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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: 374-0038-09-ITA By technical service: TÜV Italia S.r.l, TÜV Süd Group dated 12 October 2009

Type-approval No: e11*97/24*97/24/9/III*0695*00

Reason for extension: Not applicable

1. Make of exhaust: Termignoni

2. Type of exhaust: GDS

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

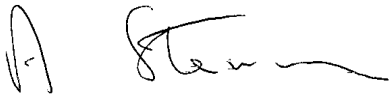
6. Date system submitted for testing: See enclosure

7. Component type-approval has been GRANTED

8. Place: BRISTOL

20-Oct-09
UK Approval Authority

9. Date: 20 OCTOBER 2009

10. Signature: 

A. W. STENNING
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APPROVAL NUMBER: e11*97/24*97/24/9/III*0695*00

INFORMATION PACKAGE CONTENTS

INDEX

REVISION NUMBER: Not applicable

Total number of sheets:	08 (Eight)
Number of separate drawings:	0 (Nil)
Number of separate photographs:	0 (Nil)

Reasons for Revision: Not applicable

Revision date
&
Office stamp

20-Oct-09
UK Approval Authority

TERMIGNONI	**INFORMATION DOCUMENT** **N° GDS/97/24 rev. 00**	**Date: 02/10/2009** **Page 1/2**

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:*	GDS
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*

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 2006/120/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 2006/120/EC)

Enclosures:

		Drawing no.	*Date*
c1.	*Drawing of rear silencers*	GDS: SILENCER	25/09/2009
c2.	*Drawing of composition*	GDS: ASSEMBLY	21/09/2009
c3.	*Drawing of reduction*	GDS: TAPPO	25/09/2009
c4.	*Drawing of inlet pipes*	GDS: FINAL BODY	25/09/2009
c5.	*List of vehicles*		
c6.	*Fitting instructions*		

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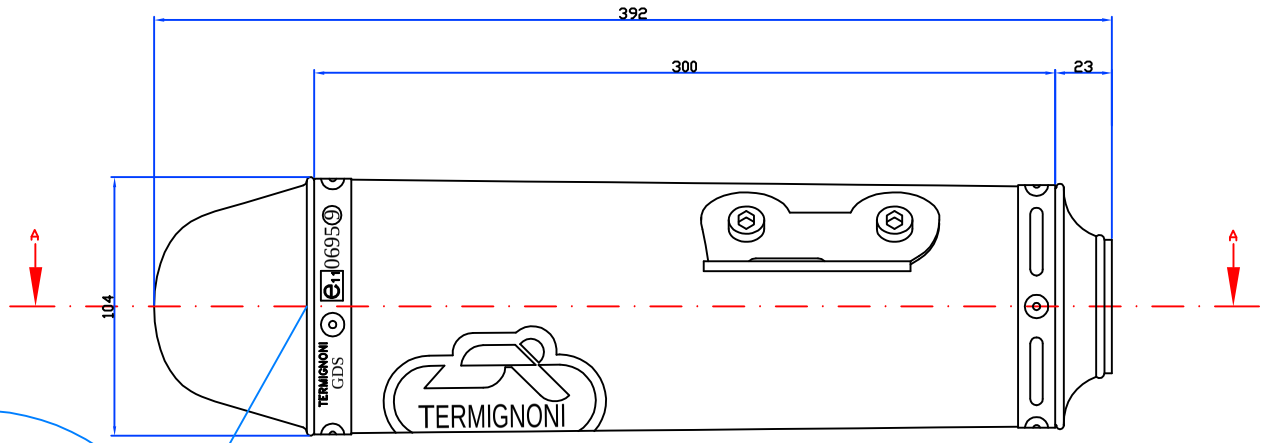
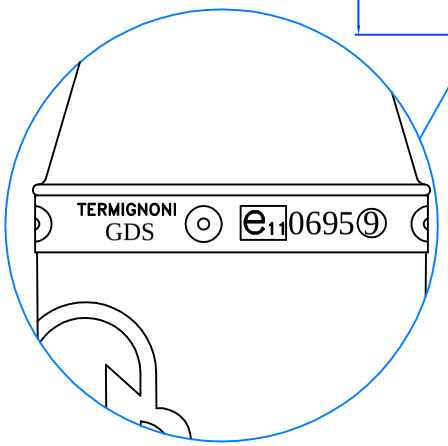
General tolerance: ±1mm

