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STSA, Kotnikova ulica 19a, SI-1000 Ljubljana, tel.: +386 1 478 8430, vozila@avp-rs.si
37141-008/2019/18

**POTRDILO O EU-HOMOLOGACIJI
EU TYPE-APPROVAL CERTIFICATE**

Sporočilo o:
Communication concerning:

- EU-homologaciji
- *EU type-approval*
- ~~razširitvi EU-homologacije~~
- ~~extension of EU type-approval~~
- ~~zavrnitvi EU-homologacije~~
- ~~refusal of EU type-approval~~
- ~~preklicu EU-homologacije~~
- ~~withdrawal of EU type-approval~~

samostojne tehnične enote: naprave za zmanjševanje hrupa
of a type of STU: noise-abatement device

glede na Priloge IX k Delegirani uredbi Komisije (EU) št. 134/2014, kakor je bila nazadnje spremenjena z Delegirano uredbo Komisije (EU) št. 2018/295
with regard to Annex(es) IX to Commission Delegated Regulation (EU) No 134/2014, as last amended by Commission Delegated Regulation (EU) No 2018/295

Številka EU-homologacije: **e26*134/2014*2018/295G*08131*00 CORR.1**
EU type-approval number:

Razlog za razširitev: /
Reason for extension:

**ODDELEK I
SECTION I**

- | | | |
|-------|---|---|
| 0.7 | Znamke (tovarniška imena proizvajalca):
<i>Make(s) (trade name(s) of manufacturer)</i> | AKRAPOVIC |
| 0.8 | Tip:
<i>Type:</i> | M-HRAA005 |
| 0.8.1 | Trgovska imena (če obstajajo):
<i>Commercial name(s) (if available):</i> | / |
| 0.9 | Ime podjetja in naslov proizvajalca:
<i>Company name and adress of manufacturer:</i> | AKRAPOVIC D.D.
MALO HUDO 8A
1295 IVANCNA GORICA
Slovenia |

- 0.9.1. Imena in naslovi proizvodnih tovarn:
Name(s) and address(es) of assembly plant(s): AKRAPOVIC D.D.
MALO HUDO 8A
1295 IVANCNA GORICA
Slovenia
- AKRAPOVIČ D.D., PE ČRNOMELJ
ULICA HEROJA STARIHA 24
8340 ČRNOMELJ
Slovenia
- 0.9.2. Ime in naslov zastopnika
proizvajalca (če obstaja):
*Name and address of manufacturer's
representative (if nay):* /
- 0.10. Pri samostojni tehnični enoti,
vozila, za katere je namenjena:
*In the case of seperate technical unit,
vehicle(s) for which is intended for:* KTM
- 0.10.1 Tip:
Type: KTM 690 LC4 (e1*168/2013*00147*)
- 0.10.2 Variante:
Variant(s): vse
all
- 0.10.3 Izvedenke:
Version(s): vse
all
- 0.10.4 Trgovska imena (če obstajajo):
Commercial name(s) (if available): 690 Enduro R
690 SMC R
- 0.10.5 Kategorija, podkategorija in
podpodkategorija vozila:
*Category, subcategory and
sub-subcategory of vehicle:* L3e-A3

in / and

0.10.	KTM
0.10.1	KTM 690 LC4 (e1*168/2013*00146*)
0.10.2	vse all
0.10.3	vse all
0.10.4	690 Enduro R 690 SMC R
0.10.5	L3e-A3

ODDELEK II
SECTION II

1. Tehnična služba, pristojna za izvajanje preskusov:
Technical service responsible for carrying out the tests: TÜV SÜD Auto Service GmbH
Westendstraße 199
D-80686 München
Germany
2. Datum poročil o preskusu:
Date of test report(s): 08.03.2019
3. Številka poročil o preskusu:
Number of test report(s): 19-00016-CM-GBM-00
4. Opombe:
Remarks: glej Dodatek
see Addendum
- 4a. Homologacija je:
The approval is: **podeljena**
granted
- 4a.1. Homologacija se podeli na podlagi člena 40
Uredbe (EU) št. 168/2013, tako da je njena
veljavnost omejena do: *ne pride v poštev*
The approval is granted in accordance with Article
40 of Regulation (EU) No 168/2013 and its
validity is thus limited to: *not applicable*
5. ~~Omejitve veljavnosti:~~
~~*Restrictions of validity:*~~ /
6. ~~Uporabljene opustitve:~~
~~*Waivers applied:*~~ /
- Kraj:
Place: 1000 LJUBLJANA
- Datum:
Date: 08.04.2019
- Ime in podpis:
Name and signature: mag. Tomaž Svetina, univ. dipl. inž. str.
vodja sektorja za vozila



Temu sporočilu je priložen seznam dokumentov, ki so deponirani pri homologacijskem organu, ki je odobril to homologacijo in jih je na zahtevo mogoče dobiti:

glej kazalo opisne dokumentacije št. e08131 Rev.01

The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request:

see index to information package No e08131 Rev.01

Dodatek k potrdilu o EU-homologaciji s številko EU-homologacije:
Addendum to the EU type-approval certificate with EU type-approval number:
e26*134/2014*2018/295G*08131*00 CORR.1

1. **Omejitve uporabe samostojne tehnične enote: naprave za zmanjševanje hrupa:**
Restriction of use of the STU: noise-abatement device:

glej prilogo 2 testnega poročila 19-00016-CM-GBM-00
see enclosure 2 of the test report 19-00016-CM-GBM-00

2. **Posebni pogoji za vgradnjo samostojne tehnične enote: naprave za zmanjševanje hrupa:**
Special conditions for the mounting of the STU: noise-abatement device:

glej proizvajalčeva navodila za vgradnjo
see manufacturer's instruction manual

3. **Opombe:**
Remarks:

/

Ta homologacija se uporablja za tip serijsko izdelanih neoriginalnih izpušnih sistemov za tip motornega kolesa ali njegovih sestavnih delov pod naslednjimi pogoji:

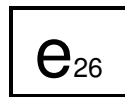
Posamezni proizvodi iz serijske proizvodnje morajo ustrezati najmanj vsem zahtevam Uredbe (EU) št. 168/2013 in Priloge IX k Delegirani uredbi Komisije (EU) št. 134/2014, nazadnje spremenjene z Delegirano uredbo Komisije (EU) št. 2018/295, "Zahteve za preskus tipa IX: raven hrupa".

