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THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE GRANTING OF A COMPONENT TYPE-APPROVAL CERTIFICATE IN RESPECT OF A NON-ORIGINAL EXHAUST SYSTEM FOR A TYPE OF MOTORCYCLE PURSUANT TO DIRECTIVE 97/24/EC CHAPTER 9 OF 17 JUNE 1997

Report No: 374-0034-09-ITA By technical service: TÜV Italia S.r.l, TÜV Süd Group dated 2 October 2009

Type-approval No: e11*97/24*97/24/9/III*0691*00

Reason for extension: Not applicable

1. Make of exhaust: Termignoni

2. Type of exhaust: R109

3. Name and address of manufacturer:

   Termignoni S.p.A.
   Via della Rampina, 16
   15077 Predosa (AL)
   Italy

4. If applicable, name and address of the manufacturer's authorized representative: Not applicable

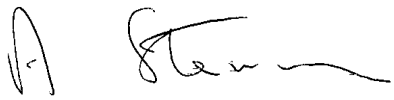
5. Make(s) and type(s) and any variant(s) or version(s) of the vehicle(s) for which the exhaust system is designed: See list enclosed

6. Date system submitted for testing: See enclosure

7. Component type-approval has been GRANTED

8. Place: BRISTOL

9. Date: 21 OCTOBER 2009

10. Signature: 

A. W. STENNING
Head of Technical and Quality Group

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APPROVAL NUMBER: e11*97/24*97/24/9/III*0691*00

INFORMATION PACKAGE CONTENTS

INDEX

REVISION NUMBER: Not applicable

Total number of sheets:	8 (Eight)
Number of separate drawings:	0 (Nil)
Number of separate photographs:	0 (Nil)

Reasons for Revision: Not applicable

Revision date
&
Office stamp

21-Oct-09
UK Approval Authority

Information Document relating to EC type approval as separate technical unit of exhaust systems for motorcycles (Directive 97/24/EC amended 2006/120/EC)

1.	*Make (trade name of manufacturer)*:	Termignoni
2.	*Type and general commercial description:*	R109
3.	*Name and address of manufacturer:*	Termignoni S.p.A. via della Rampina, 16 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*

Further details according to directive 97/24/EC, chapter 9, annex III, enclosure 2 A including amendment 2006/120/EC are mentioned in the motorcycle homologation (notice enclosure 2 of the test report).

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

21-Oct-09 UK Approval Authority

Information Document relating to EC type approval as separate technical unit of exhaust systems for motorcycles (Directive 97/24/EC amended 2006/120/EC)

Enclosures:

		Drawing no.	*Date*
c1.	*Drawing of rear silencers*	R109: SILENCER	30/07/2009
c2.	*Drawing of composition*	R109: ASSEMBLY	30/07/2009
c3.	*Drawing of reduction*	R109: TAPPO	30/07/2009
c4.	*Drawing of inlet pipes*	R109: FINAL BODIES	30/07/2009
c5.	*List of vehicles*		
c6.	*Fitting instructions*		

