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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: 374-0006-10-ITA by technical service TÜV Italia Srl, TÜV SÜD Group dated 12 May 2010

Component type-approval No: e11*97/24*97/24/9/III*0698*00

1. Make of exhaust: Termignoni

2. Type of exhaust: GS12

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 has been GRANTED

8. Place: BRISTOL

9. Date: 26 MAY 2010

10. Signature:

A. W. STENNING
Head of Technical and Quality Group

26-May-10
UK Approval Authority

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APPROVAL NUMBER: e11*97/24*97/24/9/III*0698*00

INFORMATION PACKAGE CONTENTS

INDEX

REVISION NUMBER: Not applicable

Total number of sheets:	9 (Nine)
Number of separate drawings:	0 (Nil)
Number of separate photographs:	0 (Nil)

Reasons for Revision: Not applicable

Revision date
&
Office stamp

26-May-10
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TERMIGNONI	**INFORMATION DOCUMENT N° GS12/97/24 rev. 00**	**Date: 12/05/2010 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:*	GS12
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 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*
c1.	*Drawing of rear silencer*	GS12: SILENCER	17/03/2010
c1.1.	*Drawing of rear silencer*	GS12: SILENCER CAP OPT 1	10/04/2010
c2.	*Drawing of composition*	GS12: ASSEMBLY	17/03/2010
c2.1.	*Drawing of composition*	GS12: ASSEMBLY + CAP OPT 1	17/03/2010
c3.	*Drawing of reduction*	GS12: TAPPO	17/03/2010
c4.	*List of vehicles*		
c5.	*Fitting instructions*		

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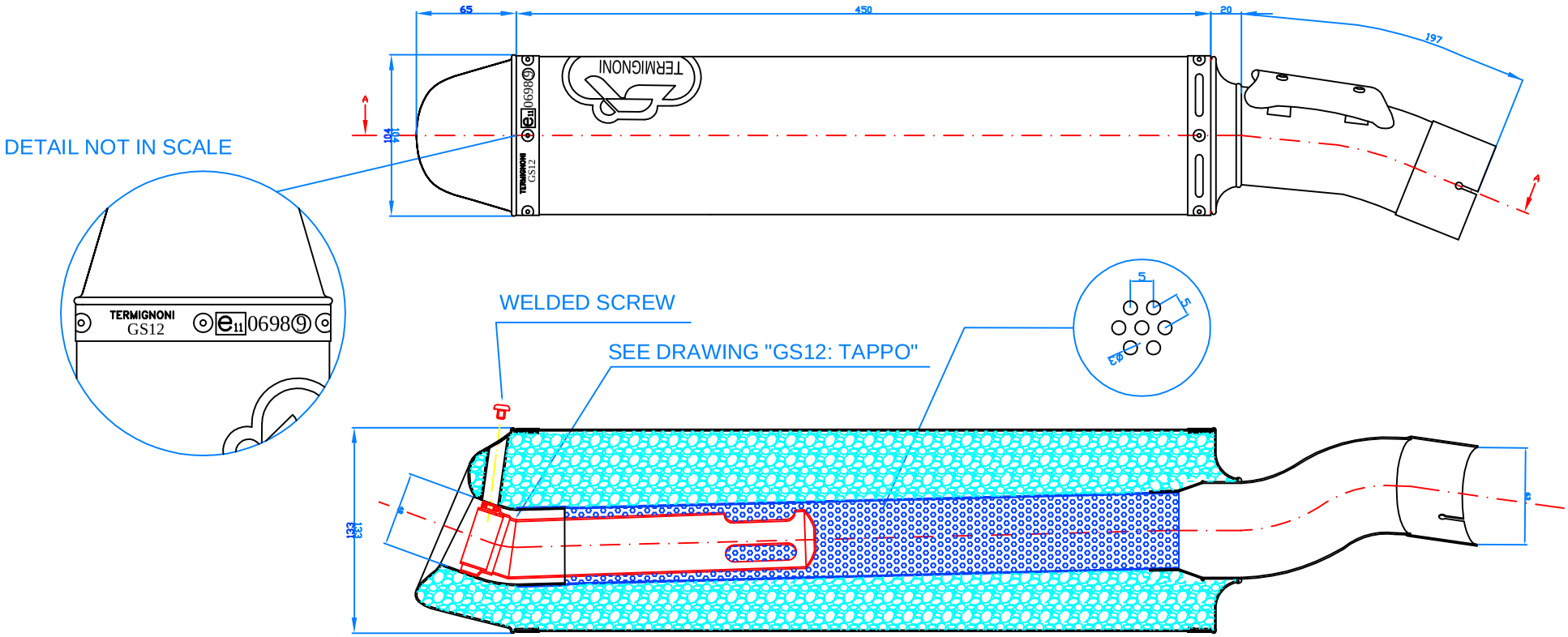
General tolerance: ±1mm



