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*0826*00

Report No: 12-00048-CM-MIL-00 by technical service: TÜV SÜD Automotive dated: 10 July 2012

Reason(s) for extension: Not applicable

1. Make of exhaust: Termignoni

2. Type of exhaust: K072

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]

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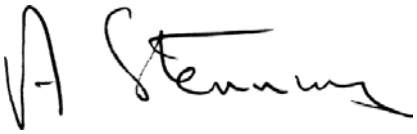
EAN261016

8. Place: BRISTOL

9. Date: 21 NOVEMBER 2012

10. Signature: 

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

(1) Delete as appropriate

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APPROVAL NUMBER: e11*97/24/9/III*2009/108*0826*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)

Reason for Revision: Not applicable

Revision date
&
Office stamp

EAN261016

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TERMIGNONI	**INFORMATION DOCUMENT** **N° K072/97/24 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:*	K072
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 TÜV SÜD

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	K072: SILENCER	02/07/2012
Drawing of collectors	K072: COLLECTORS	02/07/2012
Drawing of composition	K072: ASSEMBLY	02/07/2012
Drawing of reduction	K072: TAPPO	02/07/2012
Drawing of catalyst	K072: CATALYTIC CONVERTER	02/07/2012
List of vehicles		
Fitting instructions		

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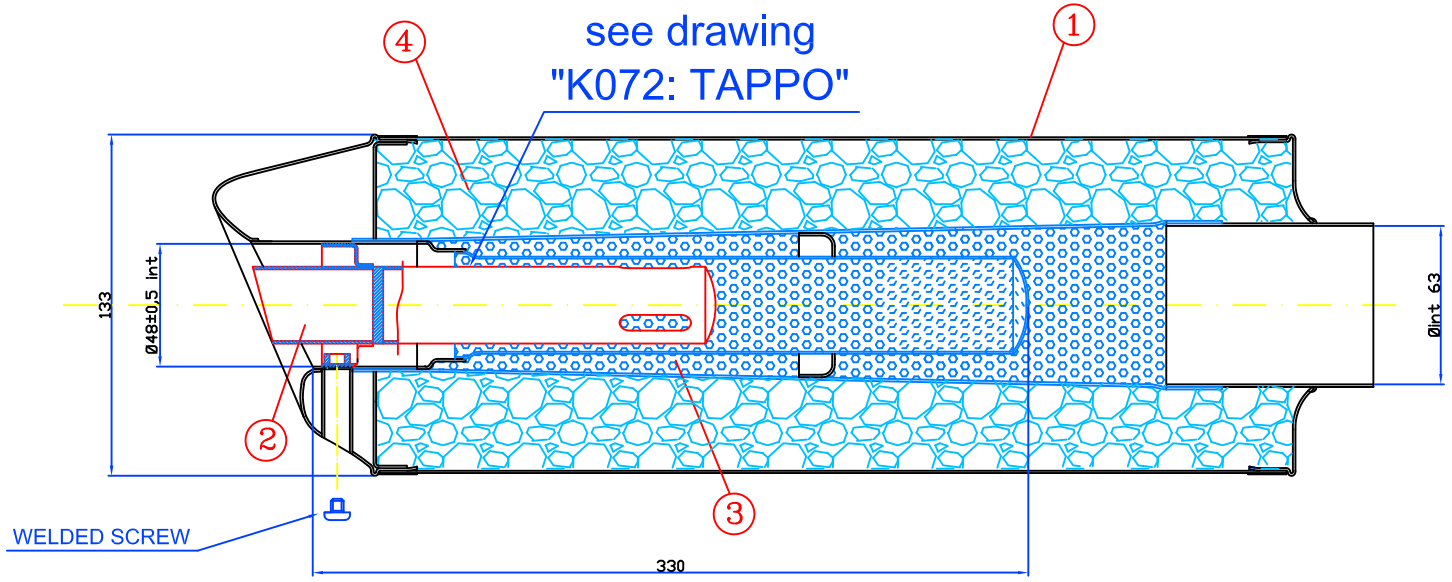
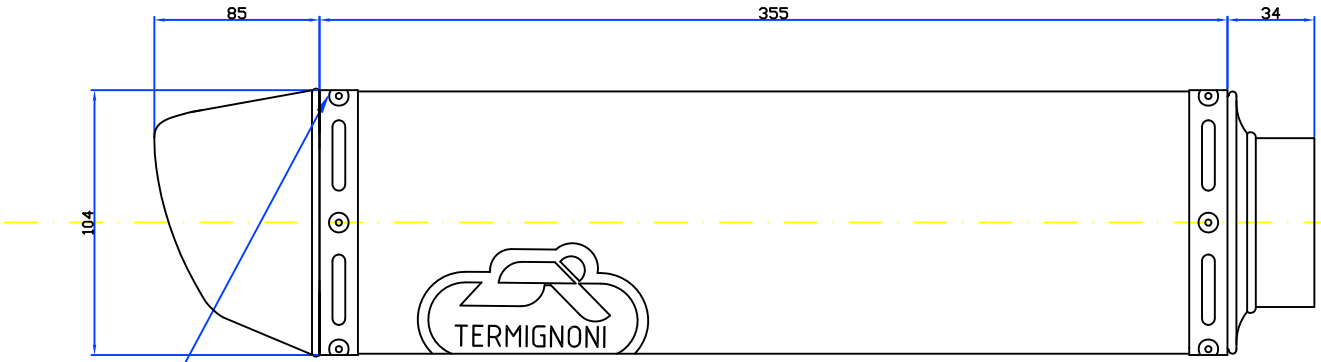
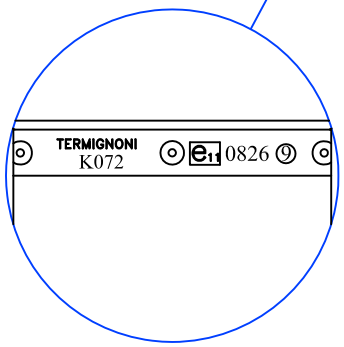
General tolerance: ±1mm