21-Oct-09
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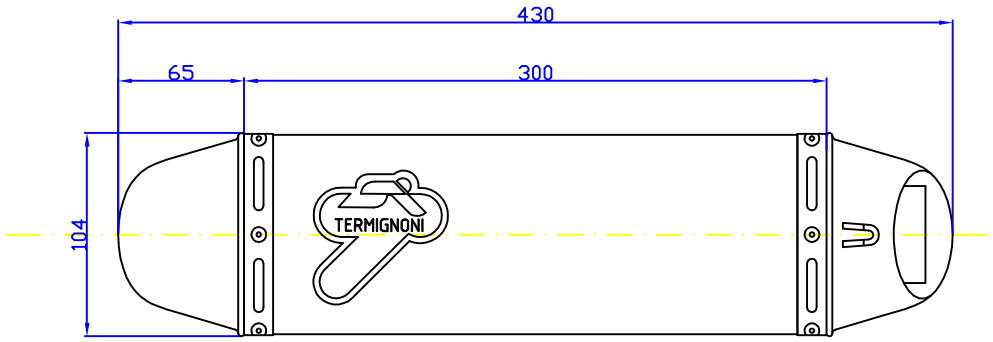
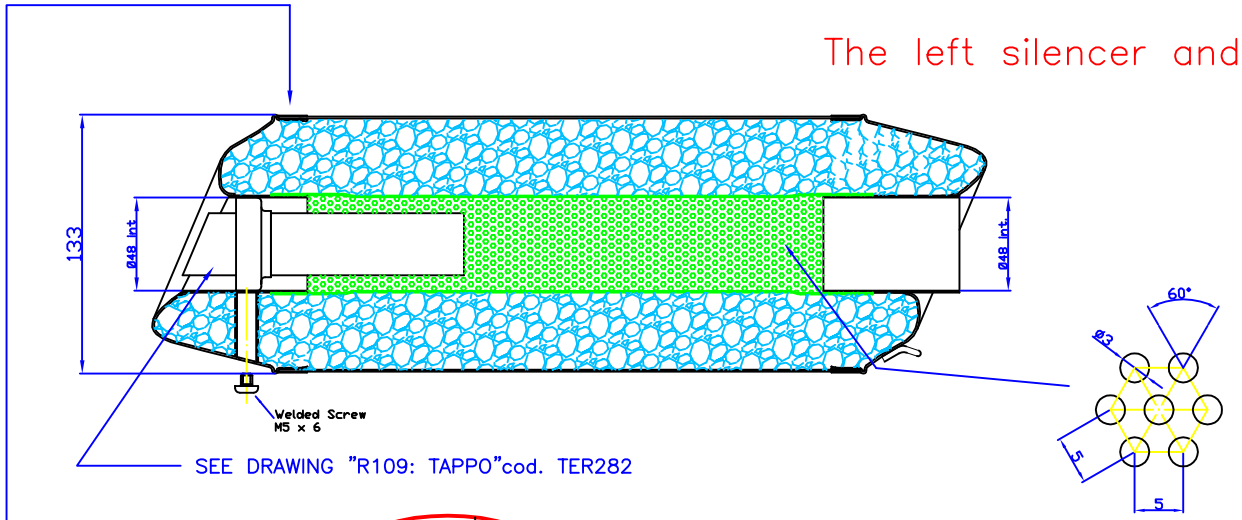
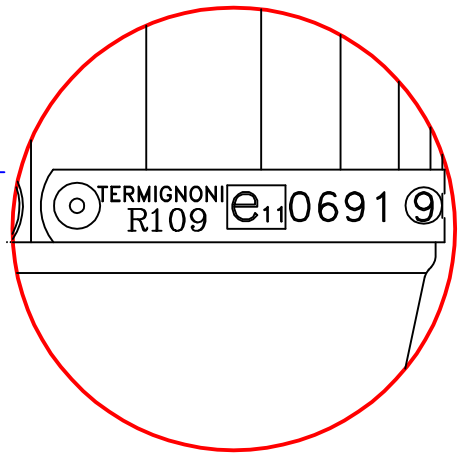
General tolerance: ±1mm



The left silencer and the right silencer are simmetrical





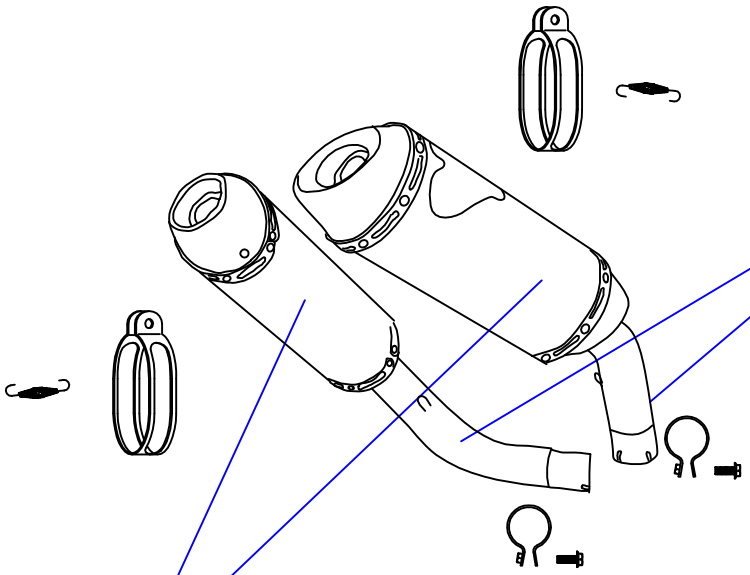
DETAIL (NOT IN SCALE)

