VCA Headquarters
1 The Eastgate Office Centre
Eastgate Road
Bristol, BS5 6XX
United Kingdom

Switchboard: +44 (0) 117 951 5151
Direct line: +44 (0) 117 952
Main Fax: +44 (0) 117 952 4103
Email: enquiries@vca.gov.uk
Web: www.vca.gov.uk

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 1/03

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: 374-0004-10-ITA by technical service TÜV Italia Srl, TÜV Süd Group dated 19 April 2010

Component type-approval No: e11*97/24*97/24/9/III*0697*00

1. Make of exhaust: Termignoni

2. Type of exhaust: D198

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: 05 MAY 2010

10. Signature:

A. W. STENNING
Head of Technical and Quality Group

05-May-10
UK Approval Authority

VCA Headquarters
1 The Eastgate Office Centre
Eastgate Road
Bristol, BS5 6XX
United Kingdom

Switchboard: +44 (0) 117 951 5151
Direct line: +44 (0) 117 952
Main Fax: +44 (0) 117 952 4103
Email: enquiries@vca.gov.uk
Web: www.vca.gov.uk
4171

APPROVAL NUMBER: e11*97/24/9/III/1*2006/27*0697*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 new approval

Revision date
&
Office stamp

Job Number: EAL219108

TERMIGNONI	**INFORMATION DOCUMENT** **N° D198/97/24 rev. 00**	**Date: 19/04/2010** **Page 1/2**

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

1.	*Make (trade name of manufacturer)*:	Termignoni
2.	*Type and general commercial description:*	D198
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

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*	D198: SILENCERS	23/10/2009
c2.	*Drawing of composition*	D198: ASSEMBLY	29/10/2009
c3.	*Drawing of reduction*	D198: TAPPO	23/10/2009
c4.	*Drawing of catalyst*	D198: CATALYTIC CONVERTER	23/10/2009
c5.	*List of vehicles*		
c6.	*Fitting instructions*		

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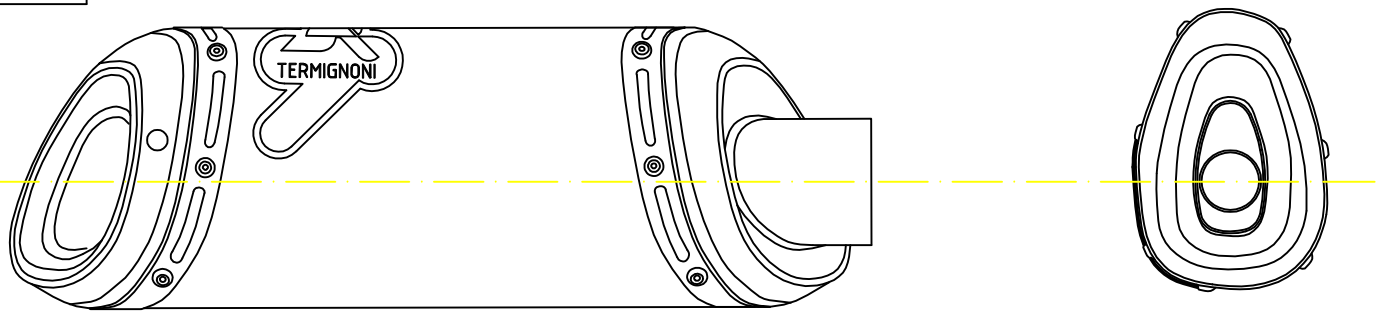
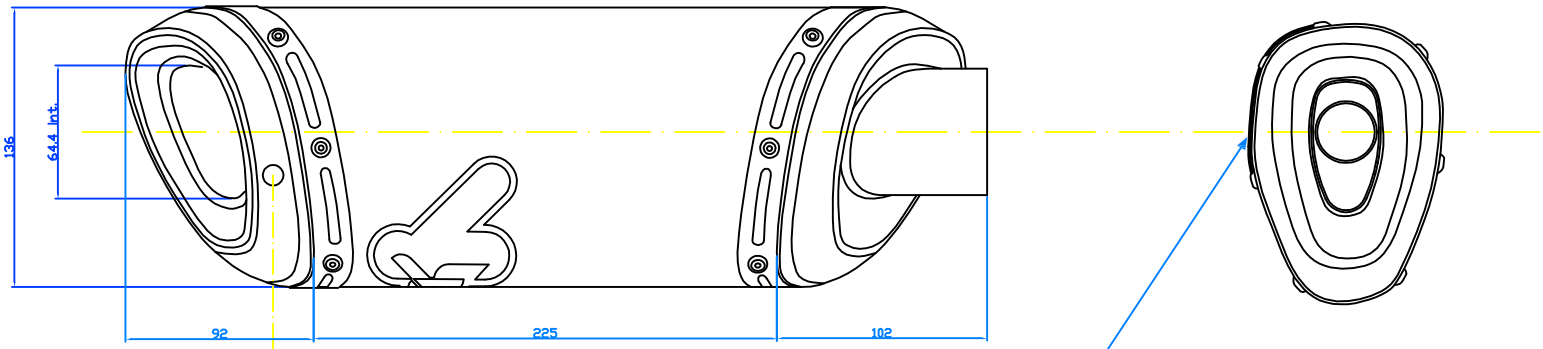
General tolerance: ±1mm