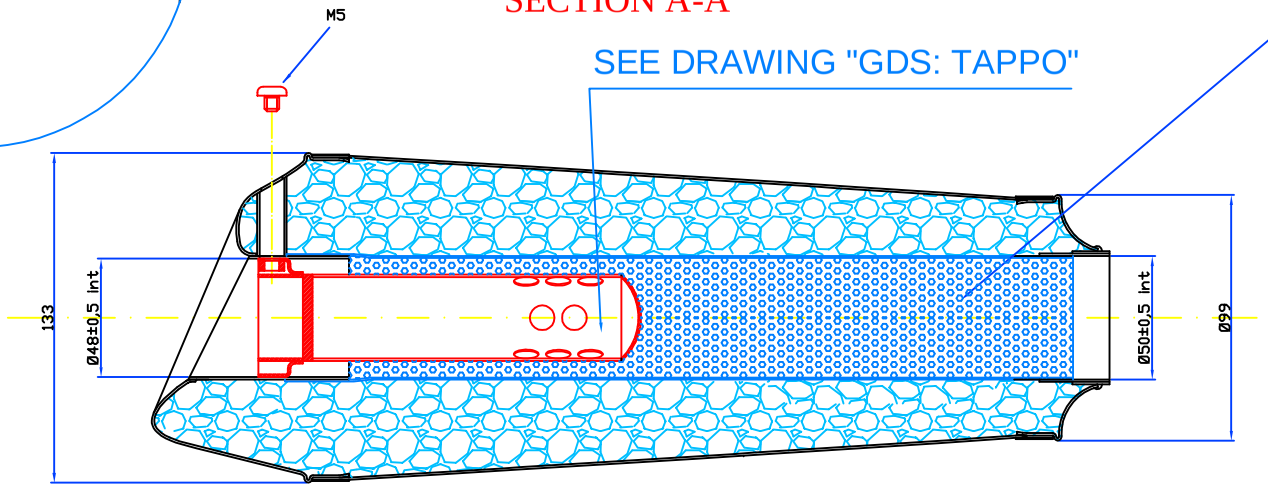


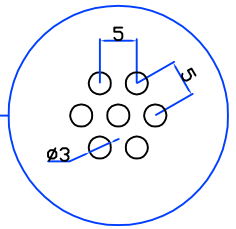


DETAIL NOT IN SCALE

SECTION A-A

SEE DRAWING "GDS: TAPPO"





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	340 g	1x

Scale:
Date: 25.09.2009
Name: D.Folci
Model: SUZUKI Gladius 650 1 Sil STR Code S065 GDS e11 0695 9
Type: GDS: SILENCER

Termignoni S.p.a.

20-Oct-09
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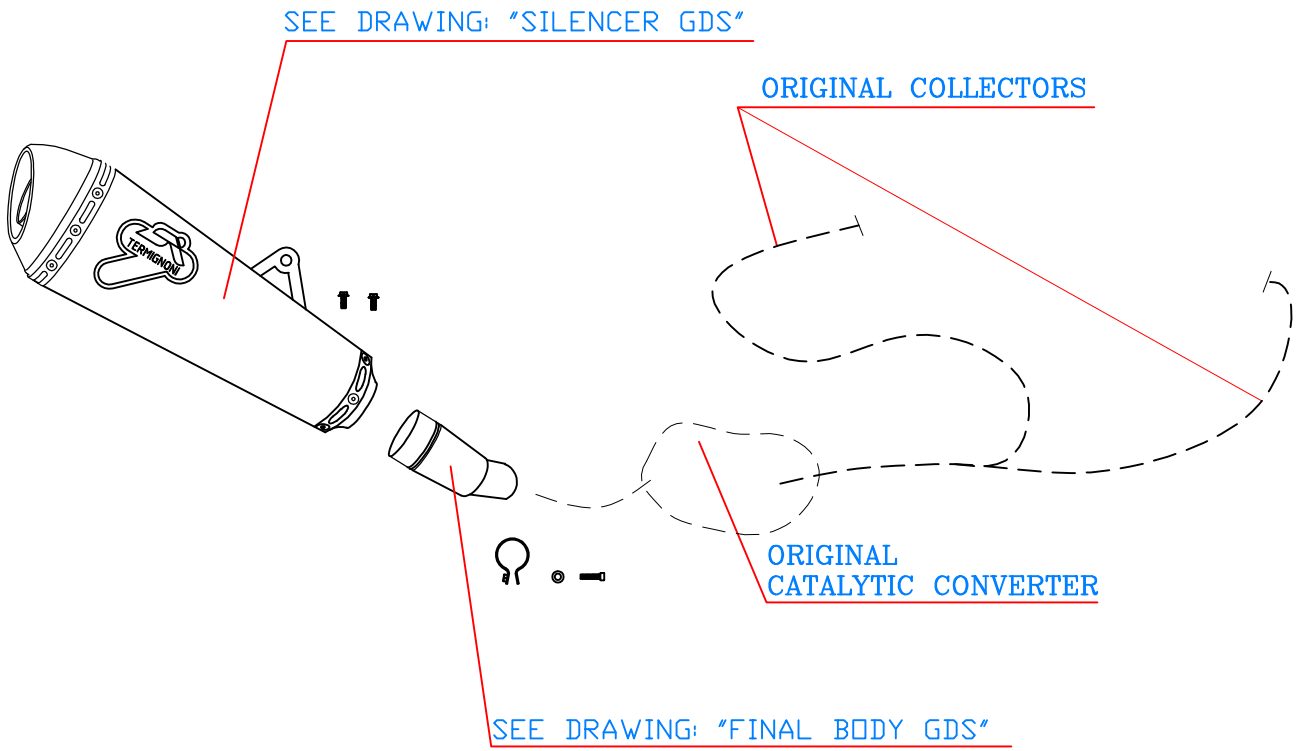