PART LIST

Nr	Part name	Material	Dimensions	Qt.
1	Shell or	Aluminium	See drawing	1x
	or	Carbon Fiber	See drawing	1x
	or	Titanium	See drawing	1x
2	Outlet Pipe	Stainless Steel	See drawing	1x
	or	Titanium	See drawing	1x
3	Punched-holes pipe	Stainless Steel	ø 50x0,8	1x
	or	Titanium	ø 50x0,8	1x
4	Sound deadener	Fiberglass	___ gr.	1x

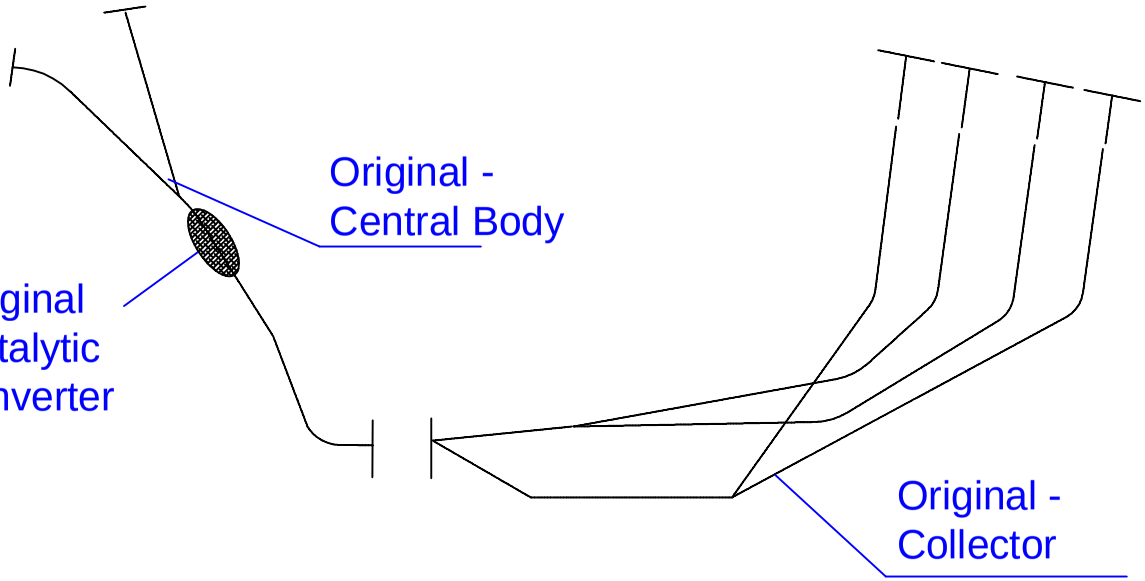
SCALE:	Model: Yamaha R1 1000 2009 2 Sil. STR COD Y090 R109 e11 0691 ⑨
DATE: 30.07.09	
NAME: D.Zancanaro	
Type:	R109: SILENCER

Termignoni s.r.l.



Final bodies
See Drawing
"R109:
Final Bodies"

Silencers
See Drawing "R109: SILENCER"



Original -
Central Body

Original
Catalytic
converter

Original -
Collector

SCALE:	Model: Yamaha R1 1000 2009 2 Sil. STR COD Y090 R109 e11 0691 ⑨
DATE: 30.07.09	
NAME: D.Zancanaro	
Type:	R109: ASSEMBLY

Termignoni s.r.l.

