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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

Report No: 12-00047-CM-MIL-00, by technical service: TÜV Italia S.r.l. TÜV SÜD Group, date: 10 July 2012

Approval No: e11*97/24/9/III*2009/108*0825*00

Extension No: Not applicable

Reason for extension: Not applicable

1. Make of exhaust: Termignoni

2. Type of exhaust: TM12

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: 03 July 2012

7. Component type-approval GRANTED (1)

8. Place: BRISTOL

9. Date: 08 NOVEMBER 2012

10. Signature:

A.W.STENNING
Head of Technical and Quality Support Group

08-NOV-12
UK Approval Authority

EAN260985

(1) Delete as appropriate

08-Nov-12
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APPROVAL NUMBER: e11*97/24/9/III*2009/108*0825*00

INFORMATION PACKAGE CONTENTS

INDEX

REVISION NUMBER: Not applicable

Total number of sheets:	09 (Nine)
Number of separate drawings:	0 (Nil)
Number of separate photographs:	0 (Nil)

Reasons for Revision: Not applicable

Revision date
&
Office stamp

TERMIGNONI	**INFORMATION DOCUMENT** **N° TM12/97/24 rev. 00**	**Date: 10/07/2012** **Page 1/2**

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:*	TM12
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 appication:*	*See list enclosed*
7.	*Restriction and instructions for installing:*	*Notice assembly manual and field of application*

Sachverständiger Prüflabor DIN EN ISO/IEC 17025 TÜV SÜD Automotive GmbH

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).

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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)

Enclosures	*Drawing no.*	*Date*
Drawing of rear silencers	TM12: SILENCER	28/06/2012
Drawing of collectors	TM12: COLLECTORS	28/06/2012
Drawing of composition	TM12: ASSEMBLY	28/06/2012
Drawing of reduction	TM12: TAPPO	28/06/2012
Drawing of catalyst	TM12: CATALYTIC CONVERTER	28/06/2012
List of vehicles		
Fitting instructions		

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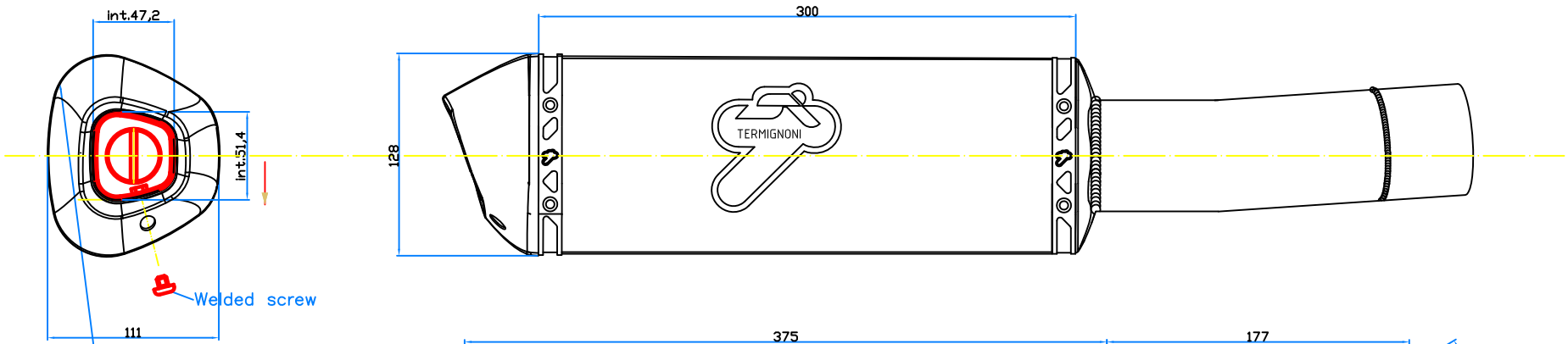
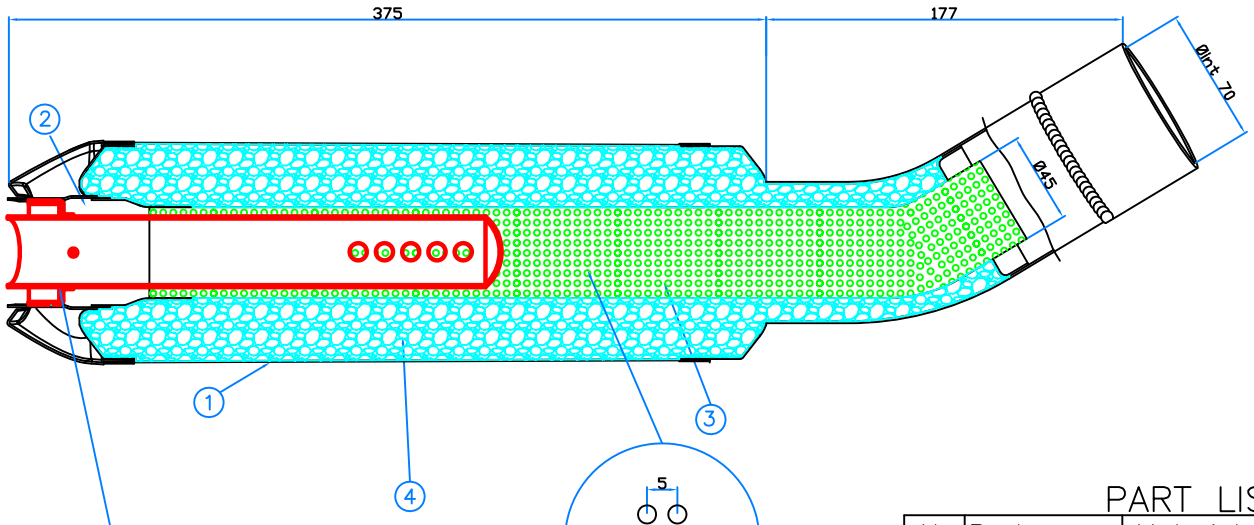
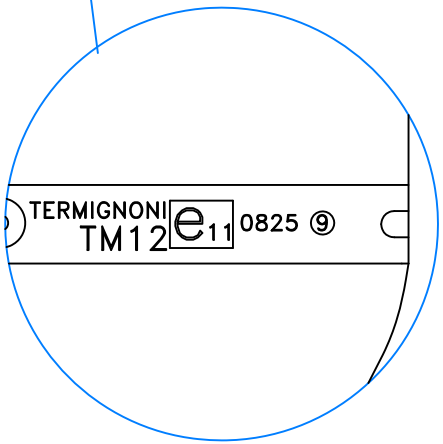
General tolerance: ±1mm