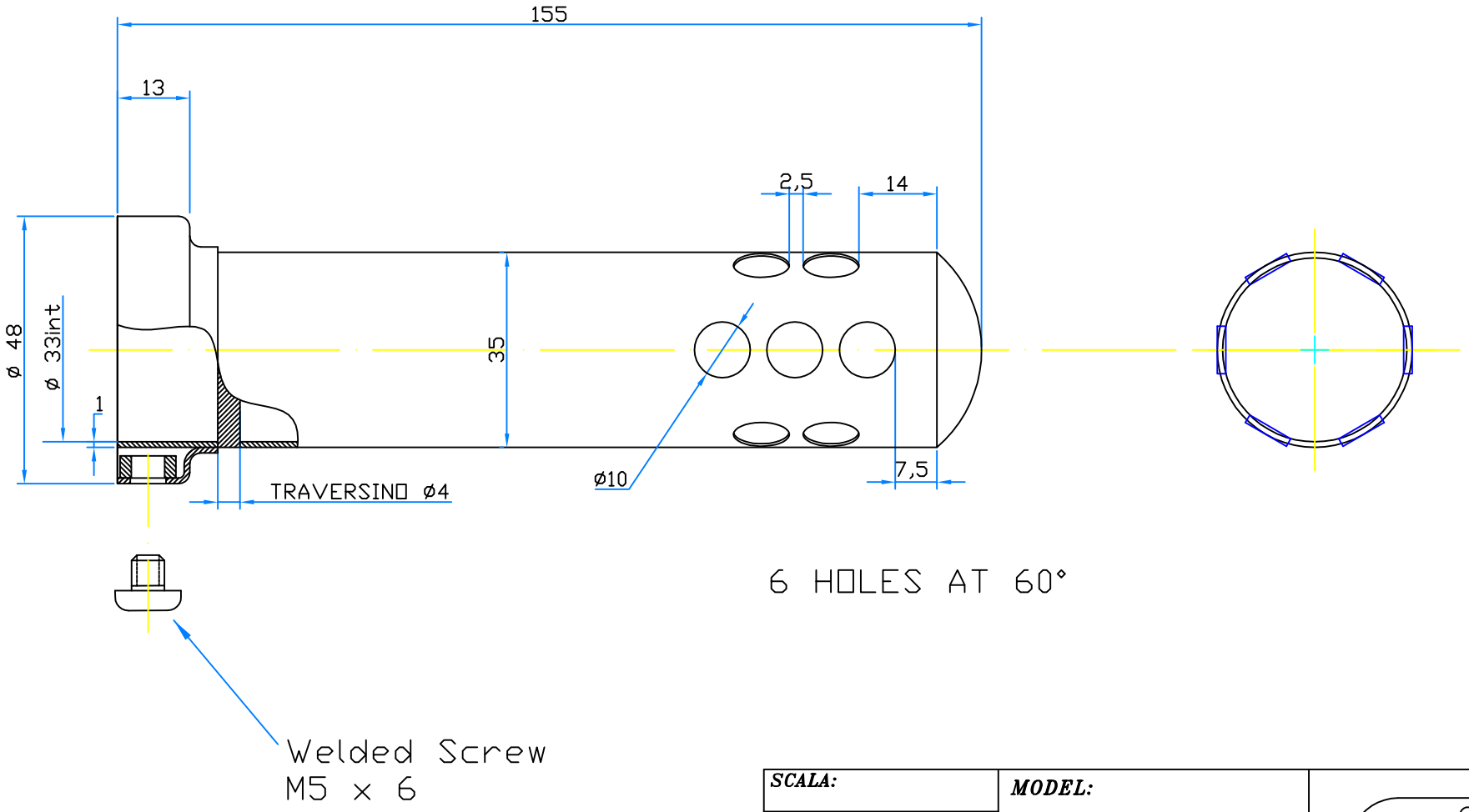
SCALE:	***MODEL:*** SUZUKI GLADIUS 650 1 sil STR code S065 GDS e11 0695 ⑨
DATE: 21.09.2009	
DES: D.Folci	
TYPE: GDS: Assembly	

