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THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

COMMUNICATION CONCERNING THE APPROVAL GRANTED [(1)]/ ~~APPROVAL EXTENDED [(1)]/ APPROVAL REFUSED [(1)]/ APPROVAL WITHDRAWN~~ [(1)] TO A COMPONENT TYPE-APPROVAL CERTIFICATE IN RESPECT OF A NON-ORIGINAL EXHAUST SYSTEM FOR A TYPE OF MOTORCYCLE PURSUANT TO COUNCIL DIRECTIVE 97/24/EC –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: 374-0017-11-ITA by technical service TÜV Italia Srl, TÜV SÜD Group dated 20 April 2011

Approval No: e11*97/24/9/III*2009/108*0782*00

Extension No: Not applicable

1. Make of exhaust: Termignoni

2. Type of exhaust: M11E

3. Name and address of manufacturer:

   Termignoni S.p.A.
   Via della Rampina, 1
   I-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 Component type-approval GRANTED/~~EXTENDED/REFUSED/WITHDRAWN~~:[(1)]

8. Place: BRISTOL

04-May-11
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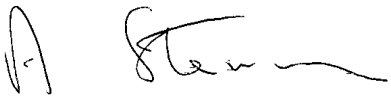
9. Date: 04 MAY 2011

10. Signature: 

A.W.STENNING
Head of Technical and Quality Support

(1) Delete as appropriate



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APPROVAL NUMBER: e11*97/24/9/III*2009/108*0782*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° M11E/97/24 rev. 00** | **Date: 20/04/2011 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:* | M11E |
| **3.** | *Name and address of manufacturer:* | Termignoni S.p.A.<br>via della Rampina, 1<br>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* |

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*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 silencers* | M11E: SILENCER | 01/04/2011 |
| *c2.* | *Drawing of inlet section* | M11E: FINAL BODY | 01/04/2011 |
| *c3.* | *Drawing of composition* | M11E: ASSEMBLY | 01/04/2011 |
| *c4.* | *Drawing of reduction* | M11E: TAPPO | 31/03/2011 |
| *c5.* | *Drawing of catalyst* | M11E: CATALYTIC CONVERTER | 31/03/2011 |
| *c6.* | *List of vehicles* | | |
| *c7.* | *Fitting instructions* | | |