Priloženo poročilo o preskusu in risbe so sestavni del te homologacije.

Vsak sestavni del neoriginalnega izpušnega sistema, vendar ne deli in cevi za vgradnjo, mora biti čitljivo in trajno označen z:

- znamko (tovarniškim imenom proizvajalca),
- trgovskim imenom,
- homologacijsko oznako.

Temu tipu proizvoda se dodeli naslednja homologacijska oznaka:



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Homologacijska oznaka na proizvodu mora po izvedbi in velikosti ustrezati zahtevam Izvedbene uredbe Komisije (EU) št. 901/2014, nazadnje spremenjene z Izvedbeno uredbo Komisije (EU) št. 2018/295.

S tem homologacijskim znakom so lahko označeni samo tisti proizvodi, ki v celoti ustrezajo homologacijski dokumentaciji.

Oznaka EU-homologacije samostojne tehnične enote ali sestavnega dela mora biti na samostojni tehnični enoti ali sestavnem dele nameščena tako, da je neizbrisna (npr. odtisnjena, jedkana, lasersko vgravirana, samouničljiva nalepka), jasno berljiva in vidna na mestu, kjer se namesti na vozilo, ne da bi bilo treba kateri koli del odstraniti z orodjem.

Proizvod je lahko označen tudi s tujo homologacijsko ali drugo oznako, če s tem ni motena razpoznavnost in čitljivost homologacijske oznake, ki jo je dodelil slovenski homologacijski organ.

Na proizvodu ne sme biti oznak, ki bi lahko privedle do zamenjave z uradno dodeljeno oznako.

Kakršnekoli spremembe na proizvodu so dovoljene samo na podlagi posebnega dovoljenja homologacijskega organa.

Veljavnost homologacije preneha z vrnitvijo ali z odvzemom. Homologacija se odvzame, če pogoji za podelitev in obstoj homologacije ne obstajajo več, če lastnik homologacije krši obveznosti, povezane s homologacijo, oziroma če se ugotovi, da homologirani proizvod ne ustreza več veljavnim predpisom.

Proizvajalec je dolžan stalno kontrolirati kakovost homologiranega proizvoda in njegovo skladnost s homologacijsko dokumentacijo. O tej kontroli je dolžan voditi evidenco in omogočiti vpogled v zapiske nadzornemu organu, ki ga določi homologacijski organ. V primeru ugotovitve neskladnosti s homologacijsko dokumentacijo je proizvajalec dolžan o tem takoj obvestiti homologacijski organ.

Homologacijski organ lahko kadarkoli preverja pravilno izvajanje pooblastil, dodeljenih s to homologacijo, in v ta namen tudi izbira vzorce za ponovni preskus. Stroške takšnih pregledov in presoj skladnosti proizvodnje, se zaračunajo proizvajalcu.

Vsako spremembo oznake proizvajalca, naslova ali proizvodne tovarne oziroma pri homologaciji imenovane pooblaščenice je treba takoj sporočiti homologacijskemu organu.

Pravice, podeljene s to homologacijo, so neprenosljive. Pravice tretjih s to homologacijo niso prizadete.

V primerih, da se proizvodnja ali prodaja proizvoda ne začne v roku enega leta od podelitve homologacije, da se proizvodnja ali prodaja prekine za več kot eno leto oziroma, da se predvideva taka prekinitve, je o tem treba takoj obvestiti homologacijski organ.

O začetku proizvodnje ali začetku prodaje oziroma njihovem ponovnem začetku je treba obvestiti homologacijski organ najkasneje v enem mesecu.

Neupoštevanje zgoraj navedenih določil lahko povzroči odvzem homologacije in se kazensko preganja.

Pravno razlago v zvezi s to homologacijo lahko daje samo homologacijski organ.

08.04.2019



mag. Tomaž Svetina, univ. dipl. inž.
vodja sektorja za vozila

This Approval shall apply to non-original exhaust systems for a type of motorcycle or its components from serial production under the following conditions:

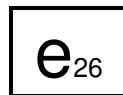
Individual products from serial production shall comply at least with all requirements set out in the Regulation (EU) No 168/2013 and Annex(es) IX to Commission Delegated Regulation (EU) No 134/2014, as last amended by Commission Delegated Regulation (EU) No 2018/295, "Test type IX requirements: sound level".

The attached test report and drawings shall be a constituent part of this Approval.

Each component of the nonoriginal exhaust system, excluding pipes and fitting accessories, shall be marked with a readable and durable:

- *make (trade name of manufacturer),*
- *commercial name,*
- *approval marking.*

This type of product shall be allotted the following approval marking:



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The design and size of the approval marking shall meet the requirements of the Commission implementing Regulation (EU) No 901/2014, as last amended by Commission implementing Regulation (EU) No 2018/295.

Only products which comply with the approval documentation may bear the approval marking.

The EU separate technical unit or component type-approval mark shall be affixed to the separate technical unit or component in a way which is indelible (e.g. stamped, etched, laser-engraved, self-destructing adhesive label), clearly legible and visible in the place at which it is to be fitted to the vehicle without the need to remove any parts with the use of tools.

The product may also be marked with a foreign approval or other marking, provided that the identifiability and readability of the approval marking granted by the Slovenian Type Approval Authority is not affected.

The product shall not bear any markings that may lead to confusion with the officially allotted marking.

Changes of any kind performed on the product shall be subject to special permission by the Slovenian Type Approval Authority.

The Approval will become ineffective when returned or withdrawn. The Approval shall be withdrawn: should the conditions for its granting and existence no longer exist, should the owner of the Approval break his obligations related to the Approval, or when it has been established that the approved product no longer complies with the applicable regulations.

The manufacturer shall regularly inspect the quality of the approved product as well as its conformity with the approval documentation. He shall keep record of this inspection and allow to the surveillance body appointed by the Slovenian Type Approval Authority access to the records. Should any non-conformities be found with respect to the approval documentation, the manufacturer shall immediately inform thereof the Slovenian Type Approval Authority.

Any time, the Slovenian Type Approval Authority may check the correct implementation of the authorizations appointed through this Approval, and for this purpose also select samples for a repeated

test. The costs of such checks and conformity of production assessments are charged to the manufacturer.