RIGHT SILENCER

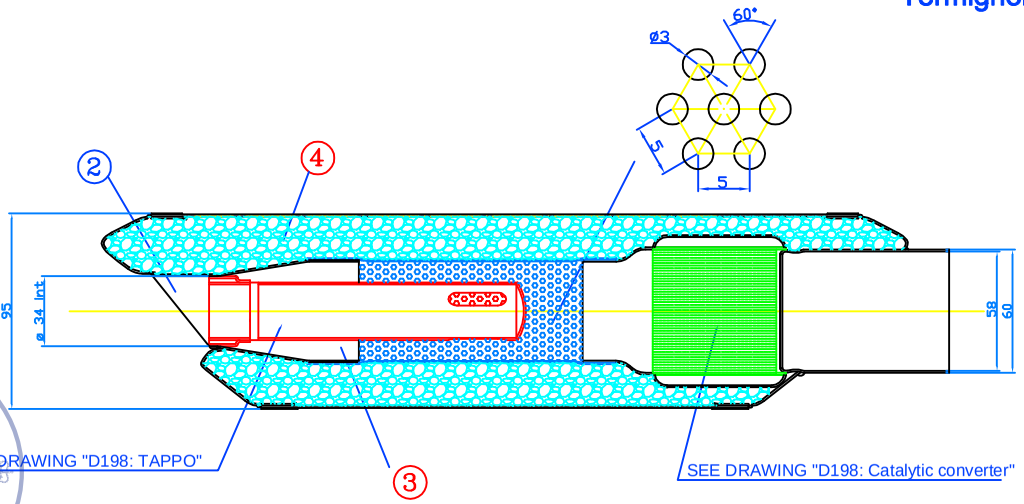


LEFT SILENCER



WELDED SCREW M5

Punching position (inside):
Termignoni D198 e11 0697 ⑤⑨



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	____ g	1x

Scale:
Date: 23.10.2009
Name: D. Folci
Model: DUCATI 1198
2 sil STR code D113
D198 e11 0697 ⑤⑨
Type: D198: SILENCERS

Termignoni S.p.A.

05-May-10
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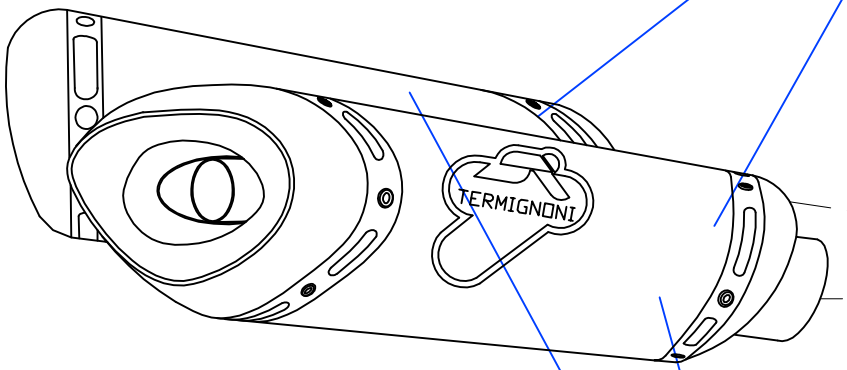
CATALYTIC CONVERTER

see drawing "D198: Catalytic converter"



ORIGINAL COLLECTORS

SILENCERS

see drawing "D198: Silencers"