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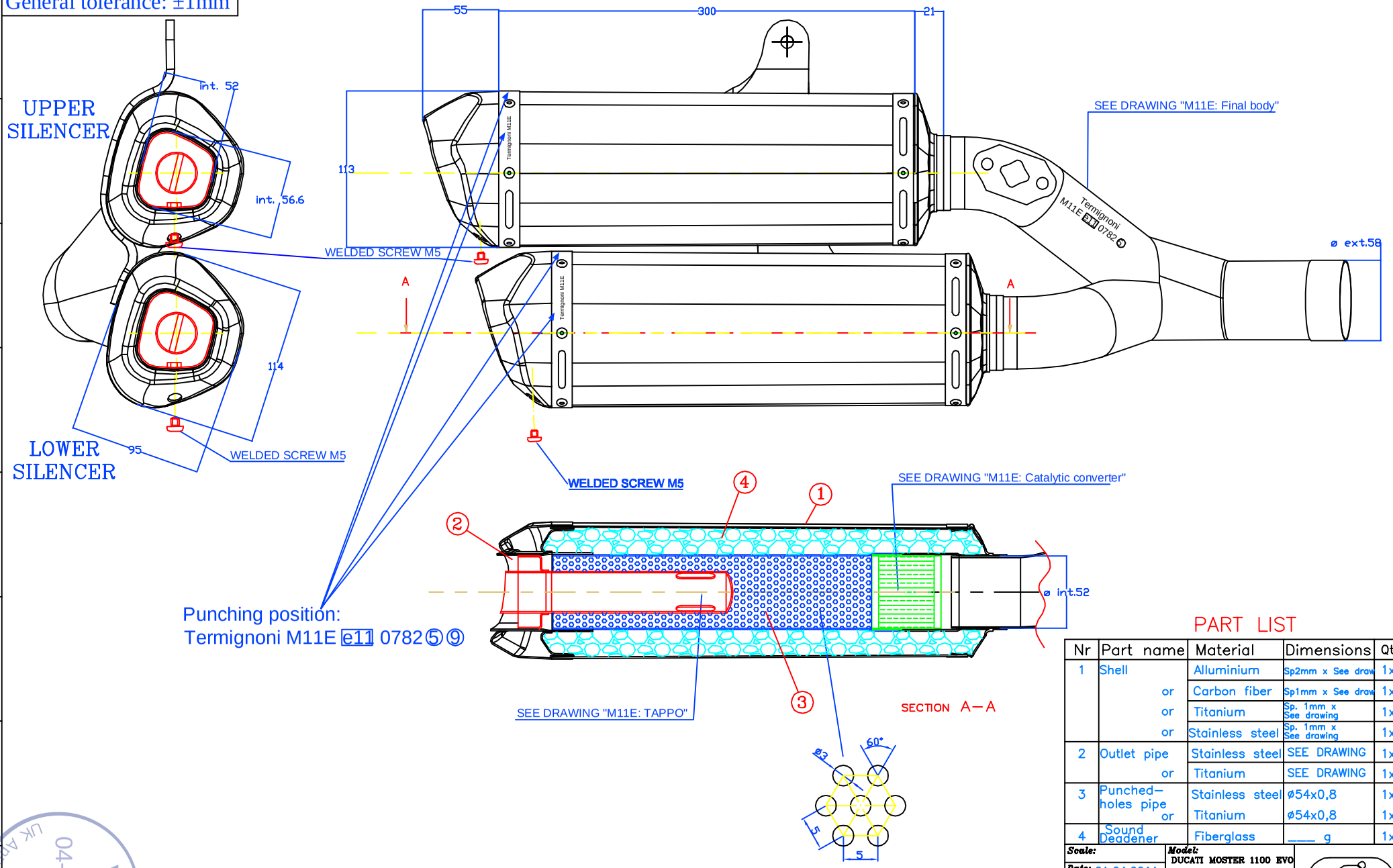
General tolerance: ±1mm




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 | Sp. 1mm x See drawing | 1x |
| | or | Stainless steel | Sp. 1mm x See drawing | 1x |
| 2 | Outlet pipe | Stainless steel | SEE DRAWING | 1x |
| | or | Titanium | SEE DRAWING | 1x |
| 3 | Punched–holes pipe | Stainless steel | ø54x0,8 | 1x |
| | or | Titanium | ø54x0,8 | 1x |
| 4 | Sound Deadener | Fiberglass | ____ g | 1x |

Scale:
Date: 01.04.2011
Name: D. Folci
Model: DUCATI MOSTER 1100 EVO 2 sil STR code D126 M11E e11 0782 ⑤⑨
Type: M11E: SILENCERS

Termignoni S.p.A.