Any changes regarding the manufacturer's marking, the address or the production plant, or the authorized person appointed through this Approval, shall be forthwith notified to the Slovenian Type Approval Authority.

The rights granted through this Approval shall be untransferrable. The rights of third persons shall not be affected through this Approval.

In the case where the production or sale of the product does not start within one year after the granting of the Approval, or the production or sale is interrupted for a period longer than one year, or such interruption is foreseen, the Slovenian Type Approval Authority shall be immediately notified.

The Slovenian Type Approval Authority shall be notified of the start of production or start of sale, or its restart, within a month's time at the latest.

Non-compliance with above stated provisions may result in withdrawal of the Approval and will be prosecuted.

Legal explanations in relation with this Approval may only be given by the Slovenian Type Approval Authority.

08.04.2019




Tomaž Svetina, M.Sc.Eng.
Head of Vehicle department



KAZALO OPISNE DOKUMENTACIJE e08131
INDEX TO THE INFORMATION PACKAGE e08131

Revision: 01

Homologacijska številka: **e26*134/2014*2018/295G*08131**
Approval number:

Razširitev številka: **00 CORR.1**
Extension number:

Zgodovina homologacije / Opisne dokumentacije:
Type approval / Information package history:

Razširitev / Revizija: Extension / Revision:	Zadeva: Subject:	Datum izdaje: Date of issue:	Skupno št. strani: Total No. of pages:
00/00	Odobritev homologacije Granting of type approval	21.03.2019	32
00/01	Zamenjava št. Poročila o preskusu Replacement of test report number	08.04.2019	32

Poročilo o preskusu: **19-00016-CM-GBM-00**
Test report:

Število strani: **15**
Number of pages:

datum izdaje: **08.03.2019**
date of issue:

datum zadnje spremembe: /
date of latest amendment:

Opisni list/Tehnični opis naprave: **M-HRAA005**
Information document/Technical description of the device:

Število strani: **2**
Number of pages:

datum izdaje: **08.03.2019**
date of issue:

datum zadnje spremembe: /
date of latest amendment:

Risba(e)¹:
Drawing(s)¹:

Število strani: **3**
Number of pages:

datum zadnje spremembe: /
date of latest amendment:

Navodila za vgradnjo in uporabo:
Mounting and handling instructions:

Število strani: **11**
Number of pages:

datum zadnje spremembe: /
date of latest amendment:

Ostala dokumentacija:
Other documentation:

Število strani: **1**
Number of pages:



¹ kosovnice, slike, sheme in diagrami / ¹ bill of materials, pictures, schematics and diagrams

**SLOVENIAN TRAFFIC SAFETY AGENCY,
KOTNIKOVA ULICA 19a,
1000 LJUBLJANA,
SLOVENIA**

We, Akrapovič d.d., Malo Hudo 8a. 1295 Ivančna Gorica, Slovenia hereby ask STSA to grant approval against **134/2014*2018/295 EC (G)** for the following product:
Exhaust system for Motorcycles - muffler:

Type: **M-HRAA005**

Version: **M-HRAA005 01TBL (SS / Ti / SS)**
M-HRAA005 01SSBL (SS / SS / SS)
M-HRAA005 03SSBL (SS / SS / Ti)
M-HRAA005 03TBL (SS / Ti / Ti)
M-HRAA005 04TBL (Ti / Ti / SS)
M-HRAA005 06TBL (Ti / Ti / Ti)
M-HRAA005 01T (SS / Ti / SS)
M-HRAA005 01SS (SS / SS / SS)
M-HRAA005 03SS (SS / SS / Ti)
M-HRAA005 03T (SS / Ti / Ti)
M-HRAA005 04T (Ti / Ti / SS)
M-HRAA005 06T (Ti / Ti / Ti)

Manufacturer: **Akrapovič d.d.**
Malo Hudo 8a
1295 Ivančna Gorica
Slovenia

We declare that we have not applied to any other Approval Authority in the EU Member States for this approval.

We have requested **TÜV SÜD Auto Service GmbH**, to carry out all testing required by the directive and/or regulation that the approval is sought against and to present the entire documentation for the approval.

Yours sincerely,


Akrapovič d.d.
Uroš Rosa, CEO

Date: 15.01.2019



Techn.Bericht Nr. / *Techn. Report No.*: 19-00016-CM-GBM-00
Hersteller / *Manufacturer*: Akrapovic, Malo Hudo 8a, 1295 Ivančna Gorica, Slovenia

Typ / *Type*: M-HRAA005

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PRÜFBERICHT TEST REPORT Nr. / *no.* 19-00016-CM-GBM-00

über die Prüfung zur Bauartgenehmigung einer Nicht-Originalauspuffanlage oder von Einzelteilen hiervon als selbstständige technische Einheit für Krafträder.

about a test regarding a component type-approval for non-original exhaust system or components thereof, as a technical unit for motorcycles

Verordnung / *Regulation* (EU) 134/2014 vom / *dated* 16.12.2013
zuletzt geändert / *last amended* (EU) 2018/295 vom / *dated* 15.12.2017
Kodierung / *Codification* G

zur Ergänzung der Verordnung (EU) Nr. 168/2013 des Europäischen Parlaments und des Rates.
supplementing Regulation (EU) 168/2013 of the European Parliament and the Council.