PART LIST

Nr	Part name	Material	Dimensions	Qt.
1	Shell	Alluminium	Sp2mm x See draw	1x
	or	Carbon fiber	Sp1mm x See draw	1x
	or	Titanium	Sp0.6mm x See drawing	1x
	or	Stainless steel	Sp0.6mm x See drawing	1x
2	Outlet pipe	Stainless steel	SEE DRAWING	1x
	or	Titanium	SEE DRAWING	1x
3	Punched-holes pipe	Stainless steel	ø50x0,8	1x
	or	Titanium	ø50x0,8	1x
4	Sound Deadener	Fiberglass	500 g	1x

Scale:
Date: 17.03.2010
Name: D. Folci
Type: GS12: SILENCER
Model: BMW 1200 GS 1 sil STR code BW02 GS12 e11 0698 9

Termignoni S.p.A.

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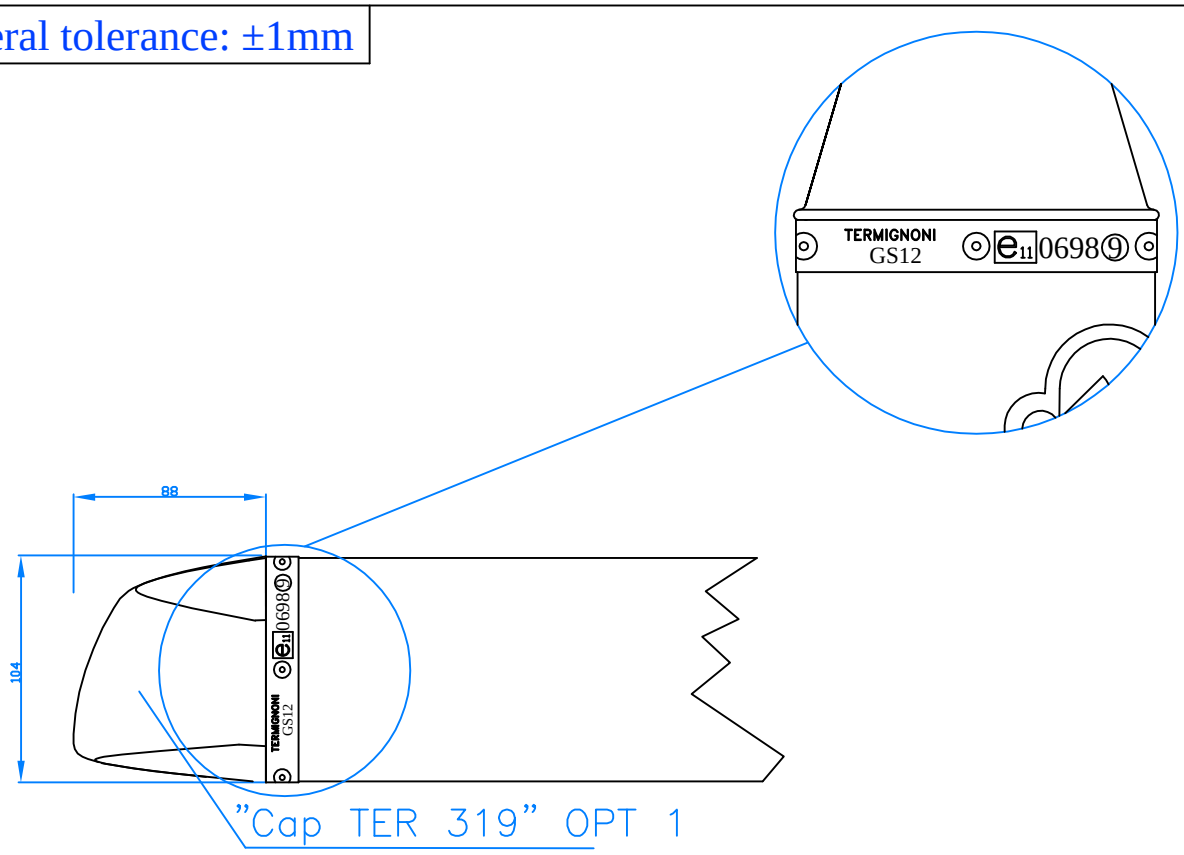
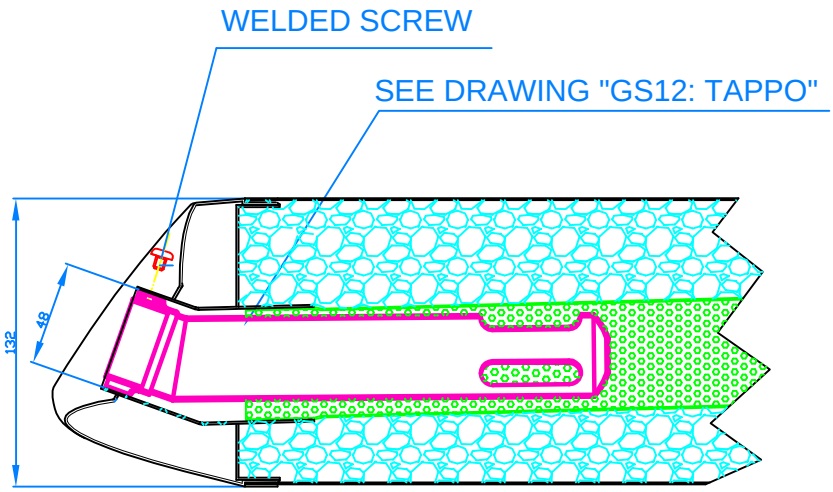
General tolerance: ±1mm





