39 0131.71696
www.termignoni.it
Part. IVA - C.F. 00862780061
Iscriz. C.C.I.A.A. AL 130295
Iscriz. Tribunale Reg. Soc. 7721
N. Export AL 009063
C.C. IT 00862780061
Cap. Soc. € 1.000.000,00 int. vers.

FITTING INSTRUCTIONS

For Termignoni exhaust systems

A. Dismantling the original exhaust system

1. Remove any casing impeding clear access
2. Detach the silencer support(s) and the original silencer from the branch pipe and/or exhaust manifold

B. Fitting Termignoni silencer(s)

1. Fit the Termignoni silencer(s) to the original branch pipe, or use the Termignoni branch pipe to fit the exhaust manifold
2. Attach the silencer(s) with the mounting(s) supplied with the vehicle, leaving the screws and bolts loose
3. Adjust the exhaust system so that when fully inserted it is at least 5 mm from any other component of the vehicle
4. Tighten all screws and bolts
5. Test the vehicle and check all connections, tightening the screws and bolts if necessary
6. After about 100 km check all the connections again and tighten the screws and bolts if necessary

WARNING:

Take care when working on the exhaust system after testing the vehicle since the surfaces could be very hot



Techn. Report No.: 14-00020-CM-MIL-00
Manufacturer: Termignoni S.p.A
15077 Predosa (AL)
Type: D147

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TEST REPORT

No. 14-00020-CM-MIL-00

about a test of a non-original exhaust system or a component
as a separate technical unit for motorcycles according to the directive of the Council of the
European Community for adaptation to the laws of the Member States relating to the
permissible sound level, pollution and exhaust systems for two or three-wheel motor vehicles

No. 97/24/EC including the amendment 2009/108/EG
Concerning chapter 9, annex III

Approval status	
<input checked="" type="checkbox"/>	Granting of a type approval
<input type="checkbox"/>	Extension/correction to type approval no. --

Techn. Report No.: 14-00020-CM-MIL-00
Manufacturer: Termignoni S.p.A
15077 Predosa (AL)
Type: D147

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Reason for extension:

It will be changed: Not applicable

It will be updated: Not applicable

0. General information

- 0.1. Make: TERMIGNONI
- 0.2. Type: D147
- 0.2.1. Variants n.a.
- 0.3. Name and address of manufacturer: Termignoni S.p.A.
Via della Rampina, 1
I-15077 Predosa (AL)
Italy
- 0.4. Name and address of authorized agent: n.a.
- 0.5. No. of information document: D147/97/24 rev. 00
Date: 13.06.2014
- 1.0. Class of the vehicles the unit is used for: L3e
- 1.1. Description of the vehicles
the unit is used for: notice enclosure 2

2. Composition of the separate technical unit

- 2.1. Kind of technical unit: Non-original exhaust system, consisting out of two silencers on the right, Ø 90 mm, absorption-reflection principle with outlet pipe Ø 36 mm according to drawing no. D147: Upper Silencer and D147: Lower Silencer, D147: Tappo, in combination with original header system . Equipped with catalytic converter inside of the inlet section of system according to drawings no. D147: Final body and D147: Catalytic converter. . Aluminium- alternatively stainless steel alternatively titanium alternatively carbon fiber-cover.



Techn. Report No.: 14-00020-CM-MIL-00
Manufacturer: Termignoni S.p.A
15077 Predosa (AL)
Type: D147

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- 2.2. Place of marking: On the silencer, see drawing:
D147: Lower silencer
D147: Upper silencer
- 2.3. Assembly of the exhaust system for testing
(no. of parts, enclosure 1): Notice 3.4
- 2.4. Position and direction of the tail pipe: On the rear right side of the vehicle