Genehmigungsstand / <i>Approval status</i>		
<input checked="" type="checkbox"/>	Erteilung einer Typgenehmigung <i>Granting of a type approval</i>	e26*134/2014*2018/295G*08131*00
<input type="checkbox"/>	Nachtrag/Änderung zur Typgenehmigung Nr. <i>Extension/correction to type approval no.</i>	

Gründe der Erweiterung / *Reasons for extension*

Es wird geändert: -
It will be changed: -

Es wird aktualisiert: -
It will be updated: -



Techn.Bericht Nr. / *Techn. Report No.*: 19-00016-CM-GBM-00
Hersteller / *Manufacturer*: Akrapovic, Malo Hudo 8a, 1295 Ivančna Gorica, Slovenia

Typ / *Type*: M-HRAA005

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0. Allgemeine Angaben / *General information*

0.1. Fabrikmarke / *Make*: Akrapovic Exhaust System Technology

0.2. Typ / *Type*: M-HRAA005

0.2.1. Ausführungen / *Variants*

Ausführungen / <i>Variants</i>	Material / <i>Material</i>		
	Rohre / <i>Tubes</i>	Außenmantel / <i>Sleeve</i>	Endkappe / <i>End cap</i>
M-HRAA005 01TBL	VA / <i>Stainless steel</i>	Titan / <i>Titanium</i>	VA / <i>Stainless steel</i>
M-HRAA005 01SSBL	VA / <i>Stainless steel</i>	VA / <i>Stainless steel</i>	VA / <i>Stainless steel</i>
M-HRAA005 03SSBL	VA / <i>Stainless steel</i>	VA / <i>Stainless steel</i>	Titan / <i>Titanium</i>
M-HRAA005 03TBL	VA / <i>Stainless steel</i>	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>
M-HRAA005 04TBL	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>	VA / <i>Stainless steel</i>
M-HRAA005 06TBL	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>
M-HRAA005 01T	VA / <i>Stainless steel</i>	Titan / <i>Titanium</i>	VA / <i>Stainless steel</i>
M-HRAA005 01SS	VA / <i>Stainless steel</i>	VA / <i>Stainless steel</i>	VA / <i>Stainless steel</i>
M-HRAA005 03SS	VA / <i>Stainless steel</i>	VA / <i>Stainless steel</i>	Titan / <i>Titanium</i>
M-HRAA005 03T	VA / <i>Stainless steel</i>	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>
M-HRAA005 04T	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>	VA / <i>Stainless steel</i>
M-HRAA005 06T	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>	Titan / <i>Titanium</i>

Die Ausführungen unterscheiden sich in der Verwendung verschiedener Werkstoffe. Der konstruktive Aufbau ist gleich. Das akustische Verhalten ist gleichwertig.

The variants vary because different materials are used. The basic construction remains the same. The acoustic behaviour is similar.



Techn.Bericht Nr. / *Techn. Report No.*: 19-00016-CM-GBM-00
Hersteller / *Manufacturer*: Akrapovic, Malo Hudo 8a, 1295 Ivančna Gorica, Slovenia

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- 0.3. Name und Anschrift des Herstellers /
Name and address of manufacturer: Akrapovic d.d.
Malo Hudo 8a
1295 Ivančna Gorica
Slovenia
- 0.4. Name und Anschrift des Beauftragten /
Name and address of authorized agent: entfällt / *n.a.*
- 0.5. Nr. des Beschreibungsbogens /
No. of information document: M-HRAA005
Ausgabedatum / *Date*: 08.03.2019
- 1.0. Klasse der Fahrzeuge, für die die
Anlage bestimmt ist / *Class of the
vehicles the unit is used for*: L3e
- 1.1. Beschreibung der Fahrzeuge, für
die die Einrichtung bestimmt ist /
*Description of the vehicles
the unit is used for*: siehe Anlage 2 / *notice enclosure 2*

2. Angaben zum Prüfobjekt / *Composition of the separate technical unit*

- 2.1. Art der Technischen Einheit:
Kind of technical unit: Siehe Anlage Technische Dokumentation
See Enclosure, Technical documentation
- 2.2. Ort der Kennzeichnung/
Place of marking: Lasergravur auf Endkappe / Typschild aufgenietet
Engraved by laser / plate fixed with rivets
- 2.3. Zusammenstellung der technischen Einheit /
*Composition of the separate
technical unit*: siehe Anlage 1 / *notice enclosure 1*
- 2.4. Lage und Richtung der Auspuffmündung:
Position and direction of the tail pipe: rechts seitlich nach hinten
at the right side to the rear
- 2.5. Prüfmuster eingegangen am:
Test samples submitted for testing at: 25.10.2018



Techn.Bericht Nr. / *Techn. Report No.*: 19-00016-CM-GBM-00
Hersteller / *Manufacturer*: Akrapovic, Malo Hudo 8a, 1295 Ivančna Gorica, Slovenia

Typ / *Type*: M-HRAA005

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3. Prüfprotokoll / *Test report*

Versuchsreihe A / *Tests series A*

3.1. Fahrzeug lfd. Nr. 1) / *Vehicle no. 1)*

- 3.1.1. Typ / *Type*: KTM 690 LC4
3.1.1.1. Variante / Version / *Variant / Version*: A / -
3.1.1.2. Fahrzeugkategorie / *Category*: L3e-A3
3.1.1.3. Handelsbezeichnung / *Model*: KTM 690 Enduro R
3.1.2. Hersteller / *Manufacturer*: KTM AG
3.1.3. Genehmigungs-Nr. / *Homologation no.*: e1*168/2013*00147*
3.1.3.1. Nachtrag bzw. Erweiterung / *Extension*: 00
3.1.4. Fahrzeugidentifizierungsnummer /
Vehicle identification no.: VBKLETP31KM733992
3.1.5. Baujahr / *Year of manufacture*: 2018
3.1.6. km-Stand / *Kilometers*: 1501
3.1.7. Zul. Gesamtgewicht / *total weight*: 350 kg

3.2. Antriebsmaschine / *Engine*

- 3.2.1. Hersteller / *Manufacturer*: KTM
3.2.2. Typ / *Type*: 768
3.2.3. Hubraum / *Engine capacity*: 693 cm³
3.2.4. Höchstleistung / *engine net power*: 55 kW bei / *at* 8000 min⁻¹
3.2.5. max. Drehmoment / *net torque*: 70 Nm bei / *at* 7000 min⁻¹

3.3. Kraftübertragung / *Transmission*

- 3.3.1. Art der Kraftübertragung /
Kind of transmission: mechanisch / *mechanical*
3.3.4. Getriebe / *Gearbox*: manuell / *manual*
3.3.5. Übersetzungsverhältnisse /
Transmission ratios:
primär / *primary* / sekundär / *secondary* 2,194 / 3,067
Höchstgeschwindigkeit / *Top speed*: 190 km/h
Reifen / *Tires*:
vorne / *front* Mitas Enduro 90/90-21 (M/C) 54T TT
hinten / *rear* 140/80-18 (M/C) 70T TT