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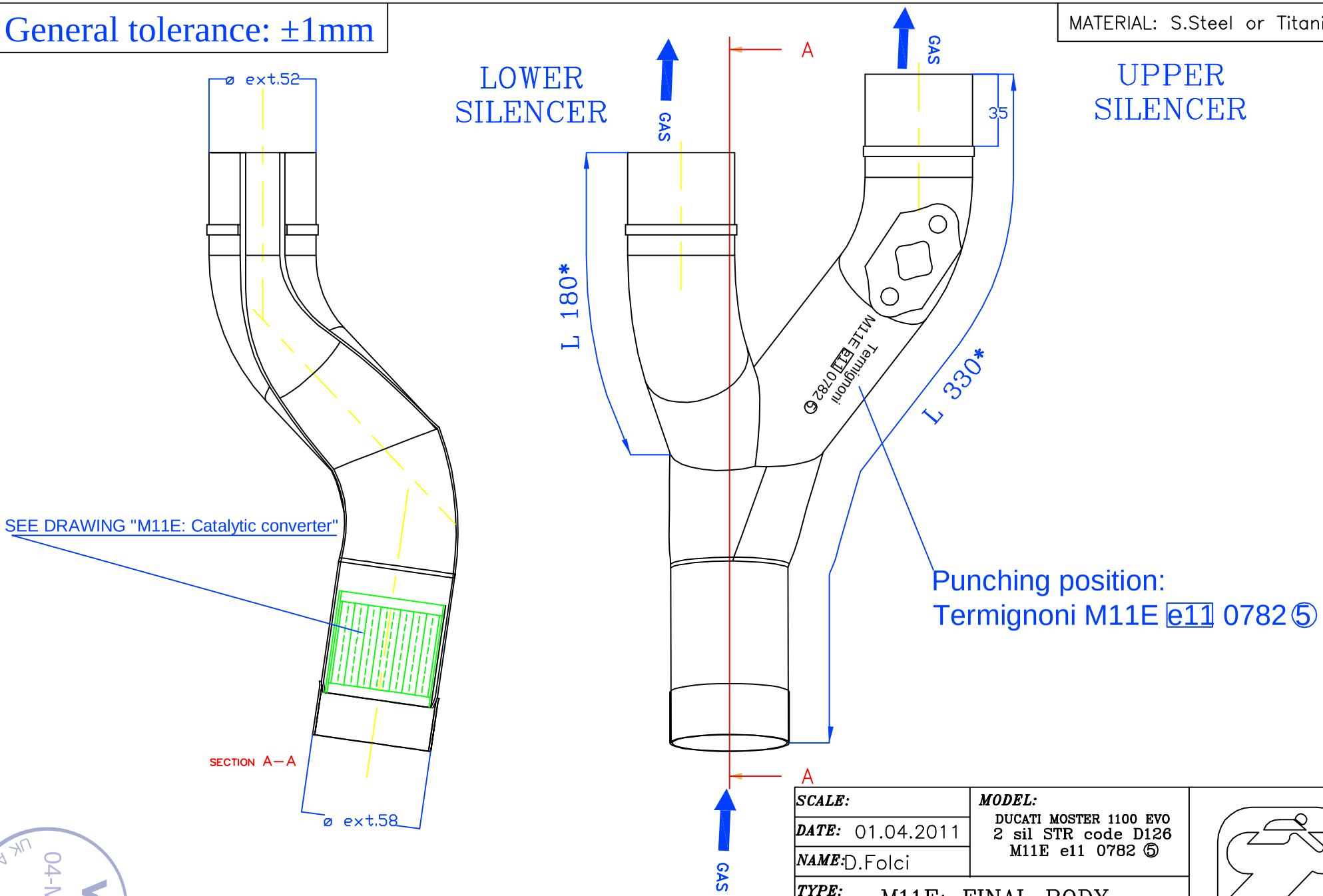
04-May-11

General tolerance: ±1mm

MATERIAL: S.Steel or Titanium




*LENGTH OF TUBE

| | |
|---|---|
| SCALE: | MODEL: DUCATI MOSTER 1100 EVO 2 sil STR code D126 M11E e11 0782 ⑤ |
| DATE: 01.04.2011 | |
| NAME: D.Folci | |
| TYPE: M11E: FINAL BODY | |

Termignoni s.p.a.

