



THE NETHERLANDS
(N E D E R L A N D)



EC TYPE-APPROVAL CERTIFICATE

Communication concerning the:

- type-approval
- extension of type-approval
- refusal of type-approval
- withdrawal of type-approval

of a type of a ~~vehicle/component~~/separate technical unit with regard to Directive 70/157/EEC and 81/334/EEC, as last amended by Directive 1999/101/EC.

Type-approval number : e4*81/334*1999/101*2335*00

Reason for extension : not applicable

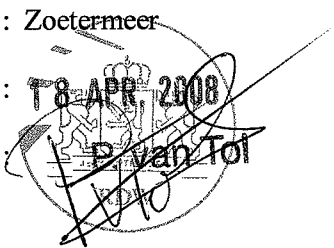
Approval mark : e4
032335

SECTION I

- 0.1. Make (trade name of manufacturer) : REMUS
- 0.2. Type and general commercial description(s) : 1415
- 0.3. Means of identification of type if marked on the ~~vehicle/component~~/separate technical unit : not applicable
 - 0.3.1. Location of that marking : not applicable
- 0.4. Category of vehicle : see annex A
- 0.5. Name and address of manufacturer : REMUS Innovation Forschungs- und Abgasanlagen-Produktionsgesellschaft m.b.H.
Dr. Niederdorfer-Straße 25
A – 8572 Bärnbach
- 0.7. In the case of components and separate technical units, location and method of affixing of the EC approval mark : see information document
- 0.8. Address(es) of assembly plant(s) : REMUS Innovation Forschungs- und Abgasanlagen-Produktionsgesellschaft m.b.H.
Dr. Niederdorfer-Straße 25
A – 8572 Bärnbach



SECTION II

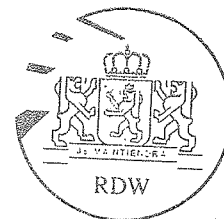
1. Additional information (where applicable) : see Addendum
 2. Technical service responsible for carrying out the tests : DEKRA
Automobil Test Center
Senftenberger Straße 30
D-01998 Klettwitz
 3. Date of test report : April 11th, 2008
 4. Number of test report : 200819487
 5. Remarks (if any) : see Addendum
 6. Place : Zoetermeer
 7. Date : 18 APR 2008

 8. Signature
9. The index to the information package lodged with the approval authority, which may be obtained on request:
- Information document no. 1415/00 pursuant to Annex I of Council Directive 70/156/EEC relating to EC type-approval of a vehicle with respect to the permissible sound level and the exhaust system (Directive 70/157/EEC (and 81/334), as last amended by Directive 1999/101/EC) and the therein mentioned annexes.
 - The test report as mentioned in item 4.

ADDENDUM

to EC type-approval certificate number: e4*81/334*1999/101*2335*00

concerning the separate technical unit type-approval of exhaust systems for motor vehicles with regard to Directive 70/157/EEC, as last amended by Directive 1999/101/EC.

1. Additional information
 - 1.1. Composition of the separate technical unit : Two rear silencers, each with one curved inlet-pipe and one straight outlet pipe, each with one straight tail pipe(s). Different variations of tail pipes.
 - 1.2. Trademark or trade name of the type(s) of motor vehicle to which the silencer is to be fitted : see annex A
 - 1.3. Type(s) of vehicle and its/their type-approval number(s) : see annex A
 - 1.4. Engine
 - 1.4.1. Type (positive ignition, diesel) : see annex A
 - 1.4.2. Cycles: two-stroke, four-stroke : see annex A
 - 1.4.3. Total cylinder capacity : see annex A
 - 1.4.4. Rated maximum engine power (... kW at ...min⁻¹) : see annex A
 - 1.5. Number of gear ratios : see annex A
 - 1.6. Gear ratios employed : see annex B
 - 1.7. Drive-axle ratio(s) : see annex B
 - 1.8. Sound level values,
 - moving vehicle : see annex B
speed stabilized before acceleration at : 50 km/h
 - stationary vehicle : see annex B
 - 1.9. Variation in back pressure : < + 25 %
 - 1.10. Any restrictions in respect of use and mounting requirements : The rear silencer type 1415 may either be mounted with original parts or with other approved separate silencers or pipes.
5. Remark: The test results are also valid for vehicle types which are mentioned in Annex A of test report and are equipped with automatic gear boxes.





Typ / Type : 1415
 Hersteller / Manufacturer : REMUS

Anlage / Appendix
 A

Fabrikmarke oder Handelsbezeichnung des Kraftfahrzeugtyps, in den der Schalldämpfer eingebaut werden soll

Trademark or trade name of the type of motor vehicle to which the silencer is to be fitted

Fahrzeugtyp / Type of vehicle	Fabrikmarke oder Handelsbezeichnung / Trademark or trade name	Typgenehmigungsnummer bzw. ABE-Nr. / Type-approval number resp. ABE-No.	Motor / Engine	Hubraum / Total cylinder capacity [cm ³] (88/76/EEC)	Nennleistung / Rated Maximum engine power [kW/min ⁻¹] (80/1269/EEC)	Anzahl der Getriebe-gänge / Number of gear ratios	ab Baujahr / From model-year
Fahrzeugklasse / Category of vehicle: M1							
Fuji Heavy Industries Ltd. (J) - SUBARU							
Art des Motors / Engine type: Otto / Positive ignition							
SH	FORESTER	e13*2001/116* 0982*..	EJ20	1994	110/6000	M5 ww./opt. A	12/ 2007

J:\Worgang\GA2008\19487\Test report_19487_Appendix A.doc





Typ / Type : **1415**
 Hersteller / Manufacturer : **REMUS**

Anlage / Appendix
B

Measurement results according to Annex II of the Directive 70/157/EEC in the version 1999/101/EC

Vehicle

Trademark or trade name : Subaru Forester
 Type of vehicle : SH

Engine

Manufacturer : Fuji Heavy Industries Ltd.
 Model : EJ20
 Rated maximum power : 110 kW at 6000 min⁻¹

Transmission

Number of gears : automatic
 Drive-axle-ratio : 4,111 (Axle 1 and Axle 2)

Exhaust silencer

Manufacturer : Remus
 Type : 1415

Tyre size : 215/65 R16

Measurement according to 70/157/EEC in the version 1999/101/EC from 15.12.1999:

Sound level of moving vehicle:

Measurement results	Left-hand side dB(A) Drive	Right-hand side dB(A) Drive	Position of gear lever
1st measurement	71	71	drive
2nd measurement	71	71	
Test result	71 dB(A)		
Test result with standard equipment	71 dB(A)		
Type approval value (e13*70/157*2007/34*6008*00)	70 dB(A)		

Sound level of stationary vehicle:

Measurement results	dB(A) (left / right)	Engine speed
1st measurement	81 / 81	4500
2nd measurement	81 / 81	
3rd measurement	81 / 81	
Test result	81 dB(A)	
Test result with standard equipment	81 dB(A)	
Type approval value (e13*70/157*2007/34*6008*00)	81 dB(A)	

Road conditions : Asphalt, dry
 Weather conditions : 15 ° C
 Ambient noise : 57 dB(A)

Date of test : 10.03.08
 Place of test : Bärnbach / Austria

J:\Vorgang\GA2008\19487\Test report_19487_Appendix B.doc