Nr	Part name	Material	DImensions	Qt.
1	Cap TER319	CARBON-F.	See drawing	1x

SCALE: 1:1	***Type:*** BMW GS 1200 '10 1 SIL STR BW02 GS12 e11 0698 ⑨
DATE: 10.04.08	
NAME: D. Folci	

GS12: SILENCER CAP OPT 1

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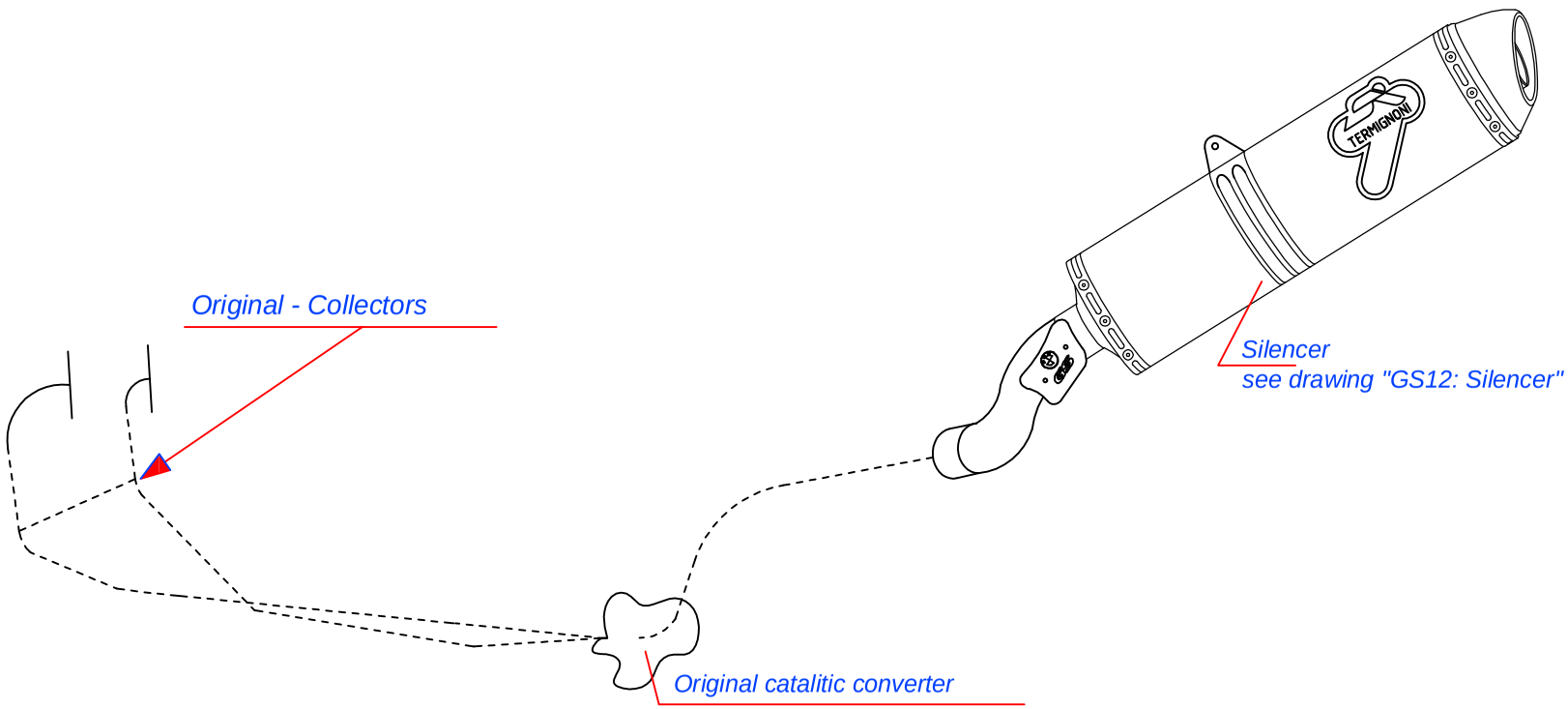

SCALE:	**MODEL:** BMW 1200 GS 1 sil STR code BW02 GS12 e11 0698 ⑨
DATE: 17.03.2010	
DES: D.Folci	
TYPE: GS12: Assembly	

Termignoni S.p.A.