DETAIL (NOT IN SCALE)

see drawing
"TM12: TAPPO"

PART LIST

Nr	Part name	Material	Dimensions	QT
1	Shell	Stainless Steel	See Drawing	1x
	or	Titanium	See Drawing	1x
	or	Carbon fiber	See Drawing	1x
	or	Aluminium	See Drawing	1x
2	Outlet Pipe	Stainless Steel	See Drawing	1x
	or	Titanium	See Drawing	1x
3	Punched-holes pipe	Stainless Steel	ø 45x0,8	1x
	or	Titanium	ø 45x0,8	1x
4	Sound deadener	Fiberglass	635 gr.	1x

SCALE:	MODEL: YAMAHA T-MAX 530 '12 2X1 cod.Y099 TM12 e11 0825 ⑤⑨
DATE: 28/06/12	
NAME: C. Zappia	
TYPE: TM12: SILENCER	

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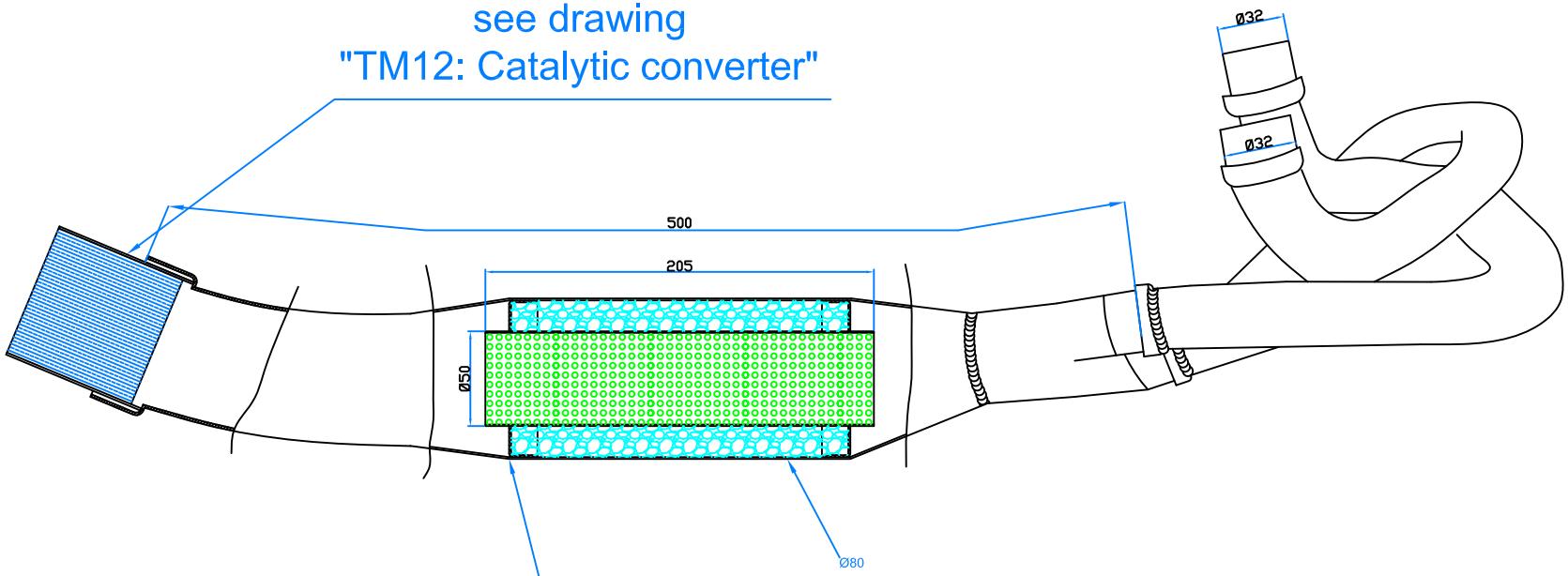
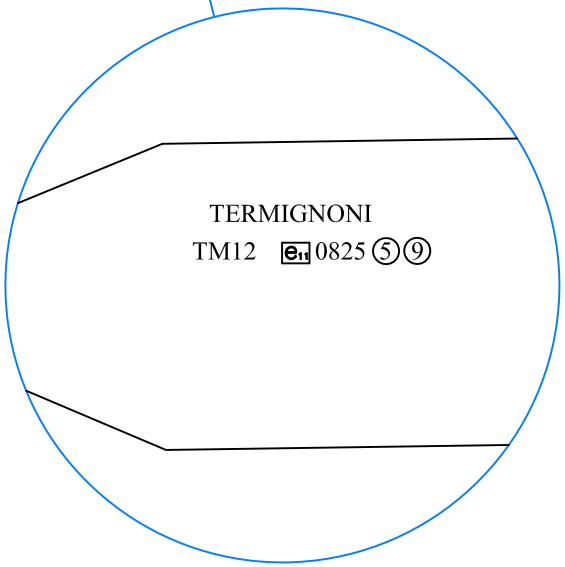
see drawing
"TM12: Catalytic converter"





DETAIL (NOT IN SCALE)

SCALE:	MODEL: YAMAHA T-MAX 530 '12 2X1 cod.Y099 TM12 e11 0825 5 9
DATE: 28/06/12	
NAME: C. Zappia	
TYPE: TM12: COLLECTORS	

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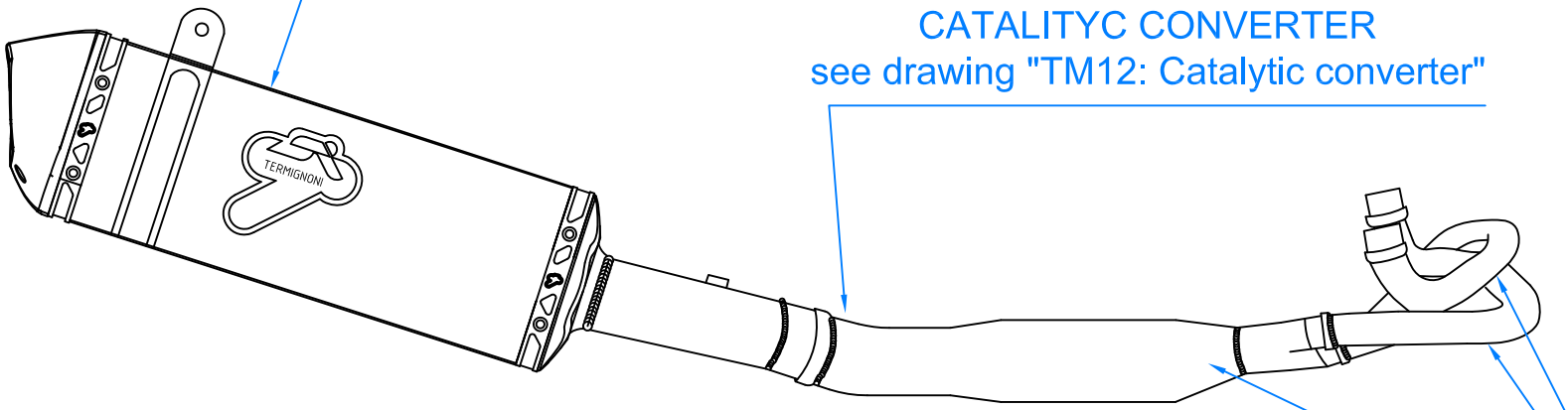
Material: Stainless steel or titanium