info@termignoni.it

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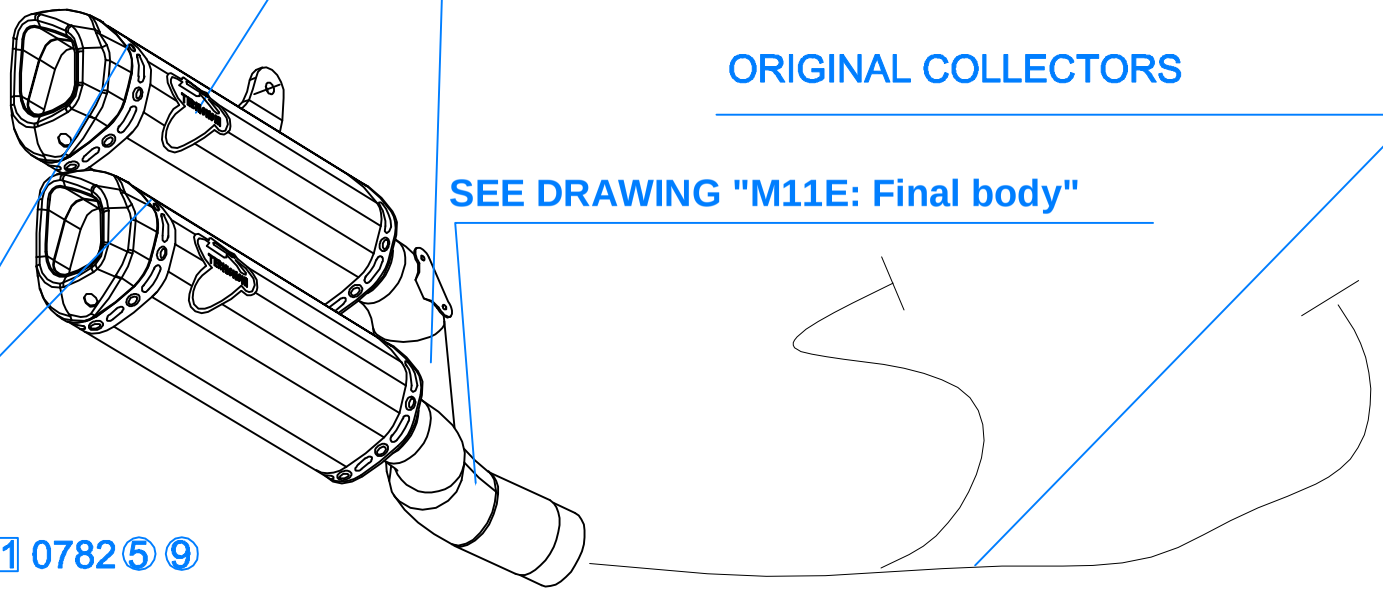
SILENCERS
see drawing "M11E: Silencers"

Punching position:
Termignoni M11E e11 0782 ⑤

ORIGINAL COLLECTORS

SEE DRAWING "M11E: Final body"



Punching position:
Termignoni M11E e11 0782 ⑤ ⑨

| | |
|---|---|
| SCALE: | MODEL: DUCATI MONSTER 1100 EVO 2 SIL STR code D126 M11E e11 0782 ⑤⑨ |
| DATE: 01/04/2011 | |
| DES: D.Folci | |
| TYPE: M11E: Assembly | |

Termignoni S.p.A.

info@termignoni.it

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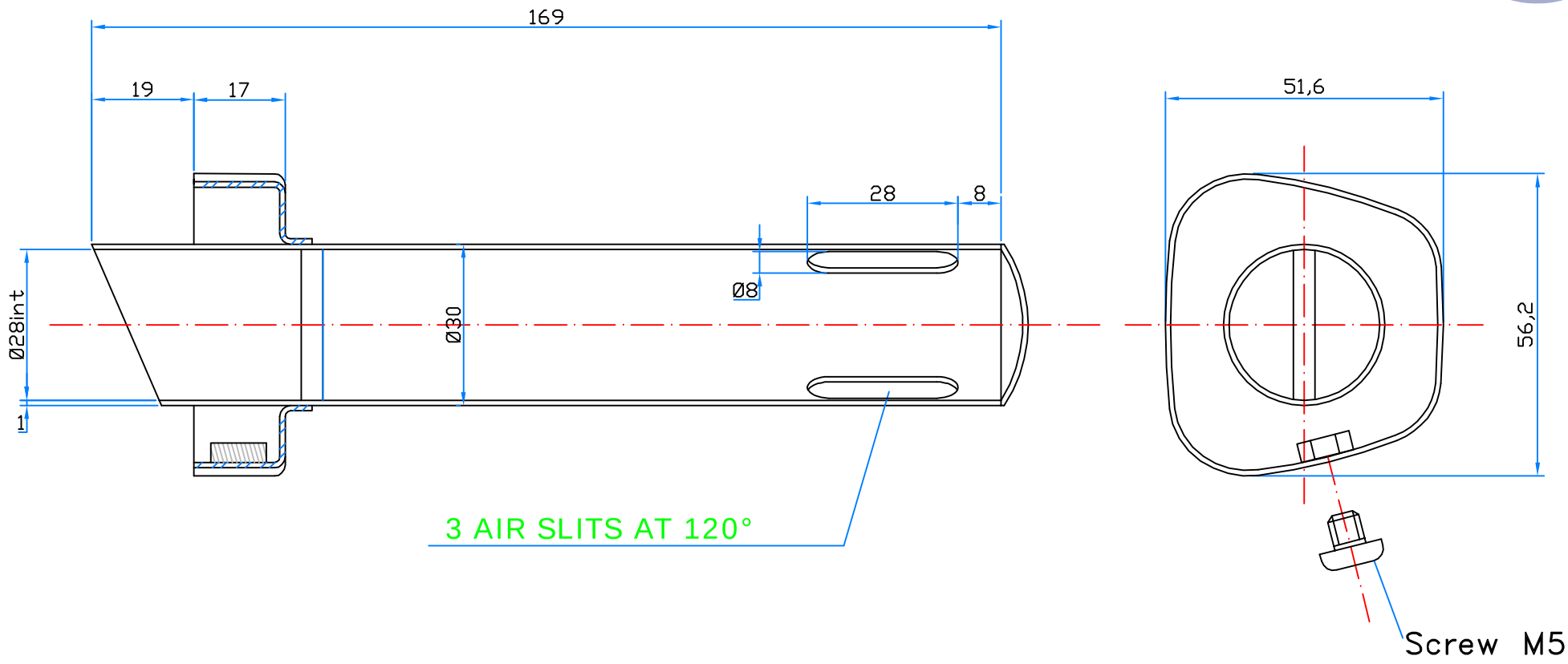
General tolerance: ±1mm