21-Oct-09
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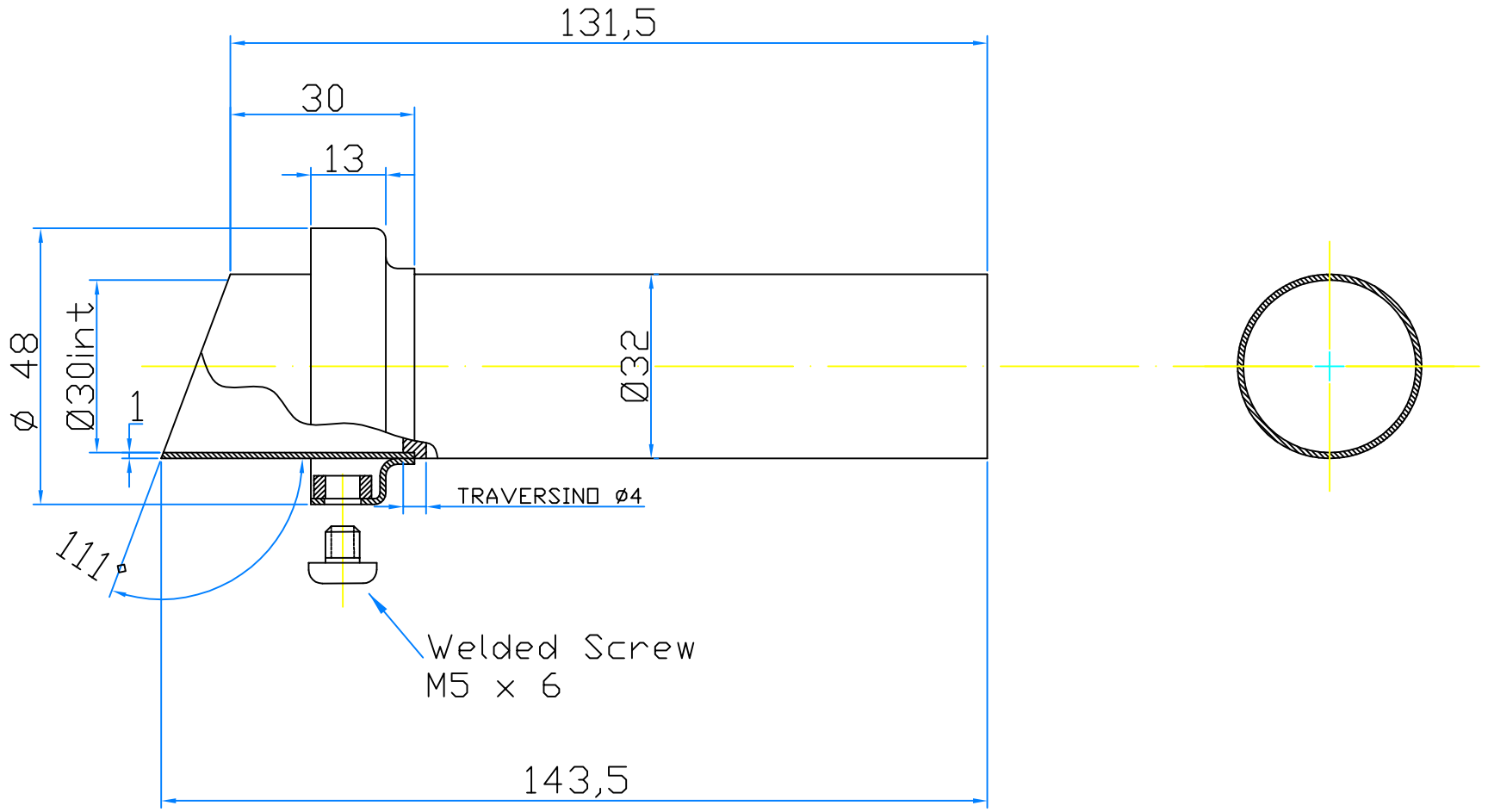
General tolerance: ±1mm

MATERIAL: S.Steel or Titanium



SCALA:	MODEL: YAMAHA R1 '09 2 Sil. STR code Y090 R109 e11 0691 ⑨
DATUM: 30.07.2009	
NAME: D.Zancanaro	
TYP: R109: TAPPO	

Termignoni S.p.A.