3. Test report

The tests were carried out in 2 series A at 09/06/2014 and B at 12/06/2014

3.1. **Vehicle**

- (0.1) Make: DUCATI
- 3.1.1. Type / Variant / Version: M6/04/AA
- 3.1.1.1 Model: Monster 821
- 3.1.2. Manufacturer: DUCATI Motor Holding S.p.A..
- 3.1.3. Homologation no.: e9*2002/24*6025*
3.1.3.1 Extension: 01
- 3.1.4. Vehicle identification no.: *ZDM10081309* (prototype)
- 3.1.5. Year of manufacture: 2014
- 3.1.6. Kilometers: 1957
- 3.1.7. Total weight: 191 kg

3.2. **Engine**

- 3.2.1. Manufacturer: Notice 3.1.2
Trade name: DUCATI
- 3.2.2. Type: 821W4D

Techn. Report No.: 14-00020-CM-MIL-00
Manufacturer: Termignoni S.p.A
15077 Predosa (AL)
Type: D147

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- 3.2.3. Engine capacity: 821 cm³
3.2.4. Rated maximum engine power: 79 kW at 9250 min⁻¹

3.3. Transmission

- 3.3.1. Kind of transmission: Mechanical
3.3.4. Gearbox: 6 Speed
3.3.5. Transmission ratios:
primary / final 1:1,848 / 1:3,067
Top speed: 225 km/h
Tires:
front 120/70ZR17 M/C (58W)
rear 180/60ZR17 M/C (75W)

- 3.4. **Assembly of the exhaust system**
(no. of parts, enclosure 1): 1) 2) 3.1) 4)

3.5. Acoustic measurements

- 3.5.1. Manufacturer of the sound level meter: Brüel & Kjaer
3.5.2. Type of the sound level meter: 2236
3.5.3. Drive by noise, stationary noise:
according to the Council Directive No. 97/24/EC with the amendment 2009/108/EC chapter 9 III.
3.5.4. Load condition during drive by test: Unloaded weight plus 80kg driver
3.5.5. Deviation at calibration: < 0.2 dB(A)

Techn. Report No.: 14-00020-CM-MIL-00
Manufacturer: Termignoni S.p.A
15077 Predosa (AL)
Type: D147

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3.6. Power measurement

3.6.1. Testing of max. power with non-original exhaust system:

The tested max. power und the engine speed are in the 5% tolerance in comparison with the original exhaust system. (see enclosure)

3.6.2. Testing of top speed with non-original exhaust system:

Not applicable, because vehicle class: Motorcycle L3e

3.7. Conditioning

by pulsation

3.8. Pollution Test

Testing of pollution with aftermarket catalytic converter in combination with non-original exhaust system against the limits mentioned in 97/24/Chap. 5 Annex II, regarding the type approval of the test bikes.

3.9. Test results

- The results of
- 3.9.1. Noise testing
 - 3.9.2. Power measurement
 - 3.9.3. Top speed
 - 3.9.4. Emission test
- are attached in the enclosure.

All motorcycles with the same serial exhaust system and same or fewer performance mentioned in enclosure 2, can be taken into the field of application due to the measurement with the above named motorcycle/s.

- 3.9.5. The described non-original exhaust system / technical unit is suitable for an application at the vehicles listed in enclosure 2.
- 3.9.6. The general specifications concerning 97/24/EC capt.9 annex III point 3.5.1 were checked and fulfilled regarding the technical possibilities by the non-original exhaust system / technical unit.

Techn. Report No.: 14-00020-CM-MIL-00
Manufacturer: Termignoni S.p.A
15077 Predosa (AL)
Type: D147

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4. Enclosures

Enclosure 1, Composition of the non original exhaust system
Enclosure 2, Field of application
Enclosure 3, Test results
Enclosure 4, Test results according pollution
Information Document

5. Summary

The information folder as mentioned under No. 0.5 and the type described therein are in compliance with the test specification mentioned above. The worst-case was selected in accordance with document "Preparation of Test Reports".
The test report may be reproduced and published in full and by the client only. It can be reproduced partially with the written permission of the test laboratory only.