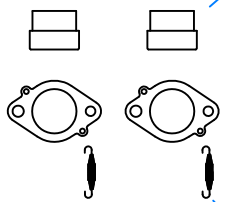
SILENCER
see drawing "TM12: Silencer"

CATALITYC CONVERTER
see drawing "TM12: Catalytic converter"



COLLECTORS
see drawing "TM12: collectors"

BUSHINGS



SPRINGS

SCALE:	MODEL: Yamaha T-MAX 530 '12 2X1 catal. Y099 TM12 e11 0825 ⑤⑨
DATE: 28/06/2012	
NAME: C. Zappia	
TYPE: TM12: ASSEMBLY	

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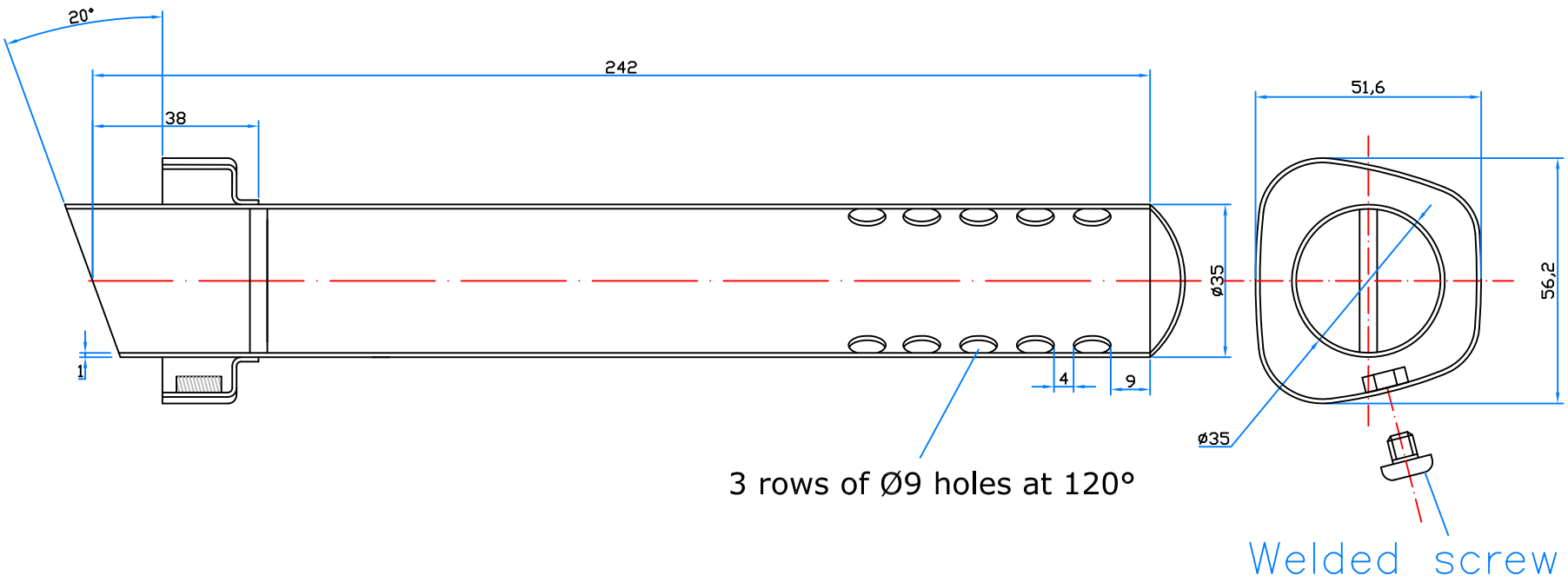
General tolerance: ±1mm