info@termignoni.it

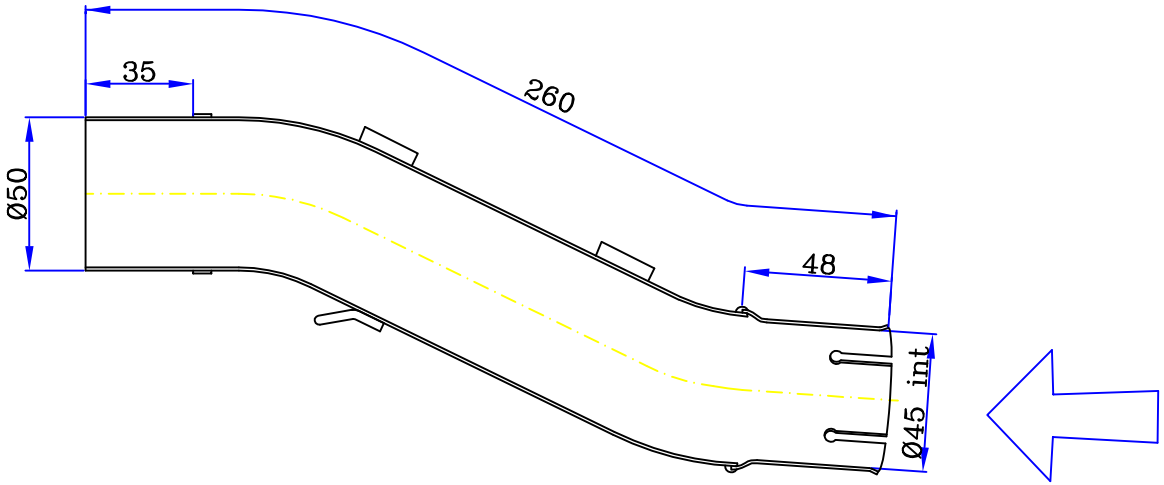
21-Oct-09

Cod. TERMIGNONI TER282

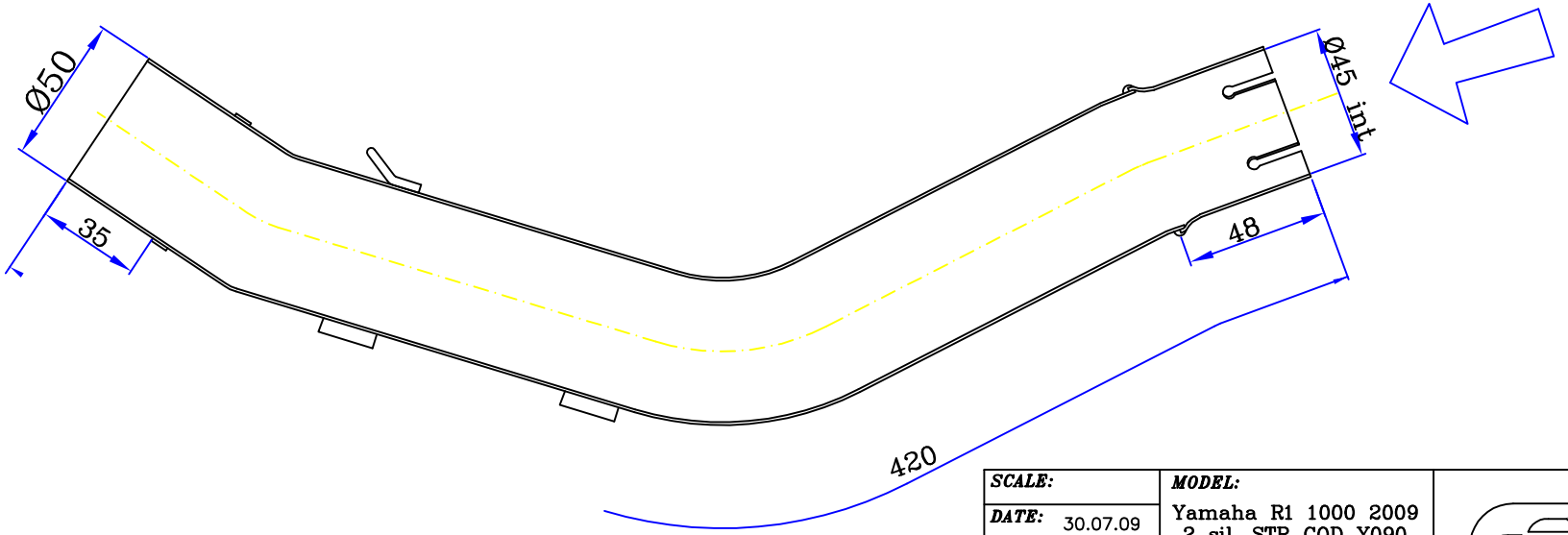
General tolerance: ±1mm

MATERIAL: STAINLESS STEEL OR TITANIUM

LEFT
SILENCER



RIGHT
SILENCER



SCALE:	MODEL: Yamaha R1 1000 2009 2 sil. STR COD Y090 R109 e11 0691 ⑨
DATE: 30.07.09	
NAME: D.Zancanaro	
TYPE: R109: FINAL BODIES	

Termignoni s.r.l.

VCA Approval Authority
21-Oct-09

INFORMATION DOCUMENT N° R109/97/24 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	YZF-R1 '09	RN22 (e13*2002/24*0325*)	N519E	4-stroke	998	133,9/12500	with cat.*)	1., c1., c2., c3., c4.

*) The original catalytic converter remain in the original exhaust system. A degradation of catalyst efficiency is not expected.

TERMIGNONI S.p.A
Via della Rampina, 16
15077 Predosa (AL)
Italy
C.F. e P.IVA 00862780061

Phone +39 0131 71666
Fax +39 0131 71696
info@termignoni.it
www.termignoni.it

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

VCA 21-Oct-09 UK Approval Authority

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

TECHNICAL REPORT

No. 374 - 0034 - 09 - ITA

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 and exhaust systems for two or three-wheel motor vehicles

No. ***97/24/EC*** *including the last amendment* ***2006/120/EC dated 27-Nov.-2006***
concerning ***Chapter 9, annex III***
Approval mark according to annex VI point 6.1.1

21-Oct-09
374003409ITA base
VCA Approval Authority

0. Technical description

0.1.	Make:	Termignoni
0.2.	Type:	**R109**
0.2.1.	Variants:	Not applicable
0.3.	Name and address of the manufacturer:	Termignoni S.p.A. Via della Rampina, 16 I-15077 Predosa (AL)
0.4.	Name and address of manufacturer's authorized representative:	Not applicable