Termignoni S.p.A.

info@termignoni.it

UK Approval Authority 20-Oct-09

MATERIAL: S.Steel or Titanium



SCALA:	MODEL: SUZUKI GLADIUS 650 '09 1 oval sil. COD S065 GDS e11 0695 ⑨
DATUM: 25.09.2009	
NAME: D. FOLCI	
TYP: GDS: TAPPO	

Termignoni S.p.a.

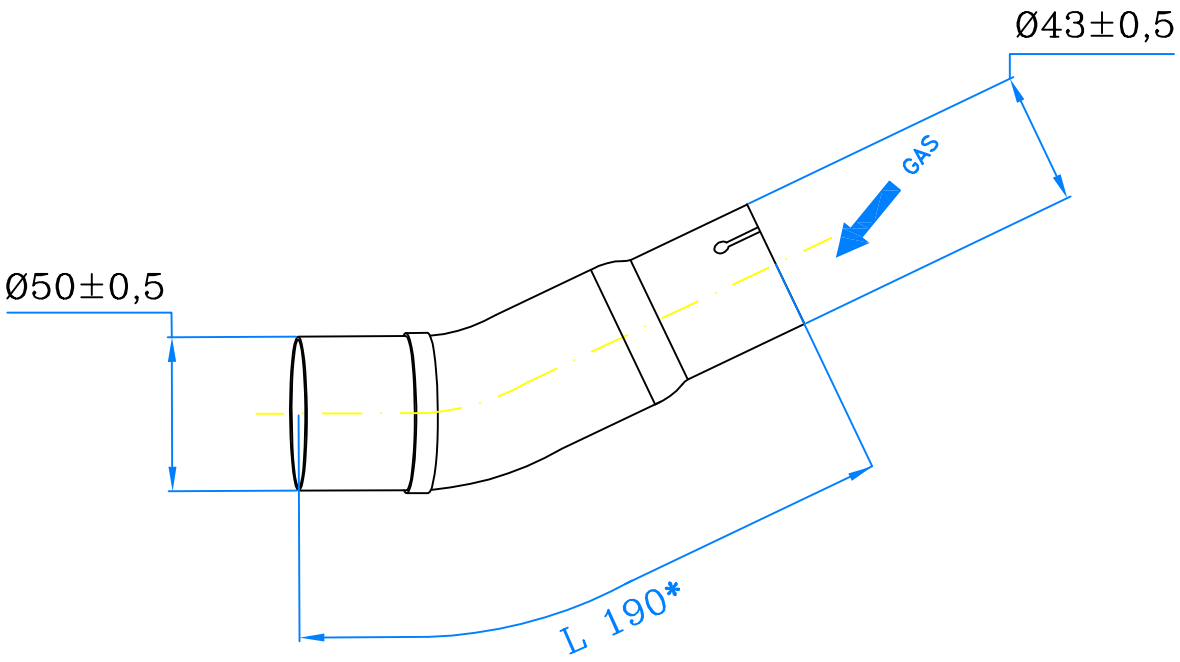
info@termignoni.it

Cod. TERMIGNONI TER261

20-Oct-09
SK Approval Authority

General tolerance: ±1mm

MATERIAL: S.Steel or Titanium



*LENGTH OF TUBE

SCALE:	MODEL: SUZUKI Gladius 650 Sil STR s065 GDS e11 0695 ⑨
DATE: 25.09.09	
NAME: D.Folci	
TYPE: GDS: FINAL BODY	

Termignoni S.p.a.

info@termignoni.it

20-Oct-09 VCA UK Approval Authority

INFORMATION DOCUMENT N° GDS/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)	Suzuki Motor Corporation	SUZUKI	GLADIUS	WVCX (e13*2002/24*2102*)	P511	4-stroke	645	53/8400	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.