MATERIAL: S.Steel or Titanium



SCALA:	*MODEL:* YAMAHA T-MAX 530 '12 2X1 cod.Y099 TM12 e11 0825 ⑤⑨
DATUM: 28/06/2012	
NAME: C. Zappia	
Tipe: TM12: Tappo	

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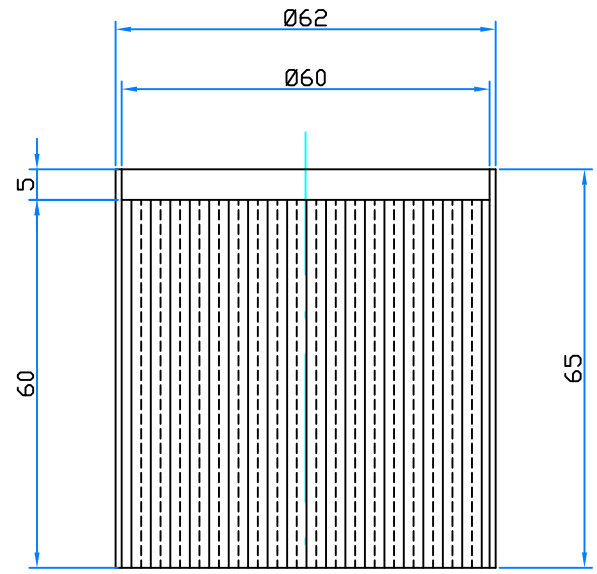
Cod. TERMIGNONI TER403



CHARACTERISTICS

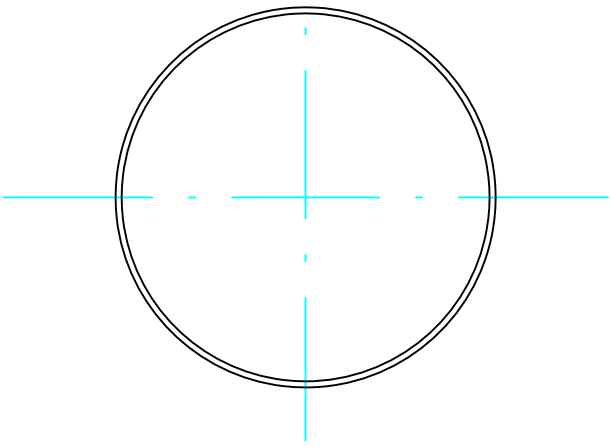
DIMENSIONS : Øi 60x60 mm.

CPSI : 400

FORMULATION : Pt/Pd/Rh

RATIO : 1/13/1

LOADING : 140 gr/ft 3



SCALE:	**MODEL:** YAMAHA T-MAX 530 '12 2x1 catal. Y099 TM12 e11 0825 ⑤ ⑨
DATE: 28/06/12	
DES: C.Zappia	
TYPE: TM12: Catalytic converter	

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08-Nov-12

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INFORMATION DOCUMENT N° TM12/97/24 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)	YAMAHA MOTOR CO. LTD	YAMAHA	T-MAX T-MAX with ABS	SJ09 (e13*2002/24*0513)	J409E	4	530	34,2/6750	with cat	1) 2) 3) 4)

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Via della Rampina, 1
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

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TÜV SÜD Automotive GmbH
Westendstraße 199
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TEST REPORT
No. 12-00047-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

0. General information

0.1.	Make:	TERMIGNONI
0.2.	Type:	TM12
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: Date:	TM12/97/24 10.07.2012
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

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2. Composition of the separate technical unit

2.1.	Kind of technical unit:	Complete non-original exhaust system, consisting out of one silencer on the right, maximum shape 128x111 mm, total muffler length 552 mm (with endcap and inlet pipe), absorption-reflection principle with an outlet pipe ∅ 33 mm with covering pipe shape 51,6x56,2 mm according to drawing no. TM12: Tappo. Exhaust system includes non original header system, according to drawing no.TM12: Collectors. Equipped with catalytic converter inside of the system according to drawings no. TM12: Collectors and TM12: Catalytic converter. Aluminium-alternatively stainless steel alternatively titanium alternatively carbon fiber-cover.
2.2	Place of marking:	On the silencer, see drawing TM12: silencer On the collectors, see drawing TM12: collectors
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
2.5.	Test samples submitted for testing at:	03/07/2012 and 04/07/2012