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	Sp0.8mm	1x
	or	Titanium		1x
4	Sound Deadener	Fiberglass	400 g	1x

Scale:	
Date: 02/07/2012	Model: KAWASAKI ER-6N 2x1 catal code. K072 K072 e11 0826 5 9
Name: C. Zappia	
Type: K072: SILENCER	

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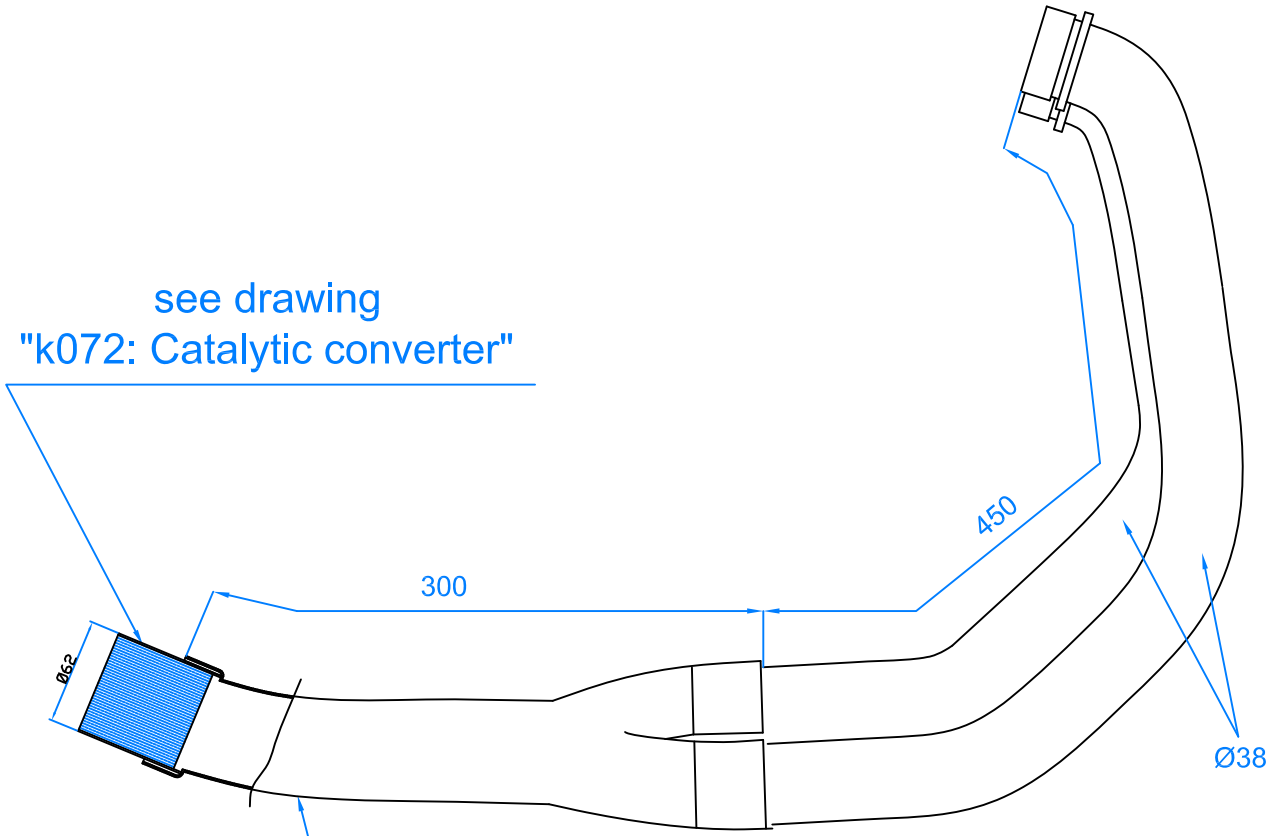