SCALE:	MODEL: DUCATI 1198 2 Sil STR code D113 D198 e11 0697 ⑤⑨
DATE: 29/10/09	
DES: D.Folci	
TYPE: D198: Assembly	

Termignoni S.p.A.

info@termignoni.it

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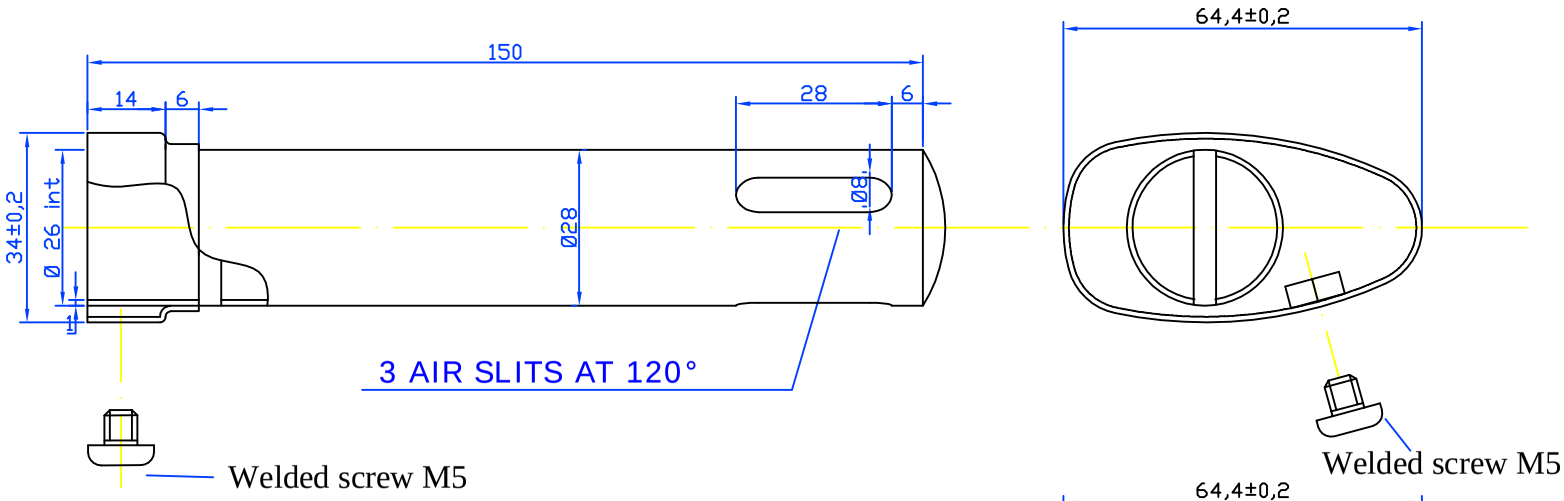
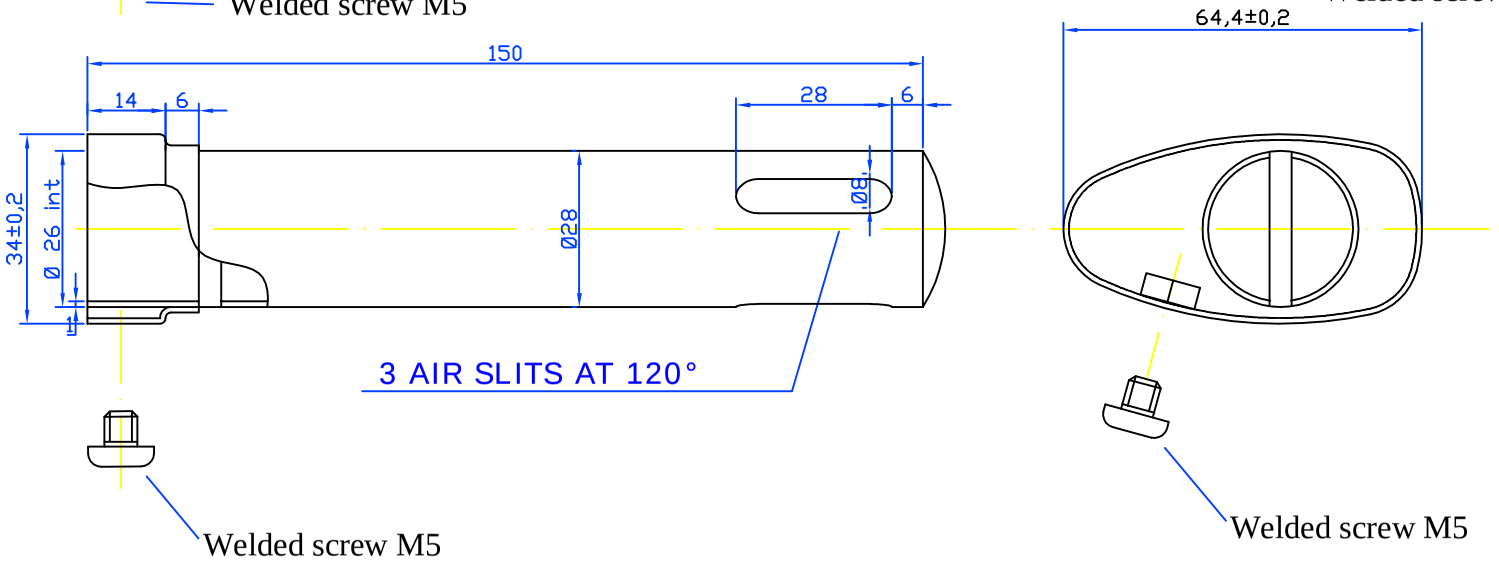
MATERIAL: S.Steel or Titanium