3.4. Zusammenbau der Auspuffanlage / *Assembly of the exhaust system*

(Teile lfd. Nr. lt. Anl. 1 /
no. of parts, enclosure 1)

Versuchsreihe A / *Tests series A*: 1)2)3)4)



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3.5. Messung der Geräuschwerte / *Acoustic measurements*

- 3.5.1. Hersteller des Messgerätes /
Manufacturer of test equipment: MÜLLER-BBM
- 3.5.2. Typ des Messgerätes /
Type of the test equipment: PAK MK II Configuration
- 3.5.3. Fahrgeräusch, Standgeräusch /
Drive by noise, stationary noise:

nach ECE-R 41.04 /
according ECE-R 41.04
- 3.5.4. Beladungszustand bei der Fahrgeräuschmessung /
Load condition during drive by test: Leergewicht zuzüglich 75 kg Fahrer /
Unloaded weight plus 75 kg driver
- 3.5.5. Abweichung bei Kalibrierung /
Deviation at calibration: < 0.2 dB(A)

3.6. Messung der Leistung / *Power measurement*

- 3.6.1. Messung der Leistungskurve mit Nicht-Originalauspuffanlage /
Testing of max. power with non-original exhaust system:

Die gemessene Nennleistung und die zugehörige Drehzahl liegen im Toleranzbereich von 5% im Vergleich zu den mit der Originalauspuffanlage gemessenen Werten. (siehe Anlage) /
The tested max. power and the engine speed are in the 5% tolerance in comparison with the original exhaust system. (see enclosure)
- 3.6.2. Messung der Höchstgeschwindigkeit mit Nicht-Originalauspuffanlage/
Testing of top speed with non-original exhaust system:

Entfällt, da Fahrzeugklasse: L3e
Not applicable, because vehicle class: L3e

3.7. Konditionierung der Auspuffschalldämpferanlage / *Conditioning*

durch Druckschwingungen / *by pulsation*



3.8. Messung der Schadstoffemissionen / *Pollution Test*

Messung des Abgasverhaltens mit Austauschkatalysator in Verbindung mit Nicht-Originalauspuffanlage gegen die in (EU)168/2013 Anh. VI genannten Grenzwerte bezogen auf die Fahrzeugklasse des Prüffahrzeugs.

Testing of pollution with aftermarket catalytic converter in combination with non-original exhaust system against the limits mentioned in (EU)168/2013 Annex VI regarding the vehicle category of the test bike.

3.9. Ergebnisse / *Test results*

Die Ergebnisse der Prüfungen hinsichtlich / *The results of*

- 3.9.1. Geräusche / *Noise testing*
- 3.9.2. Leistung / *Power measurement*
- 3.9.3. Höchstgeschwindigkeit / *Top speed*
- 3.9.4. Abgasverhalten / *Pollution test*

sind der als Anlage beigefügten Tabellen zu entnehmen / *are attached in the enclosure.*

Aufgrund der Messung mit dem/n o.g. Fahrzeug/en können auch die in Anlage 2 aufgeführten Kraffräder die die gleiche Serien- Auspuffanlage besitzen und gleiche bzw. geringere Motorleistung haben, mit in den Verwendungsbereich aufgenommen werden/

All motorcycles with the same serial exhaust system and same or less 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. Die beschriebene Nicht-Originalauspuffanlage / Technische Einheit darf an den in der Anlage 2 aufgeführten Krafffahrzeugen unter den dort genannten Bedingungen verwendet werden. /

The described non-original exhaust system / technical unit is suitable for an application at the vehicles listed in enclosure 2.

- 3.9.6. Die allgemeinen Spezifikationen gemäß (EU)134/2014; Anhang IX; Anlage 2; Abschnitt 3.5.1. werden durch die Nicht-Originalauspuffanlage als technische Einheit erfüllt. /

The general specifications regarding (EU)134/2014; Annex IX; Appendix 2; Clause 3.5.1. are fulfilled by the non-original exhaust system as technical unit.



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4. Anlagen / *Enclosures*

Anlage 1, Teile der Nicht-Originalauspuffanlage
Enclosure 1, Composition of the non original exhaust system
Anlage 2, Verwendungsbereich
Enclosure 2, Field of application
Anlage 3, Ergebnis der Prüfungen
Enclosure 3, Test results
Anlage 4, Ergebnis der Prüfungen hinsichtlich Abgasverhalten
Enclosure 4, Test results according pollution
Anlage, Leistungskurve
Enclosure, Performance diagram
Anlage, Protokoll Geräuschmessung
Enclosure, protocol noise test
Beschreibungsbogen
Information Document

5. Schlussbescheinigung / *Summary*

Der angegebene Beschreibungsbogen und der darin beschriebene Typ entsprechen der genannten Prüfgrundlage. Der ungünstigste Fall wurde entsprechend Prozessbeschreibung „Erstellung von Gutachten“ bestimmt.
Der Prüfbericht darf nur vom Auftraggeber und nur in vollem Wortlaut vervielfältigt und weitergegeben werden. Eine auszugsweise Vervielfältigung und Veröffentlichung des Prüfberichtes ist nur nach schriftlicher Genehmigung des Prüflaboratoriums zulässig.
The information folder and the type described therein are in compliance with the test specification mentioned above. The worst-case was selected in accordance with document "Preparation of Test Reports".
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München, 08.03.2019



Dipl.-Ing. (FH) Max Höhler
Prüfingenieur / *The Expert*



ANLAGE 1
ENCLOSURE 1

zum Prüfbericht Nr. / to test report no.
Typ / Type:
Hersteller / Manufacturer:

19-00016-CM-GBM-00
M-HRAA005
Akrapovic, Malo Hudo 8a
1295 Ivančna Gorica, Slovenia

Teile der Nicht-Originalauspuffanlage + Originalteile/
Composition of the original exhaust system + original parts