0.5.	Class of the vehicles the unit is used for:	Motorcycle - L3e

21-Oct-09
374003409ITA base
VCA Approval Authority

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

I. Test object(s)

1.1.	Description of the vehicles the unit is used for:	Notice enclosure b
1.2.	Identification number:	TERMIGNONI R109 e11 0691 9
1.2.1.	Structure of the non-original exhaust system:	Non-original exhaust system, consisting out of two silencers under the seat, elliptic, main axle 133 mm, secondary axle 104 mm, total length 430 mm, absorption- reflection- principle with an outlet pipe ∅ 30 mm with covering pipe ∅ 48 mm according to drawing no. R109: SILENCER in combination with non-original inlet section (according to drawing R109: FINAL BODIES) and with original header system. Carbon fiber- alternatively aluminium- alternatively titanium-cover.
1.2.2.	List of parts:	See Test Report
1.2.3.	Position of the marking:	On the silencers, see enclosures c1.
1.2.4.	Make vehicles tested:	YAMAHA
1.2.5.	Material of the non-original exhaust system:	See Test Report
1.3.	Remarks:	---

21-Oct-09
374003409ITA base
VCA Approval Authority

II. Test Report

2.1.	Test equipment:	The tests were effected with an equipment that corresponds to the test requirements
2.2.	Condition under which the above mentioned test Records have been achieved:	See Test Report enclosure
2.2.1	Summary of the Test Records:	See Test Report enclosure
2.3.	General information about the Tests:	
2.3.1.	Weather condition:	See Test Report enclosure
2.3.2.	Place of the test:	See Test Report enclosure
2.3.3.	Date of the test:	See Test Report enclosure

21-Oct-09
374003409ITA base
VCA Approval Authority

III. Enclosures

a. Test Report
Composition of the non original exhaust system;
Field of application;
Test Records.