MATERIAL: S.Steel or Titanium

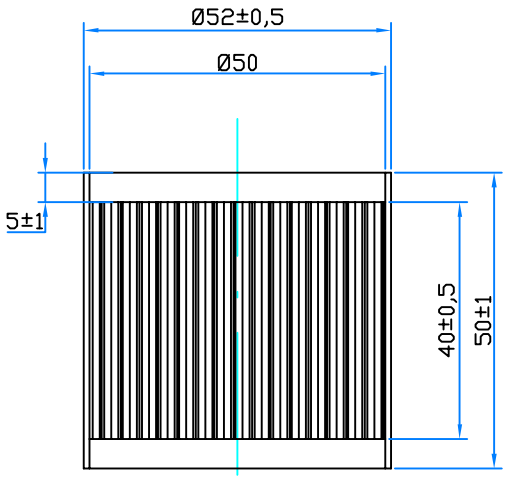



| | |
|---|---|
| SCALA: | MODEL: DUCATI Monster 1100 Evo 2011 2 SIL STR D126 M11E e11 0782 ⑤⑨ |
| DATUM: 31.03.2011 | |
| NAME: P.PELIZZA | |
| TYP: M11E: TAPPO | |

Termignoni s.p.a.

info@termignoni.it

Cod. TERMIGNONI TER397




# CHARACTERISTICS

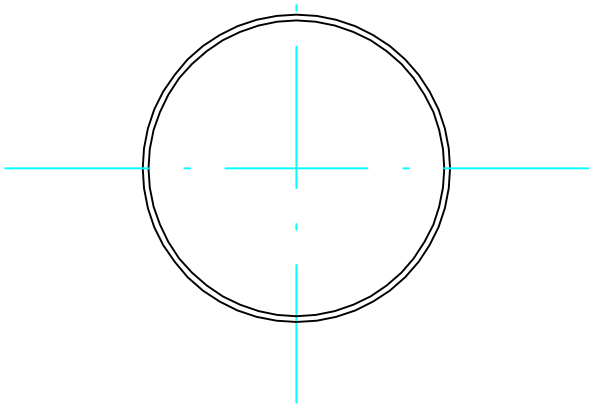
DIMENSIONS : Øi 50x40 mm.