info@termignoni.it

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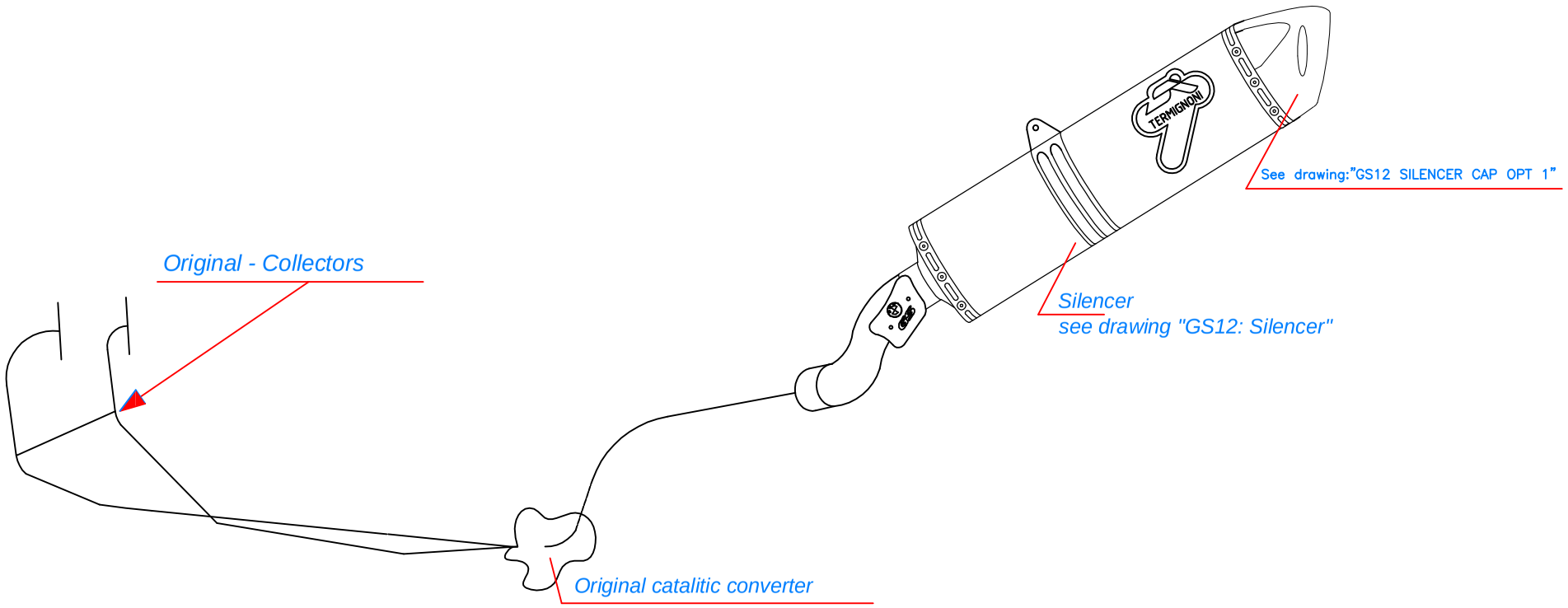

SCALE:	**MODEL:** BMW 1200 GS '10 1 sil STR code BW02 GS12 e11 0698 ⑨
DATE: 17.03.2010	