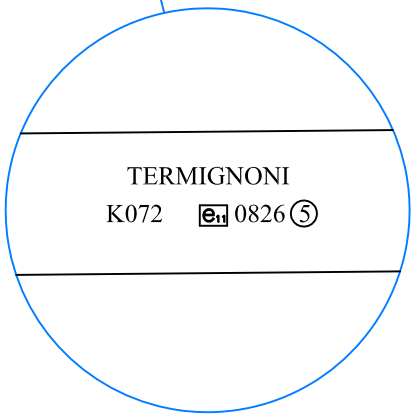

SCALE:	MODEL: WAWASAKI ER-6N 2X1 catal. cod.K072 K072 e11 0826 5 9
DATE: 02/07/12	
NAME: C. Zappia	
TYPE: K072: COLLECTORS	

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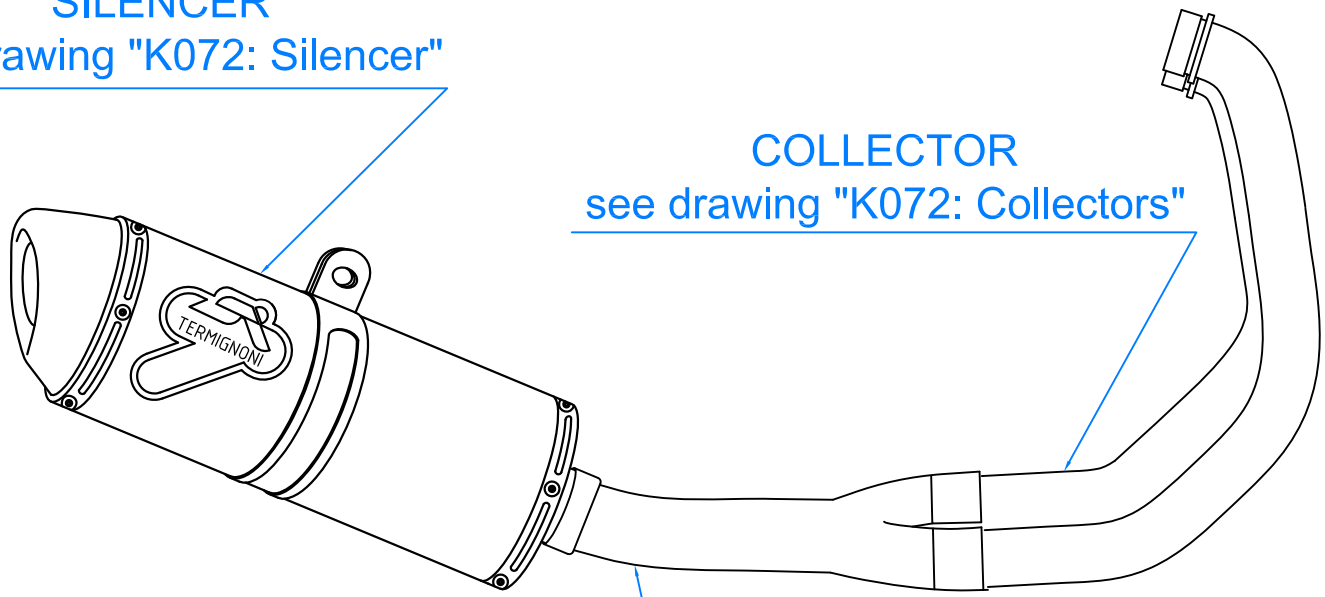
SILENCER
see drawing "K072: Silencer"

COLLECTOR
see drawing "K072: Collectors"



CATALYTIC CONVERTER
see drawing "K072: Catalytic converter"