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Lfd. Nr. / No.	Einzelteile, Abmessungen in mm / <i>Components parts, dimensions in mm</i>	Abmessungen des Teiles in mm bzw. Originalteil / Ersatzteil / <i>Dimensions of the part in mm or original part / replacement part</i>	Teilenummer bzw. Genehmigungsnummer / <i>Part no. or homologation no.</i>
1)	Krümmerröhr / <i>header pipe</i>	Originalteile / <i>original parts</i>	-
2)	Verbindungsrohr / <i>link pipe</i>	-	L-KTMSO22
3)	Katalysator / <i>catalytic converter</i>	Ø72 x 100	P-KAT-060 e26*01081*F
4)	Schalldämpfer / <i>silencer</i> (Austrittsrohr / <i>outlet pipe</i> 2 x Ø 22)	konisch hexagonal / <i>conical hexagonal</i> 131,8 x 171,8 Länge ohne Endkappen / <i>length without endcaps</i> 400	M-HRAA005 e26*08131*G E26 92R-01 8131

**ANLAGE 2
ENCLOSURE 2**

**zum Prüfbericht Nr. / to test report no.
Typ / Type:
Hersteller / Manufacturer:**

**19-00016-CM-GBM-00
M-HRAA005
Akrapovic, Malo Hudo 8a
1295 Ivančna Gorica, Slovenia**

Verwendungsbereich (Fahrzeugdaten) / Field of application

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Lfd. Nr.	Hersteller	Fabrikmarke	Handelsbezeichnung	Fahrzeugtyp Genehmigung Nr.	Var. Vers.	Motortyp 4 Takt	Hubraum in cm ³	Nennleistung kW/min ⁻¹	Sonstige bestimmende Merkmale	Anordnung entspr. Anl. 1 lfd. Nr.
No. of vehicle	Manufacturer	Trade mark	Commercial description	Vehicle type no. of homologation	Var. Vers.	Engine type 4 Stroke	Engine capacity in cm ³	max. engine power kW/min ⁻¹	Additional remarks *)	Composition reg. enclosure no. 1
1)	KTM AG	KTM	690 Enduro R	KTM 690 LC4	alle all	768	693	55/8000	mit Kat. / with cat.	1)2)3)4)
2)			690 SMC R	e1*168/2013*00147*				55/8000		
3)			690 Enduro R	KTM 690 LC4		768	693	32/5500		
4)			690 SMC R	e1*168/2013*00146*				32/5500		

*) Der serienmäßige Katalysator wird durch einen Austausch-katalysator ersetzt.
The original catalytic converter is replaced by an aftermarket-catalyst.

**ANLAGE 3
ENCLOSURE 3**

zum Prüfbericht Nr. / to test report no.
Typ / Type:
Hersteller / Manufacturer:

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M-HRAA005
Akrapovic d.d.,
1295 Ivančna Gorica, Slovenia

Ergebnis der Prüfungen / Test results

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Lfd.Nr.	Leistung Serie kW/min ⁻¹	Leistung Austausch kW/min ⁻¹	Vmax Serie km/h	Vmax Aus- tausch km/h	Fahrgeräusche in dB(A) / Sound levels driving vehicle in dB(A)					Standgeräusche in dB(A) / Sound levels stationary vehicle in dB(A)			
					gemes- sen in Gang	Grenz- wert **)	Serie gemes- sen	Austausch gemessen	bei km/h	lt. Fzg. BE	Serie gemes- sen /	Austausch gemessen	bei min ⁻¹
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 **) SL _{EU4}	Original mea- sured L _{urban}	Non original measured L _{urban}	at km/h	Vehicle type hom.	Original mea- sured	Non original measured	at min ⁻¹
1) A*	55/8000	56/8000	-	-	3	77	78	78	50	91	92	92	4000

*) Versuchsreihe / test series

**) Grenzwert der Richtlinienfassung, die bei Erteilung der Fahrzeuggenehmigung Gültigkeit hatte /
Limit value of directive which was valid by vehicle type homologation

ANLAGE 4 zum Prüfbericht Nr. / *to test report no.* **19-00016-CM-GBM-00**
ENCLOSURE 4 **Typ / Type:** **M-HRAA005**
Hersteller / Manufacturer: **Akrapovic d.,**
1295 Ivančna Gorica, Slovenia

Ergebnis der Prüfungen hinsichtlich Abgasverhalten /
Test results according pollution

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Versuchsreihe / Series A: (Fahrzeug lfd. Nr. / Vehicle no. 1)

Messung gemäß / *Tests regarding:*
entsprechend Typ / *according to Type*

134/2014 Anh. / *Annex II; III; VI*
I; II; V

Typ / Type I

Äquivalente Schwungmasse / <i>Equivalent flywheel mass</i>		230 kg		
WMTC Phase 2 WMTC Stage 2	Kategorie 3-2 <i>Class 3-2</i>	CO [mg/km]	THC [mg/km]	NO _x [mg/km]
Test 1	R ₁	337	40	38
Test 2	R ₂			
Test 3	R ₃			
Mittelwert / <i>Average</i>		337	40	38
Grenzwerte / <i>Limits</i> 168/2013 Annex VI (A1) Euro 4 (v _{max} ≥ 130 km/h)		1140	170	90

Typ / Type II

Betriebsbedingung / <i>Running condition</i>	CO [Vol %]	Motordrehzahl / <i>Engine rpm</i> [min -1]	Motoröltemperatur / <i>Engine oil temperature</i> [°C]
Normale Leerlaufdrehzahl / <i>Nominal idle speed</i>	0,00	1600	91° C
Hohe Leerlaufdrehzahl / <i>Exceeded idle speed</i>	0,00	2500	92° C

Typ / Type V

Mathematisches Dauerhaltbarkeitsverfahren / *Mathematical durability procedure*

Verschlechterungsfaktor / <i>Deterioration Factor (DF)</i>	1,3	1,2	1,2
Test 1 R ₁ x DF	438	48	45
Test 2 R ₂ x DF			
Test 3 R ₃ x DF			
Mittelwert / <i>Average</i>	438	48	45
Grenzwerte / <i>Limits</i> 168/2013 Annex VI (A1) Euro 4 (v _{max} ≥ 130 km/h)	1140	170	90

1. Vehicle

1.1 Manufacturer: KTM
 1.2 Vehicle Ident. Number: VBKLETP31KM733992
 1.3 Commercial name / Type: KTM 690 Enduro R
 1.4 Type: 690 Enduro-R
 1.5 Variant: ---
 1.6 Version: ---
 1.7 Class: L3e-A3
 1.8 Type approval number: e1*168/2013*00147*00
 1.9 Vehicle kerb weight (m_{kerb}) [kg]: 160
 1.10 Mass of the vehicle in running order (m_{ro}) [kg]: 235
 1.11 Vehicle test mass (m_t) [kg]: 235
 1.12 Technically permissible max. laden mass (M) [kg]: 350
 1.13 Power to mass ratio index (PMR): 234,0
 1.14 Vehicle length [m]: 2,03
 1.15 Milage [km]: 1501