RIGHT SILENCER



LEFT SILENCER



SCALA:	MODEL: DUCATI 1198 2 SIL STR D113 D198 e11 0697 59
DATUM: 23.10.09	
NAME: D.FOLCI	
TYP: D198: TAPPO	

Termignoni S.p.A.

info@termignoni.it

Cod. TERMIGNONI TER271 SX

Cod. TERMIGNONI TER309 DX

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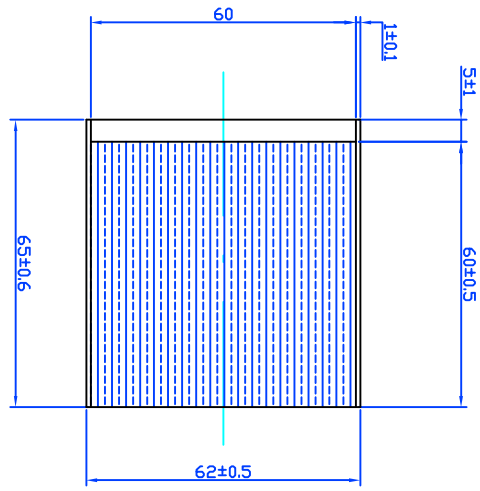


CHARACTERISTICS

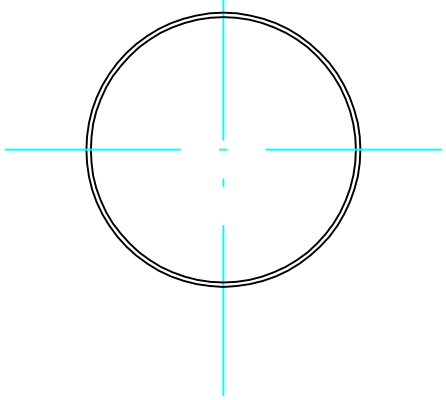
DIMENSIONS : Øi 60x60 mm.

CPSI : 400

FORMULATION : Pt/Pd/Rh

RATIO : 1/13/1

LOADING : 140 gr/ft 3



SCALE:	***MODEL:*** DUCATI 1198 2 sil STR code D113 D198 e11 0697 ⑤⑨	
DATE: 23.10.2009		
DES: D.FOLCI		
TYPE: D198: Catalytic converter		
Termignoni S.p.A.		info@termignoni.it

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INFORMATION DOCUMENT N° D198/97/24 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	1198/1198S	H7 (e3*2002/24*0436*)	1198WB	4-stroke	1198	120/9750	with cat.	1., c1., c2., c3., c4.
2)			1198/1198S depotenziato					75/8250		

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05-May-10

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
Daimlerstraße 11
D-85748 Garching

Automotive

TECHNICAL REPORT

No. 374 - 0004 - 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* ***2006/120/EC dated 27-Nov.-2006***
concerning ***Chapter 9, annex III***
Approval mark according to annex VI point 6.1.1