SCALE:	***MODEL:*** KAWASAKI ER-6N 2x1 catal. code K072 K072 e11 0826 ⑤⑨
DATE: 02/07/12	
DES: C. Zappia	
TYPE: K072: Assembly	

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info@termignoni.it

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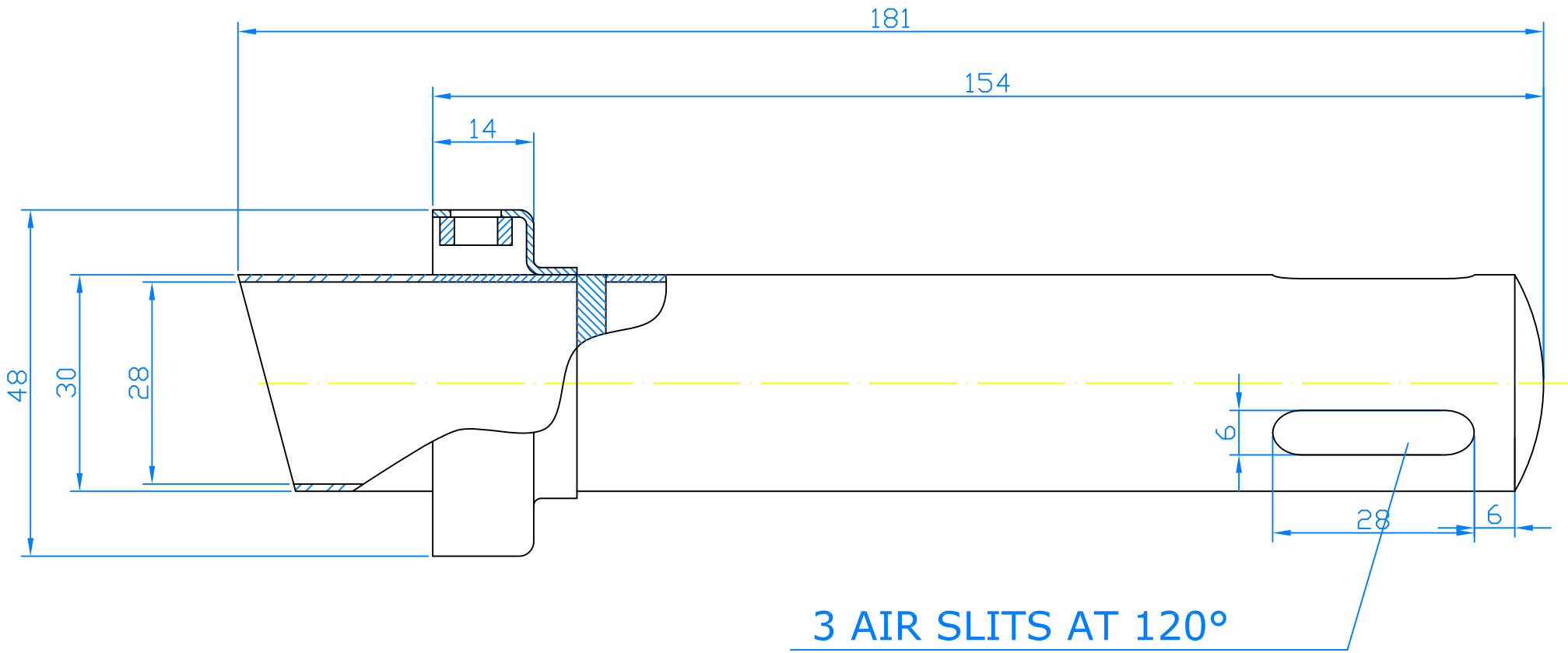
General tolerance: ±1mm

MATERIAL: S.Steel or Titanium



SCALA:	MODEL: KAWASAKI ER-6N 2x1 catal. code K072 K072 e11 0826 ⑤ ⑨
DATUM: 02/07/2012	
NAME: C.Zappia	
TYP: K072: TAPPO	

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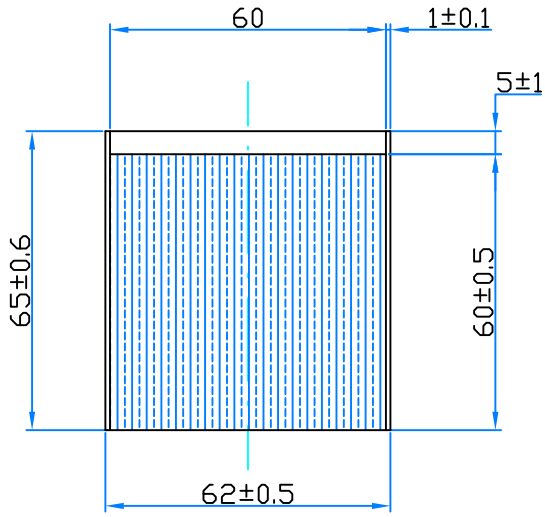
Cod. TERMIGNONI TER332



CHARACTERISTICS

DIMENSIONS : Øi 60x60 mm.