CPSI : 100

FORMULATION : Pt/Pd/Rh

RATIO : 1/13/1

LOADING : 200 gr/ft 3



| | |
|---|---|
| ***SCALE:*** | ***MODEL:*** |
| ***DATE:*** 31.03.2011 | Ducati Monster 1100 evo 2011<br>D126 : 2 sil str<br>M11E e11 0782 ⑤ ⑨ |
| ***DES:*** P.Pelizza | |
| ***TYPE:*** M11E: Catalytic converter | |

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info@termignoni.it

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**INFORMATION DOCUMENT N° M11E/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) | Ducati Motor Holding S.p.A. | DUCATI | Monster 1100 evo ABS | M5 (e3*2002/24*0497*) | 1078AE | 4-stroke | 1079 | 70 / 7500 | with cat. | 1., c1., c2., c3., c4., c5. |

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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
D-80686 München

Automotive



# TECHNICAL REPORT

# No. 374 - 0017 - 11 - 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*



04-May-11
374001711ITA base
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## 0. Technical description

| | | |
|---|---|---|
| 0.1. | Make: | Termignoni |
| 0.2. | Type: | **M11E** |
| 0.2.1. | Variants: | Not applicable |
| 0.3. | Name and address of the manufacturer: | Termignoni S.p.A.<br>Via della Rampina, 1<br>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 |



04-May-11
374001711ITA base
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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 M11E e11 0782 5 9 |
| 1.2.1. | Structure of the non-original exhaust system: | Non-original exhaust system, consisting out of two silencers on the right, endcap shape 95x114 mm, total length 376 mm (with endcap), absorption- reflection-principle with an outlet pipe ∅ 28 mm with covering pipe shape 51,6x56,2 mm according to drawing no. M11E: SILENCER in combination with original header system.<br>Equipped with catalytic converter inside of the silencer and final body according to drawing no. M11E: CATALYTIC CONVERTER.<br>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 silencers and on the final body, see enclosures c1. and c2. |
| 1.2.4. | Make vehicles tested: | Ducati |
| 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 |

## III. Enclosures

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

| | Number | Pages | Date |
|---|---|---|---|
| 1 | 374-0018-11-ITA | 6 | 20/04/2011 |

| | | |
|---|---|---|
| b. | Information Document n° M11E/97/24 rev. 00 | 20/04/2011 |
| c1. | Drawing M11E: SILENCER | 01/04/2011 |
| c2. | Drawing M11E: FINAL BODY | 01/04/2011 |
| c3. | Drawing M11E: ASSEMBLY | 01/04/2011 |
| c4. | Drawing M11E: TAPPO | 31/03/2011 |
| c5. | Drawing M11E: CATALYTIC CONVERTER | 31/03/2011 |



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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 2009/108/EC.
There are no technical objections against granting an EC Type-approval.

This technical report consists of sheet 1 to 6.

Recognised Expert
Pietro Vergani

pv Sesto San Giovanni (MI),
the 20.04.2011

211781

TÜV SÜD Automotive GmbH
Westendstraße 199
D-80686 München

Automotive



# TEST REPORT

# No. 374 - 0018 - 11 - 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: | **M11E** |
| 0.2.1. | Variants: | Not applicable |
| 0.3. | Name and address of manufacturer: | Termignoni S.p.A.<br>Via della Rampina, 1<br>I-15077 Predosa (AL) |
| 0.4. | Name and address of manufacturer's authorized representative: | Not applicable |



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374001811ITA - Monster 1100
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| | | |
|---|---|---|
| 0.5. | No. of information document:<br>Date: | M11E/97/24 rev. 00<br>20/04/2011 |
| 1.0. | Class of the vehicles the unit is used for: | Motorcycle L3e (according 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 two silencers on the right, endcap shape 95x114 mm, total length 376 mm (with endcap), absorption- reflection- principle with an outlet pipe ∅ 28 mm with covering pipe shape 51,6x56,2 mm according to drawing no. M11E: SILENCER in combination with original header system.
Equipped with catalytic converter inside of the silencer and final body according to drawing no. M11E: CATALYTIC CONVERTER.

| | | |
|---|---|---|
| 2.2. | Place of marking: | On the silencers and on the final body, see drawings M11E: SILENCER and M11E: FINAL BODY |
| 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 of the vehicle, right side |

## 3. Test report

The tests were carried out in 1 series A at 31/03/2011 and 04/04/2011.