VCA
05-May-10
374000410ITA base
VCA Approval Authority

0. Technical description

0.1.	Make:	Termignoni
0.2.	Type:	**D198**
0.2.1.	Variants:	Not applicable
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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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 D198 e11 0697 5 9
1.2.1.	Structure of the non-original exhaust system:	Non-original exhaust system, consisting out of two silencers under the seat, endcap shape 136x95 mm, total length 419 mm (with endcaps), absorption-reflection- principle with an outlet pipe ∅ 26 mm with covering pipe shape 34,0x64,4 mm according to drawing no. D198: SILENCERS in combination with original header system. Equipped with catalytic converters inside of the silencers according to drawing no. D198: CATALYTIC CONVERTER. 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, see enclosures c1.
1.2.4.	Make vehicles tested:	Ducati
1.2.5.	Material of the non-original exhaust system:	See Test Report
1.3.	Remarks:	---

05-May-10
374000410ITA 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

III. Enclosures

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

	Number	Pages	Date
1	374-0005-10-ITA	6	19/04/2010

b. Information Document n° D198/97/24 rev. 00 19/04/2010

c1. Drawing D198: SILENCERS 23/10/2009

c2. Drawing D198: ASSEMBLY 29/10/2009

c3. Drawing D198: TAPPO 23/10/2009

c4. Drawing D198: CATALYTIC CONVERTER 23/10/2009

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05-May-10
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Daimlerstraße 11
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 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 19.04.2010

201948

VCA 05-May-10 374000410ITA base UK Approval Authority

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

TEST REPORT

No. 374 - 0005 - 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 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:	**D198**
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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UK Approval Authority
374000510ITA - 1198

0.5.	No. of information document: Date:	D198/97/24 rev. 00 19/04/2010
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, endcap shape 136x95 mm, total length 419 mm (with endcaps), absorption- reflection- principle with an outlet pipe ∅ 26 mm with covering pipe shape 34,0x64,4 mm according to drawing no. D198: SILENCERS in combination with original header system.
Equipped with catalytic converters inside of the silencers according to drawing no. D198: CATALYTIC CONVERTER.

2.2.	Place of marking:	On the silencers, see drawing D198: SILENCERS
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, under the seat

3. Test report

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

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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:	H7 / 04 / AA
3.1.2.	(0.5.)	Manufacturer	DUCATI Motor Holding S.p.A.
3.1.3. 3.1.3.1		Homologation no.: Extension:	e3*2002/24*0436* 03
3.1.4.		Vehicle identification no.:	*ZDMH704AA8B020725*
3.1.5.		Year of manufacture:	2009
3.1.6.	(2.1)	Weight of the vehicle:	196 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:	1198WB
3.2.3.		Engine capacity:	1198 cm^3
3.2.4.	(3.2.1.7)	Rated maximum engine power:	120 kW at 9750 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):	Dry 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:	288 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.

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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.

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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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.

Recognised Expert
Pietro Vergani

pv Sesto San Giovanni (MI),
the 19.04.2010

201948

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05-May-10
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374000510ITA - 1198

TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

E N C L O S U R E 1 ***to test report no.*** **374-0005-10-ITA**
Type: **D198**
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 136x95 mm, total length 419 mm (with endcaps), absorption- reflection- principle with an outlet pipe ∅ 26 mm with covering pipe shape 34,0x64,4 mm	Drawing D198: SILENCERS
c2.	Drawing of composition	Notice drawing	Drawing D198: ASSEMBLY
c3.	Reduction	Notice drawing	Drawing D198: TAPPO
c4.	Catalytic converter	Notice drawing	Drawing D198: CATALYTIC CONVERTER

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05-May-10

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Daimlerstraße 11
D-85748 Garching

Automotive

E N C L O S U R E 2 ***to test report no.*** **374-0005-10-ITA**
Type: **D198**
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	1198/1198S	H7 (e3*2002/24*0436*)	1198WB	4-stroke	1198	120/9750	with cat.	1., c1., c2., c3., c4.
2)			1198/1198S depotenziato					75/8250		

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TÜV SÜD Automotive GmbH
Daimlerstraße 11
D-85748 Garching

Automotive

E N C L O S U R E 3 ***to test report no.*** **374-0005-10-ITA**
Type: **D198**
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*	120/9750	122/9750	-	-	2 / 3	80	81,00	80,25	50	98	99	99	4875

*) 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	0,164	0,092	0,026	270
Test 2				
Test 3				
Arithmetic mean	0,164	0,092	0,026	270
% of limit	8,2	30,7	17,3	
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]
1200 ± 100	0,06	363
2300 ± 100	0,06	363

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

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05-May-10