CPSI : 400

FORMULATION : Pt/Pd/Rh

RATIO : 1/13/1

LOADING : 140 gr/ft 3

SCALE:	***MODEL:*** KAWASAKI ER-6N 2x1 catal. code K072 K072 e11 0826 ⑤ ⑨
DATE: 02/07/2012	
DES: C. Zappia	
TYPE: K072: Catalytic converter	

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INFORMATION DOCUMENT N° K072/97/24 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)	KAWASAKI HEAVY INDUSTRIES, LTD.	KAWASAKI	ER-6N ER-6N with ABS	ER650E (e1*2002/24*0533)	ER650AE	4	649	53,0/8500	with cat	1) 2) 3) 4)

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Termignoni s.p.a.
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
D-80686 München

TEST REPORT
No. 12-00048-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:	K072
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:	K072/97/24 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 133x104 mm, total length 1224 mm (with endcap), absorption-reflection principle with an outlet pipe ∅ 28 according to drawing no. K072: Tappo. Exhaust system includes non original header system, according to drawing no.K072: Collectors. Equipped with catalytic converter inside of the system according to drawings no. K072: Collectors and K072: Catalytic converter. Aluminium-alternatively stainless steel alternatively titanium alternatively carbon fiber-cover.
2.2	Place of marking:	On the silencer, see drawing K072: silencer On the collectors, see drawing K072: 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:	KAWASAKI
3.1.1.	Type / Variant / Version:	ER650E/E/--
3.1.1.1	Model:	ER-6N
3.1.2.	Manufacturer	KAWASAKI HEAVY INDUSTRIES, LTD.
3.1.3.	Homologation no.:	e1*2002/24*0533*
3.1.4.	Vehicle identification no.:	*JKAER650EEDA09256*
3.1.5.	Year of manufacture:	2012
3.1.6.	Kilometers:	2764

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3.1.7.	Total weight:	204 kg
3.2.	**Engine**	
3.2.1.	Manufacturer:	KAWASAKI HEAVY INDUSTRIES, LTD.
	Trade name:	--
3.2.2.	Type:	ER650AE
3.2.3.	Engine capacity:	649 cm^3
3.2.4.	Rated maximum engine power:	53 kW at 8500 min^{-1}
3.3.	**Transmission**	
3.3.1.	Kind of transmission:	Mechanical
3.3.4	Gearbox:	6 gears
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 ZR17 M/C 160/60 ZR17 M/C
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
D-80686 München

E N C L O S U R E 1

To test report no. **12-00048-CM-MIL-00**
Type: **K072**
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	K072: Collectors
2)	Catalytic converter	Notice drawing	K072: Catalytic converter
3)	Reduction	Notice drawing	K072: Tappo
4)	Silencer (outlet pipes ∅ 28)	One silencer on the right, maximum shape 133x104 mm, total length 1224 mm (with endcap), absorption-reflection principle with an outlet pipe ∅ 28 mm	K072: Silencer

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E N C L O S U R E 2

To test report no. **12-00048-CM-MIL-00**
Type: **K072**
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)	KAWASAKI HEAVY INDUSTRIES, LTD.	KAWASAKI	ER-6N ER-6N with ABS	ER650E (e1*2002/24*0533)	ER650AE	4	649	53,0/8500	with cat	1) 2) 3) 4)

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E N C L O S U R E 3

To test report no. **12-00048-CM-MIL-00**
Type: **K072**
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*	53,0/8500	53,8/8500	-	-	2/3	80	79	79	50	92	92	92	4250

*) *Test series*

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

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TÜV SÜD Automotive GmbH
Westendstraße 199
D-80686 München

E N C L O S U R E 4 | ***To test report no.*** **12-00048-CM-MIL-00**
Type: **K072**
Manufacturer: **Termignoni S.p.A.**

Test results according pollution

Type I

Equivalent flywheel mass	280 kg

	CO [g/km]	HC [g/km]	NO_X [g/km]
Test 1	1,073	0,089	0,054
Test 2	-	-	-
Test 3	-	-	-
Average	1,073	0,089	0,054
Limits C, 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	365
Exceeded idle speed	0,47	2300	365

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