	Number	Pages	Date
1	374-0035-09-ITA	6	02/10/2009

b. Information Document n° R109/97/24 rev. 00 30/07/2009

c1. Drawing R109: SILENCER 30/07/2009

c2. Drawing R109: ASSEMBLY 30/07/2009

c3. Drawing R109: TAPPO 30/07/2009

c4. Drawing R109: FINAL BODIES 30/07/2009

21-Oct-09
374003409ITA base
VCA Approval Authority

TÜV SÜD Automotive GmbH
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Automotive

IV. Final confirmation

The named information document and the described type correspond to the Directive 97/24/EC chapter 9, annex III including the last amendment 2006/120/EC.
There are no technical objections against granting an EC Type-approval.

This technical report consists of sheet 1 to 6.

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

Recognised Expert
Pietro Vergani

pv Sesto San Giovanni (MI),
the 02.10.2009

196363

21-Oct-09
374003409ITA base
VCA Approval Authority

TÜV SÜD Automotive GmbH
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Automotive

TEST REPORT

No. 374 - 0035 - 09 - ITA

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 and exhaust systems for two or three-wheel motor vehicles

No. 97/24/EC including the last amendment 2006/120/EC dated 27-Nov.-2008 concerning chapter 9, annex III
Approval mark according to annex VI point 6.1.1

0. General information

0.1.	Make:	Termignoni
0.2.	Type:	**R109**
0.2.1.	Variants:	Not applicable
0.3.	Name and address of manufacturer:	Termignoni S.p.A. Via della Rampina, 16 I-15077 Predosa (AL)
0.4.	Name and address of manufacturer's authorized representative:	Not applicable

21-Oct-09
374003509ITA - R1
2009
VCA Approval Authority

0.5.	No. of information document: Date:	R109/97/24 rev. 00 30/07/2009
1.0.	Class of the vehicles the unit is used for:	Motorcycle - L3e (according to 2002/24/EC amended 2006/120/EC)
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:

Technical unit, consisting out of two silencers under the seat, elliptic, main axle 133 mm, secondary axle 104 mm, total length 430 mm, absorption- reflection- principle with an outlet pipe ∅ 30 mm with covering pipe ∅ 48 mm according to drawing no. R109: SILENCER in combination with non-original inlet section (according to drawing R109: FINAL BODIES) and with original header system.

2.2.	Place of marking:	On the silencers, see drawing R109: 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 side of the vehicle, under the seat

3. Test report

The tests were carried out in 1 series A at 02/10/2009.

3. **Test report** (continuation)

Series A: (no. 1)

3.1. **Vehicle**

	(0.1)	Make:	YAMAHA
3.1.1.	(0.2.)	Type / variant / version:	RN22 / I / i
3.1.2.	(0.5.)	Manufacturer	Yamaha Motor Co., Ltd.
3.1.3. 3.1.3.1		Homologation no.: Extension:	e13*2002/24*0325* 00
3.1.4.		Vehicle identification no.:	*JYARN221000004285*
3.1.5.		Year of manufacture:	2009
3.1.6.	(2.1)	Weight of the vehicle:	206 kg

3.2. **(3.)** **Engine**

3.2.1.	(3.0.)	Manufacturer:	Notice 3.1.2
	(3.1.)	Make:	YAMAHA
3.2.2.	(3.1.1)	Type:	N519E
3.2.3.		Engine capacity:	998 cm^3
3.2.4.	(3.2.1.7)	Rated maximum engine power:	133,9 kW at 12500 min^{-1}

21-Oct-09
374003509ITA - R1
2009
EC Approval Authority

3. **Test report** (continuation)

3.3.	**(4.)**	**Transmission**	
	(4.1)	Drawing of transmission:	Notice vehicle homologation no. s. 3.1.3.
3.3.1.	(4.2)	Kind of transmission:	Mechanical
	(4.3)	Clutch (kind):	Wet multi-plate type
	(4.4)	Gearbox	
3.3.2.	(4.4.1)	Kind	Mechanical
	(4.4.2)	Kind of activity:	Foot shifted
3.3.4.		No of gears	6
3.3.5.	(4.5.)	Transmission ratios: primary / final	Notice vehicle homologation no. s. 3.1.3.
	(4.6.)	Top speed:	285 km/h
	(5.2.)	Tires:	
		front	120/70 ZR17
		rear	190/55 ZR17
3.4.		Assembly of the exhaust system (no. of parts, enclosure 1):	1., c1., c2., c3., c4.