2. Engine

2.1 Manufacturer / engine code: KTM
 2.2 Model: 8-768*00005*
 2.3 Cycles: four stroke two stroke n.a.
 2.4 Number and arrangement of cylinders: 1 / Single
 2.5 Working principle: positive ignition compression ignition electrical hybrid
 2.6 Rated power [kW / min^{-1}]: 55 / 8000
 2.7 Idle engine speed [min^{-1}]: 1650
 2.8 Cylinder capacity [cm^3]: 693

3. Transmisson

3.1 Type: manual gearbox automatic gearbox Type: ---
 3.2 No. of gears: 6
 3.3 Ratio (Prime : Secondary) --- : ---



4. Equipment

4.1	Pre Catalyst(s) Make / type (left/right):	---	/	---	/	---
4.2	Catalyst(s) Make / type (left/right):	Akrapovic	/	n.a.	/	---
4.5	Front exhaust silencer(s) Make / type (left/right):	---	/	---	/	---
4.6	Middle exhaust silencer(s) Make / type (left/right):	---	/	---	/	---
4.7	Rear exhaust silencer(s) Make / type (left/right):	Akrapovic	/	M-HRAA005	/	
4.8	Tail pipe(s) Make / type (left/right):	Akrapovic	/	2x D= 22mm	/	---
4.9	Exhaust Flap(s) Make / type (left/right):	---	/	---	/	---
4.13	Tyres	Axle 1		Axle 2		
	Manufacturer:	Mitas		Mitas		
	Type:	Enduro		Enduro		
	Size:	90/90-21		140/80-18		
	Tyre pressure [bar]:	---		---		
	Tyre tread depth [mm]:	---		---		

5. Measurements

5.1 Conditions

Passby Parameter	
Reference acceleration $a_{wot\ ref}$ [m/s ²]:	3,73
-10% Reference acc. $a_{wot\ ref\ min}$ [m/s ²]:	3,36
+10% Reference acc. $a_{wot\ ref\ max}$ [m/s ²]:	4,10
Target acceleration a_{urban} [m/s ²]:	1,84
Gear weighting factor k:	n.a.
Partial power factor k_p	0,521

Driving conditions		
Gear	i	i+1
test acceleration $a_{wot\ test}$ [m/s ²]:	3,85	---
aver. vehicle velocity when ref. point at AA'	38,1	---
aver. vehicle velocity when ref. point at PP'	49,8	---
aver. vehicle velocity when ref. point at BB'	60,4	---
Operating mode:	n.a.	Gearbox: Locked

Calculation of the acceleration/factors	
$a_{wot\ ref} =$	$3.33 * \log(PMR) - 4.16$
k =	n.a.
$k_p =$	$(1 - (a_{urban}/a_{wot\ test}))$
$a_{wot\ i} =$	$((v_{BB}/3.6)^2 - (v_{AA}/3.6)^2) / (2 * (20 + i))$
$a_{wot\ i+1} =$	n.a.
$a_{urban} =$	$1.28 * \log(PMR) - 1.19$

5.2 Measurement results pass by noise

Gear used	Run	Mode	acc. point ⁽²⁾ [m]	A-A'		P-P'		B-B'		$a_{wot\ test}$ [m/s ²]	Sound level L ⁽³⁾		L _{aver} ⁽⁴⁾	
				v [km/h]	n [rpm]	v [km/h]	n [rpm]	v [km/h]	n [rpm]		left [dB(A)]	right [dB(A)]	li [dB(A)]	re [dB(A)]
3	5	wot ₍₃₎	-5,0	38,7	3006	49,1	3724	60,3	4508	3,75	81,7	80,8	81,7	81,0
	10			38,3	3050	49,9	3773	60,8	4562	3,91	81,6	81,1		
	13			37,3	3030	50,4	3732	60,1	4210	3,89	81,7	81,0		
	24	crs ₍₃₎		50,0	3650	49,5	3653	50,2	3665		74,0	73,6	74,0	73,3
	25			50,2	3620	49,5	3641	50,8	3680		74,1	73,1		
	30			49,7	3595	49,6	3626	50,3	3646		74,0	73,2		
-	---	---	---	---	---	---	---	---	---	---	---	---	---	
	---			---	---	---	---	---	---	---	---	---		
	---			---	---	---	---	---	---	---	---	---		
	---	---		---	---	---	---	---	---	---	---	---	---	---
	---			---	---	---	---	---	---	---	---	---		
	---			---	---	---	---	---	---	---	---	---		

2) Acceleration point according Line A-A'; 3) values reduced by 1 dB(A); Numbers written in italics a corrected acc. to Annex3, Pt. 2.1; 4) Intermediate Results of each side of the vehicle

$[L_{wot\ rep} = L_{wot\ (i+1)} + k * (L_{wot\ (i)} - L_{wot\ (i+1)})]$; [In the case of a single gear ratio test the values are the test result of each test; PMR > 25]
 $[L_{crs\ rep} = L_{crs\ (i+1)} + k * (L_{crs\ (i)} - L_{crs\ (i+1)})]$; [In the case of a single gear ratio test the values are the test result of each test; PMR > 25]

5.3 Results

	Gear		L _{rep}		L _{wot\ max} [dB(A)]	Test result L _{urban} [dB(A)]
	i [dB(A)]	i+1 [dB(A)]	wot [dB(A)]	crs [dB(A)]		
L _{wot}	81,7	---	81,7	74,0	82,0	77,7
L _{crs}	74,0	---				

Calculation L _{urban} (PMR > 25)	
$[L_{urban} = L_{wot\ rep} - k_p * (L_{wot\ rep} - L_{crs\ rep})]$	
$[L_{urban} = 81,7 - 0,521 * (81,7 - 74)]$	



3

5.4 Limits

Category	Power-to-mass ratio index (PMR)	Limit value for L _{urban} [dB(A)]
First category	PMR ≤ 25	73
Second category	25 < PMR ≤ 50	74
Third category	PMR > 50	77 ^(a)

(a) For motorcycles tested in second gear only in Annex 3, the limit value is increased by 1dB(A) until the date in Paragraph 12.7. Data for affected vehicles shall be studied, and discussions shall be made in case of further extension.