DES: D.Folci	
TYPE: GS12: Assembly + cap OP1	

Termignoni S.p.A.

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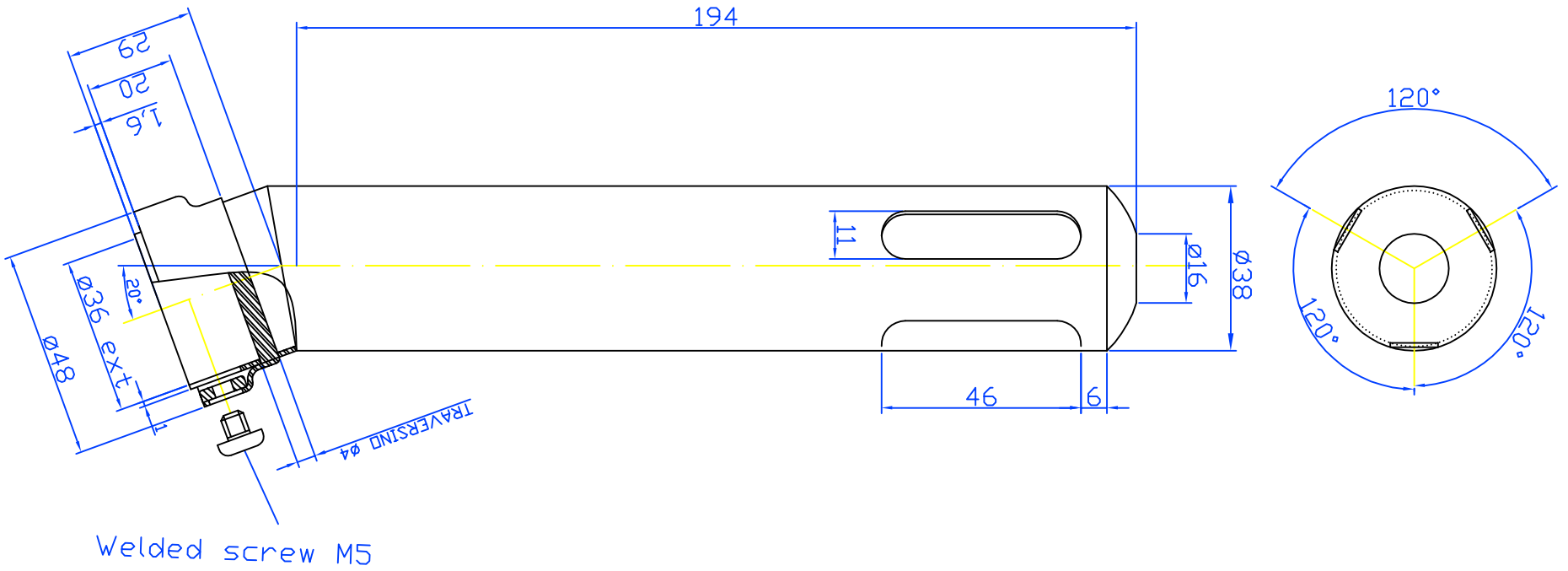
MATERIAL: S.Steel or Titanium