21-Oct-09
374003509ITA - R1
2009
VCA Approval Authority

3.5. Power measurement

3.5.1. The tested max. power and the engine speed are in the ± 5% tolerance in comparison with the original exhaust system.

3.5.2. Testing of top speed with non-original exhaust system:
Not applicable, because vehicle class : motorcycle

3.6. Conditioning

By pulsation

3.7. Test results

The results of
3.7.1. Sound testing
3.7.2. Power measurement
3.7.3. Top speed
3.7.4. Emission test
are attached in the enclosure 3.
The results of the sound tests with the original and non original exhaust systems fulfil point 3.5.2.1.1 of Directive 97/24/EC chapter 9, including last amendment 2006/120/EC. 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.
Emission test has not been carried out because the non original exhaust system does change neither cathalyst then vehicle performance.

3.7.5. The described non-original exhaust system / technical unit is suitable for an application at the vehicles listed in enclosure 2.

3.7.6. The general specifications concerning point 3.5.1 of Directive 97/24/EC Chapter 9 (including last amendment 2006/120/EC) were checked and were fulfilled by the non original exhaust system / technical unit.

TÜV SÜD Automotive GmbH
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Automotive

4. Enclosures

Enclosure 1, Composition of the non original exhaust system (Page 1)

Enclosure 2, Field of application (Page 1)

Enclosure 3, Test results (Page 1)

5. Summary

The named information document and the described type correspond to the Directive 97/24/EC including the amendment 2006/120/EC chapter 9, annex III.
There are no technical objections against granting an EC Type-approval.

This test report contains the pages 1 to 6 and enclosures.

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

Recognised Expert
Pietro Vergani

pv Sesto San Giovanni (MI),
the 02.10.2009

196363

21-Oct-09
374003509ITA - R1
2009
VCA Approval Authority

TÜV SÜD Automotive GmbH
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D-85748 Garching

Automotive

E N C L O S U R E 1 ***to test report no.*** **374-0035-09-ITA**
Type: **R109**
Manufacturer: **Termignoni S.p.A.**

Composition of the 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.	Header pipes	original parts	-
c1.	Rear silencers	Two silencers under the seat, elliptic, main axle 133 mm, secondary axle 104 mm, total length 430 mm, absorption- reflection-principle with an outlet pipe ∅ 30 mm with covering pipe ∅ 48 mm	Drawing R109: SILENCER
c2.	Drawing of composition	Notice drawing	Drawing R109: ASSEMBLY
c3.	Reduction	Notice drawing	Drawing R109: TAPPO
c4.	Inlet pipes	Notice drawing	Drawing R109: FINAL BODIES

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21-Oct-09

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

E N C L O S U R E 2 ***to test report no.*** **374-0035-09-ITA**
Type: **R109**
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	YZF-R1 '09	RN22 (e13*2002/24*0325*)	N519E	4-stroke	998	133,9/12500	with cat.*)	1., c1., c2., c3., c4.

*) The original catalytic converter remain in the original exhaust system. A degradation of catalyst efficiency is not expected.

UK Approval Authority
21-Oct-09

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

E N C L O S U R E 3 ***to test report no.*** **374-0035-09-ITA**
Type: **R109**
Manufacturer: **Termignoni S.p.A.**

Test results

- Noise and Power Test

					Sound levels driving vehicle in dB(A)					Sound levels stationary vehicle in dB(A)			
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*	133,9/12500	133,3/12500	-	-	2 / 3	80	81,00	80,00	50	99	99	97	6250

*) test series

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