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374001811ITA - Monster 1100
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**3.** **Test report** (continuation)

Series A: (no. 1)

**3.1.** **Vehicle**

| | | | |
|---|---|---|---|
| | (0.1) | Make: | DUCATI |
| 3.1.1. | (0.2.) | Type / variant / version: | M5 / 11 / AA |
| 3.1.2. | (0.5.) | Manufacturer | DUCATI Motor Holding S.p.A. |
| 3.1.3.<br>3.1.3.1 | | Homologation no.:<br>Extension: | e3*2002/24*0497*<br>08 |
| 3.1.4. | | Vehicle identification no.: | *ZDMM511ABAB037453* |
| 3.1.5. | | Year of manufacture: | 2011 |
| 3.1.6. | (2.1) | Weight of the vehicle: | 186 kg |

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

| | | | |
|---|---|---|---|
| 3.2.1. | (3.0.) | Manufacturer: | Notice 3.1.2 |
| | (3.1.) | Make: | DUCATI Motor Holding S.p.A. |
| 3.2.2. | (3.1.1) | Type: | 1078AE |
| 3.2.3. | | Engine capacity: | 1079 $cm^3$ |
| 3.2.4. | (3.2.1.7) | Rated maximum engine power: | 70 kW at 7500 $min^{-1}$ |



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374001811ITA - Monster 1100
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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): | 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:<br>primary / final | <br>1:1,848 / 1:2,600 |
| | (4.6.) | Top speed: | 225 km/h |
| | (5.2.) | Tires:<br>front<br>rear | <br>120/70 ZR17 M/C<br>180/55 ZR17 M/C |
| 3.4. | | Assembly of the exhaust system (no. of parts, enclosure 1): | 1., c1., c2., c3., c4., c5. |



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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.

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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04-May-11
374001811ITA - Monster 1100
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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 20.04.2011

211781



VCA Approval Authority
04-May-11
374001811ITA - Monster 1100

TÜV SÜD Automotive GmbH
Westendstraße 199
D-80686 München

Automotive

***E N C L O S U R E 1*** ***to test report no.*** **374-0018-11-ITA**
***Type:*** **M11E**
***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 on the right, endcap shape 95x114 mm, total length 376 mm (with endcap), absorption- reflection- principle with an outlet pipe ∅ 28 mm with covering pipe shape 51,6x56,2 mm | Drawing M11E: SILENCER |
| c2. | Final body | Notice drawing | Drawing M11E: FINAL BODY |
| c3. | Drawing of composition | Notice drawing | Drawing M11E: ASSEMBLY |
| c4. | Reduction | Notice drawing | Drawing M11E: TAPPO |
| c5. | Catalytic converter | Notice drawing | Drawing M11E: CATALYTIC CONVERTER |

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04-May-11

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D-80686 München

Automotive

***E N C L O S U R E 2*** ***to test report no.*** **374-0018-11-ITA**
***Type:*** **M11E**
***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) | Ducati Motor Holding S.p.A. | DUCATI | Monster 1100 evo ABS | M5 (e3*2002/24*0497*) | 1078AE | 4-stroke | 1079 | 70 / 7500 | with cat. | 1., c1., c2., c3., c4., c5. |

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Automotive

***E N C L O S U R E 3*** ***to test report no.*** **374-0018-11-ITA**
***Type:*** **M11E**
***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* | 70,0 / 7500 | 70,4 / 7500 | - | - | 2 / 3 | 80 | 81,00 | 81,00 | 50 | 95 | 98 | 95 | 3750 |

*) test series

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

**- Emission Test**

**Test Type I**

Emission of gaseous pollutants in an urban cycle.

| | CO [g/km] | HC [g/km] | NOx [g/km] | equivalent inertia [kg] |
|---|---|---|---|---|
| Test 1 | 0,990 | 0,205 | 0,023 | 280 |
| Test 2 | | | | |
| Test 3 | | | | |
| Arithmetic mean | 0,990 | 0,205 | 0,023 | 280 |
| % of limit | 49,5 | 68,3 | 15,3 | |
| limits | 2,0 | 0,3 | 0,15 | |

**Test Type II**

Emission of Carbon monoxide and hydrocarbon at normal idling speed:

| Engine revolution [min$^{-1}$] | CO [%] | Oil temperature [K] |
|---|---|---|
| 1100 ± 100 | 0,10 | 361 |
| 2300 ± 100 | 0,27 | 361 |

Note: Emission test has been performed with all the components, as listed in Enclosure 1

UK Approval Authority
04-May-11