3. Test report

The tests were carried out in 2 series A at 03/07/2012 and B at 04/07/2012

3.1. Vehicle

(0.1)	Make:	YAMAHA
3.1.1.	Type / Variant / Version:	SJ09
3.1.1.1	Model:	T-MAX
3.1.2.	Manufacturer	YAMAHA MOTOR CO. LTD
3.1.3.	Homologation no.:	e13*2002/24*0513*
3.1.4.	Vehicle identification no.:	*JYASJ091000003074*
3.1.5.	Year of manufacture:	2012
3.1.6.	Kilometers:	2905

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3.1.7.	Total weight:	217 kg
3.2.	**Engine**	
3.2.1.	Manufacturer:	YAMAHA
	Trade name:	--
3.2.2.	Type:	J409E
3.2.3.	Engine capacity:	530 cm^3
3.2.4.	Rated maximum engine power:	34,2 kW at 6750 min^{-1}
3.3.	**Transmission**	
3.3.1.	Kind of transmission:	Automatic
3.3.4	Gearbox:	--
3.3.5.	Transmission ratios: primary / final	Notice vehicle homologation no. s. 3.1.3
	Top speed:	Notice vehicle homologation no. s. 3.1.3
	Tires: front rear	 120/70-15 160/70-15
3.4.	**Assembly of the exhaust system** (no. of parts, enclosure 1):	1) 2) 3) 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 driver
3.5.5.	Deviation at calibration:	< 0.2 dB(A)

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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 Pollution 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.

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4. Enclosures

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

5. Summary

The named information document and the described type correspond to the Directive 97/24/EC including the amendment 2009/108/EG chapter 9, annex III.
There are no technical objections against granting an EC Type-approval.
The technical service is accredited for the named testing procedure by the Kraftfahrt-Bundesamt, Federal Republic of Germany, by the KBA-Accreditation.

München, 10.07.2012
The Expert

Sachverständiger Prüflabor DIN EN ISO/IEC 17025 TÜV SÜD Automotive GmbH

Pietro Vergani
Prüflabor DIN EN ISO/IEC 17025

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TÜV SÜD Automotive GmbH
Westendstraße 199
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E N C L O S U R E 1

To test report no. **12-00047-CM-MIL-00**
Type: **TM12**
Manufacturer: **Termignoni S.p.A.**

Composition of the non original exhaust system + original parts

No.	Components parts, dimensions in mm	Dimensions of the part in mm or original part / replacement part	Part no. or homologation no.
1)	Collectors	Non original collectors equipped with catalytic converters	TM12: Collectors
2)	Catalytic converter	Notice drawing	TM12: Catalytic converter
3)	Reduction	Notice drawing	TM12: Tappo
4)	Silencer (outlet pipes ∅ 33)	One silencer on the right, maximum shape 128x111 mm, total muffler length 552 mm (with endcap and inlet pipe), absorption-reflection principle with an outlet pipe ∅ 33 mm with covering pipe shape 51,6x56,2 mm	TM12: Silencer

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E N C L O S U R E 2

To test report no. **12-00047-CM-MIL-00**
Type: **TM12**
Manufacturer: **Termignoni S.p.A.**

Field of application

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)	YAMAHA MOTOR CO. LTD	YAMAHA	T-MAX T-MAX with ABS	SJ09 (e13*2002/24*0513)	J409E	4	530	34,2/6750	with cat	1) 2) 3) 4)

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E N C L O S U R E 3

To test report no. **12-00047-CM-MIL-00**
Type: **TM12**
Manufacturer: **Termignoni S.p.A.**

Test results

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,B*	34,2/6750	34,0/6750	-	-	-	80	80	80	50	86	86	86	3375

*) *Test series*

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

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E N C L O S U R E 4 | ***To test report no.*** **12-00047-CM-MIL-00**
Type: **TM12**
Manufacturer: **Termignoni S.p.A.**

Test results according pollution

Type I

Equivalent flywheel mass	300 kg

	CO [g/km]	HC [g/km]	NO_X [g/km]
Test 1	1,044	0,089	0,147
Test 2	1,079	0,076	0,162
Test 3	1,049	0,069	0,133
Average	1,057	0,078	0,147
Limits B, II (Vh≥150cm³)	2,00	0,30	0,15

Type II

Running condition	CO [Vol %]	Engine rpm [min^{-1}]	Engine oil temperature [K]
Nominal idle speed	0,06	1300	369
Exceeded idle speed	0,05	2300	369

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