Designated as Technical Service by:

Approval authority	Country	Registration-number	Actual scope list
Kraftfahrt-Bundesamt (KBA)	Deutschland/ Germany	KBA-P 00100-10	www.kba.de
Vehicle Certification Agency (VCA)	Vereintes Königreich/ United Kingdom	VCA-TS-006	http://ec.europa.eu/enterpri se/sectors/automotive/appr oval-authorities-technical- services/technical- services/index_en.htm
Approval Authority of the Netherlands (RDW)	Niederlande/ The Netherlands	RDW-99050009 01	
National Standards Authority of Ireland (NSAI)	Irland/ Ireland	Technical Service Number: 49	
Vehicle Safety Certification Center (VSCC)	Taiwan/ Taiwan	DE04-06-1	http://www.vsc.org.tw/Engli sh/Default.aspx

München, 13.06.2014



Pietro Vergani
Authorized Signatory

ENCLOSURE 1

To test report no.

Type:

Manufacturer:

14-00020-CM-MIL-00

D147

Termignoni S.p.A.

Composition of the original exhaust system + original parts

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No.	Components parts, dimensions in mm	Dimensions of the part in mm or original part / replacement part	Part no. or homologation no.
1)	Collectors	Notice drawing	Drawing D147: Final body
2)	Catalytic converter	Ø 93 x 100 mm	Drawing D147: Catalytic converter
3)	Reduction	Notice drawing	Drawing D147: Tappo tipo "A"
4)	Silencer (outlet pipe Ø 36 mm)	Two silencers on the right, Ø 90 mm, absorption-reflection principle with outlet pipe Ø 36 mm	Drawing D147: Lower Silencer and Drawing D147: Upper Silencer

ENCLOSURE 2

To test report no.

14-00020-CM-MIL-00

Type:

D147

Manufacturer:

Termignoni S.p.A.

Field of application

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No. of vehicle	Manufacturer	Make	Commercial name	Vehicle type (and no. of homologation)	Engine type	Stroke	Engine capacity in cm ³	Rated maximum engine power in kW/min ⁻¹	Additional remarks:	Composition as shown in enclosure no. 1
1)	DUCATI Motor Holding S.p.A..	DUCATI	Monster 821	M6 e9*2002/24*6025*01	821W4D	4-stroke	821	79 / 9250	with cat	1) 2) 3) 4)
2)								35 / 8000		
3)								25 / 8250		

ENCLOSURE 3

To test report no.

Type:

Manufacturer:

14-00020-CM-MIL-00

D147

Termignoni S.p.A.

Test results

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No. of vehicle	Engine power original kW/min ⁻¹	Engine power non original kW/min ⁻¹	Vmax original km/h	Vmax non original km /h	measured in gear ratio	Limit Value **)	Original mea- sured	Non original measured	at km/h	Vehicle type hom.	Original mea- sured	Non original measured	at min ⁻¹
1) A*	79,0/9250	78,9 / 9250	-	-	2/3	80	80	79	50	102	96	95	4625

*) Test series

**) Limit value of directive which was valid by vehicle type homologation

ENCLOSURE 4

To test report no.

Type:

Manufacturer:

14-00020-CM-MIL-00

D147

Termignoni S.p.A.

Test results according pollution

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Test series: B

Type I

Equivalent flywheel mass	270 kg
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	CO [g/km]	HC [g/km]	NO _x [g/km]
Test 1	0,489	0,075	0,047
Test 2	-	-	-
Test 3	-	-	-
Average	0,489	0,075	0,047
Limits C, II (Vh≥150cm ³)	2,62	0,33	0,22

Type II

Running condition	CO [Vol %]	Engine rpm [min ⁻¹]	Engine oil temperature [K]
Nominal idle speed	0,08	1250	371
Exceeded idle speed	0,07	2300	371