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20-Oct-09

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

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TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

TECHNICAL REPORT

No. 374 - 0038 - 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

VCA
20-Oct-09
374003809ITA base
VCA Approval Authority

0. Technical description

0.1.	Make:	Termignoni
0.2.	Type:	**GDS**
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

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Daimlerstraße 11
D-85748 Garching

I. Test object(s)

1.1.	Description of the vehicles the unit is used for:	Notice enclosure b
1.2.	Identification number:	TERMIGNONI GDS e11 0695 9
1.2.1.	Structure of the non-original exhaust system:	Non-original exhaust system, consisting out of one silencer right, conical with elliptic end cap (main axle 133 mm, secondary axle 104 mm), total length 392 mm, absorption- reflection- principle with an outlet pipe ∅ 33 mm with covering pipe ∅ 48 mm according to drawing no. GDS: SILENCER in combination with non-original inlet section (according to drawing GDS: FINAL BODY) and with original header system. Carbon fiber- alternatively aluminium- alternatively stainless steel- alternatively titanium-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:	SUZUKI
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	374-0039-09-ITA	6	12/10/2009

b. Information Document n° GDS/97/24 rev. 00 02/10/2009

c1. Drawing GDS: SILENCER 25/09/2009

c2. Drawing GDS: ASSEMBLY 21/09/2009

c3. Drawing GDS: TAPPO 25/09/2009

c4. Drawing GDS: FINAL BODY 25/09/2009

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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 12.10.2009

197243

VCA Approval Authority 20-Oct-09 374003809ITA base

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

TEST REPORT

No. 374 - 0039 - 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:	**GDS**
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

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0.5.	No. of information document: Date:	GDS/97/24 rev. 00 02/10/2009
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 one silencer right, conical with elliptic end cap (main axle 133 mm, secondary axle 104 mm), total length 392 mm, absorption- reflection-principle with an outlet pipe ∅ 33 mm with covering pipe ∅ 48 mm according to drawing no. GDS: SILENCER in combination with non-original inlet section (according to drawing GDS: FINAL BODY) and with original header system.

2.2.	Place of marking:	On the silencer, see drawing GDS: 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 right side of the vehicle

3. Test report

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

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3. **Test report** (continuation)

Series A: (no. 1)

3.1. Vehicle

	(0.1)	Make:	SUZUKI
3.1.1.	(0.2.)	Type / variant / version:	WVCX / 1 / 1
3.1.2.	(0.5.)	Manufacturer	Suzuki Motor Corporation
3.1.3.		Homologation no.:	e13*2002/24*2102*
3.1.3.1		Extension:	--
3.1.4.		Vehicle identification no.:	*JS1CX111100101688*
3.1.5.		Year of manufacture:	2009
3.1.6.	(2.1)	Weight of the vehicle:	190 kg

3.2. (3.) Engine

3.2.1.	(3.0.)	Manufacturer:	Notice 3.1.2
	(3.1.)	Make:	SUZUKI
3.2.2.	(3.1.1)	Type:	P511
3.2.3.		Engine capacity:	645 cm^3
3.2.4.	(3.2.1.7)	Rated maximum engine power:	53 kW at 8400 min^{-1}

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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	120/70 ZR17
		rear	160/60 ZR17
3.4.		Assembly of the exhaust system (no. of parts, enclosure 1):	1., c1., c2., c3., c4.

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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 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.

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20-Oct-09
374003909ITA - Gladius
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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 12.10.2009

197243

VCA 20-Oct-09 374003909ITA - Gladius UK Approval Authority

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D-85748 Garching

Automotive

E N C L O S U R E 1 ***to test report no.*** **374-0039-09-ITA**
Type: **GDS**
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 right, conical with elliptic end cap (main axle 133 mm, secondary axle 104 mm), total length 392 mm, absorption-reflection- principle with an outlet pipe ∅ 33 mm with covering pipe ∅ 48 mm.	Drawing GDS: SILENCER
c2.	Drawing of composition	Notice drawing	Drawing GDS: ASSEMBLY
c3.	Reduction	Notice drawing	Drawing GDS: TAPPO
c5.	Inlet pipes	Notice drawing	Drawing GDS: FINAL BODY

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20-Oct-09

TÜV SÜD Automotive GmbH
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D-85748 Garching

Automotive

E N C L O S U R E 2 ***to test report no.*** **374-0039-09-ITA**
Type: **GDS**
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)	Suzuki Motor Corporation	SUZUKI	GLADIUS	WVCX (e13*2002/24*2102*)	P511	4-stroke	645	53/8400	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 20-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.*** **374-0039-09-ITA**
Type: **GDS**
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*	53/8400	52,8/8400	-	-	2 / 3	80	79,75	79,00	50	90	92	91	4200

*) test series

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