SCALA:	MODEL: BMW 1200 GS 1 sil STR code BW02 GS12 e11 0698 ⑨
DATUM: 17.03.2010	
NAME: D. FOLCI	
TYP: GS12: TAPPO	

Termignoni S.p.a.

info@termignoni.it

Cod. TERMIGNONI TER327

26-May-10
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INFORMATION DOCUMENT N° GS12/97/24 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)	BMW AG	BMW	R1200 GS	R12 (e1*2002/24* 0199*)	12 2E J	4-stroke	1170	81/7750	with cat. *)	1.0., c1., c2., c3. or 1.0., c1.1., c2.1, c3.

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

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15077 PREDOSA (AL) Italy
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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
Daimlerstraße 11
D-85748 Garching

Automotive

TECHNICAL REPORT

No. 374 - 0006 - 10 - 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* ***2009/108/EC dated 17-Aug.-2009***
concerning ***Chapter 9, annex III***
Approval mark according to annex VI point 6.1.1

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26-May-10
374000610ITA base
UK Approval Authority

0. Technical description

0.1.	Make:	Termignoni
0.2.	Type:	**GS12**
0.2.1.	Variants:	00 01 (with CAP opt.1)
0.3.	Name and address of the manufacturer:	Termignoni S.p.A. Via della Rampina, 1 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

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I. Test object(s)

1.1.	Description of the vehicles the unit is used for:	Notice enclosure b
1.2.	Identification number:	TERMIGNONI GS12 e11 0698 (9)
1.2.1.	Structure of the non-original exhaust system:	Non-original exhaust system, consisting out of one silencer on the left, elliptic 133x104 mm, total length 732 mm (with endcaps), absorption- reflection-principle with an outlet pipe ∅ 36 mm with covering pipe ∅ 48 mm according to drawing no. GS12: SILENCER in combination with original header system. Equipped with two different caps, one for each variant according to drawing no. GS12: SILENCER and GS12: SILENCER CAP OPT 1. Carbon fiber- alternatively aluminium- alternatively titanium- alternatively stainless steel-cover.
1.2.2.	List of parts:	See Test Report
1.2.3.	Position of the marking:	On the silencer, see enclosures c1.
1.2.4.	Make vehicles tested:	BMW
1.2.5.	Material of the non-original exhaust system:	See Test Report
1.3.	Remarks:	---

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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

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III. Enclosures

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

	Number	Pages	Date
1	374-0007-10-ITA	6	12/05/2010

b.	Information Document n° GS12/97/24 rev. 00	12/05/2010
c1.	Drawing GS12: SILENCER	17/03/2010
c1.1.	Drawing GS12: SILENCER CAP OPT 1	10/04/2010
c2.	Drawing GS12: ASSEMBLY	17/03/2010
c2.1.	Drawing GS12: ASSEMBLY + CAP OPT 1	17/03/2010
c3.	Drawing GS12: TAPPO	17/03/2010

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D-85748 Garching

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 2009/108/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 12.05.2010