5.5 Sound level of stationary vehicle

Measuring results	left	right
	[dB(A)]	[dB(A)]
1 st Run	91,3	---
2 nd Run	91,9	---
3 rd Run	91,8	---
4 th Run	---	---
max. meas. Value	91,9	---

Engine speed [rpm]	Target engine speed	
4000		n = 75% S (S ≤ 5000 min-1)
	X	n = 50% S (S > 5000 min-1)

Result [dB(A)]	92
-----------------------	-----------

5.5.1 Sound level of stationary vehicle in different

Operation mode	Result [dB(A)]
---	---
---	---
---	---
---	---
---	---

6. **Weather conditions**

Air temperature [°C]:	20,7
Surface temperature [°C]:	24,3
Air pressure [mbar]:	989

Air humidity [%]	52
Wind speed [m/s]:	0,6
Wind direction [°]:	223,6

7. **General Requirements**

Ambient noise level	
before Measurement [dB(A)]:	46,8
after Measurement [dB(A)]:	46,8

Calibration level (Target) [dB(A)]:	94,0
Calibration level Micro 1 [dB(A)]:	94,0
Calibration level Micro 2 [dB(A)]:	94,0

8. **Date / place of test:** 25.10.2018 / Akrapovic d.d., Precna (SI)

9. **Expert:** Wibmer Chr.

10. **Remarks:** 2 Tail pipes with Insert D=22mm



Item No.	(Sub) categories	Detailed information
B.		General information concerning systems, components or separate technical units
0.7.	L1e — L7e	Make(s) (trade name(s) of manufacturer): AKRAPOVIC Exhaust System Technology
0.8.	L1e — L7e	Type: M-HRAA005
0.8.1.	L1e — L7e	Commercial name(s) (if available): n.a.
0.8.2.	L1e — L7e	Type-approval number(s) (if available): e26*134/2014*2018/295G*08131*00
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): n.a.
0.9.	L1e — L7e	Company name and address of manufacturer: Akrapovic d.d. Malo Hudo 8a 1295 Ivančna Gorica Slovenia
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: n.a.
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: n.a.
0.10.		Vehicle(s) for which the system/separate technical unit is intended for:
0.10.1.	L1e — L7e	Type: see Technical Report
0.10.2.	L1e — L7e	Variant: see Technical Report
0.10.3.	L1e — L7e	Version: see Technical Report
0.10.4.	L1e — L7e	Commercial name(s) (if available): see Technical Report
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle: see Technical Report
C.		General information concerning vehicle, systems, components or separate technical units
0.12.		Conformity of production
0.12.1.	L1e — L7e	Controlled by ISO 9001:2008 Quality Management System certified by TÜV SÜD Management Service GmbH Registration no.: 12 100 31148 TMS
1.		GENERAL CONSTRUCTION CHARACTERISTICS
1.8.		Propulsion unit performance
1.8.1.	L3e, L4e, L5e, L7e-A, L7e-B2	Declared maximum vehicle speed: km/h see Technical Report
1.8.2.	L1e, L2e, L6e, L7e-B1, L7e-C	Maximum design vehicle speed: and gear in which it is reached: n.a.
1.8.3.	L1e — L7e	Maximum net power combustion engine: . kW at . min ⁻¹ at A/F ratio: see Technical Report
1.8.4.	L1e — L7e	Maximum net torque combustion engine: . Nm at . min ⁻¹ at A/F ratio: see Technical Report
1.8.5.	L1e — L7e	Maximum continuous-rated power electric motor (15/30 minutes power): n.a.
1.8.6.	L1e — L7e	Maximum continuous-rated torque electric motor: Nm at min ⁻¹ n.a.
1.8.7.	L1e — L7e	Maximum continuous total power for propulsion(s): kW. at ... min ⁻¹ at A/F ratio: n.a.
1.8.8.	L1e — L7e	Maximum continuous total torque for propulsion(s): Nm at min ⁻¹ at A/F ratio: n.a.
1.8.9.	L1e — L7e	Maximum peak power for propulsion(s): kW at min ⁻¹ at A/F ratio: n.a.
4.		GENERAL INFORMATION ON ENVIRONMENTAL AND PROPULSION UNIT PERFORMANCE
4.0		General information on environmental and propulsion performance
4.0.1.	L1e — L7e	Environmental step : Euro (4)
4.0.2.	L1e — L7e	Fuel consumption: see WVTA
4.0.3.	L1e — L7e	CO ₂ emissions: see WVTA
4.0.4.	L1e — L7e	Energy consumption: n.a.
4.0.5.	L1e — L7e	Electric range: n.a.
4.0.6.		Sound level
4.0.6.1.	L1e — L7e	Limit value for L _{urban} : see Technical Report
4.4.	L1e — L7e	Additional information on environmental and propulsion unit performance
4.4.4.	L1e — L7e	All additional technical information according to UN Regulation No. 92, are mentioned in the Technical Report or shown in the attachments.



Anlage <i>Enclosure</i>	Zeichnung Nr. <i>Drawing no.</i>	Datum <i>Date</i>	Seiten <i>Pages</i>
Zeichnung Schalldämpfer <i>Drawing silencer</i>	M HSO T76R16 T400/65 S45AA/D22 SM 690 19	29.11.2018	1
Stückliste <i>Part list</i>	M-HRAA005	-	1
Zusammenstellungszeichnung <i>Assembly drawing</i>	KTM 690 SMC R KTM 690 Enduro R	-	1
Montageanleitung <i>Installation instructions</i>	769.05.979.000 KTM 690 Enduro R KTM 690 SMC R	02/2019	10
ASEP Bestätigung <i>Statement of compliance ASEP</i>		07.03.2019	1



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Rosa Uroš, Managing Director

08.03.2019



Partial exhaust system / Slip-ON line / EC / ECE Type approval

**KTM 690 SMC R
KTM 690 Enduro R**

Product code: S-KTMSO51-HRAATBL