201947

VCA Approval Authority 26-May-10
374000610ITA base

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

TEST REPORT

No. 374 - 0007 - 10 - 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 2009/108/EC dated 17-Aug.-2009 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:	**GS12**
0.2.1.	Variants:	Not applicable
0.3.	Name and address of manufacturer:	Termignoni S.p.A. Via della Rampina, 1 I-15077 Predosa (AL)
0.4.	Name and address of manufacturer's authorized representative:	Not applicable

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0.5.	No. of information document: Date:	GS12/97/24 rev. 00 12/05/2010
1.0.	Class of the vehicles the unit is used for:	Motorcycle - L3e (acc. to 2002/24/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 one silencer on the left, elliptic 133x104 mm, total length 732 mm (with endcaps), absorption- reflection- principle with an outlet pipe ∅ 36 mm with covering pipe ∅ 48 mm according to drawing no. GS12: SILENCER in combination with original header system.
Equipped with two different caps, one for each variant according to drawing no. GS12: SILENCER and GS12: SILENCER CAP OPT 1.

2.2.	Place of marking:	On the silencer, see drawing GS12: 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 left side of the vehicle

3. Test report

The tests were carried out in 1 series A at 18/03/2010.

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374000710ITA - GS1200
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3. **Test report** (continuation)

Series A: (no. 1)

3.1. **Vehicle**

	(0.1)	Make:	BMW
3.1.1.	(0.2.)	Type / variant / version:	R12 / 0450 / A
3.1.2.	(0.5.)	Manufacturer	BME AG.
3.1.3.		Homologation no.:	e1*2002/24*0199*
3.1.3.1		Extension:	09
3.1.4.		Vehicle identification no.:	*WB104500XAZX00684*
3.1.5.		Year of manufacture:	2009
3.1.6.	(2.1)	Weight of the vehicle:	230 kg

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

3.2.1.	(3.0.)	Manufacturer:	Notice 3.1.2
	(3.1.)	Make:	BMW
3.2.2.	(3.1.1)	Type:	12 2E J
3.2.3.		Engine capacity:	1170 cm^3
3.2.4.	(3.2.1.7)	Rated maximum engine power:	81 kW at 7750 min^{-1}

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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:	Notice vehicle homologation no. s. 3.1.3.
	(5.2.)	Tires: front rear	 110/80 ZR19 150/70 ZR17
3.4.		Assembly of the exhaust system (no. of parts, enclosure 1):	1.0., c1., c2., c3. (for variant 00) 1.0., c1.1., c2.1, c3. (for variant 01)

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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 2009/108/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 2009/108/EC) were checked and were fulfilled by the non original exhaust system / technical unit.

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374000710ITA - GS1200
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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 2009/108/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 12.05.2010

201947

VCA 26-May-10 374000710ITA - GS1200 EK Approval Authority

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

E N C L O S U R E 1 ***to test report no.*** **374-0007-10-ITA**
Type: **GS12**
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 silencer	One silencer on the left, elliptic 133x104 mm, total length 732 mm (with endcaps), absorption- reflection- principle with an outlet pipe ∅ 36 mm with covering pipe ∅ 48 mm	Drawing GS12: SILENCER
c1.1.	Rear silencer variant 01	Notice drawing	Drawing GS12: SILENCER CAP OPT 1
c2.	Drawing of composition	Notice drawing	Drawing GS12: ASSEMBLY
c2.1.	Drawing of composition variant 01	Notice drawing	Drawing GS12: ASSEMBLY + CAP OPT 1
c3.	Reduction	Notice drawing	Drawing GS12: TAPPO

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26-May-10

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D-85748 Garching

Automotive

E N C L O S U R E 2 ***to test report no.*** **374-0008-10-ITA**
Type: **GS12**
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)	BMW AG	BMW	R1200 GS	R12 (e1*2002/24* 0199*)	12 2E J	4-stroke	1170	81/7750	with cat. *)	1.0., c1., c2., c3. or 1.0., c1.1., c2.1, c3.

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

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Automotive

E N C L O S U R E 3 ***to test report no.*** **374-0008-10-ITA**
Type: **GS12**
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*	81,0/7750	78,8/7750	-	-	2 / 3	80	81,00	81,00	50	92	94	86	3875

*) test series

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

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