

Original BMW Accessories. Installation Instructions.



M Performance Silencer System Retrofit Kit F3x 328i (N20)

Retrofit kit number

18 30 2 348 498 F30/F31N20 M Performance silencer (ECE)
18 30 2 293 771 F30/F31N20 M Performance silencer (US)

The attached approval is not required for the US version.



Important information

Installation as per series, see ISTA No. 18 12 031.



GRAND-DUCHÉ DE LUXEMBOURG

Ministère du Développement durable
et des Infrastructures
Département des Transports

L-2938 Luxembourg

SOCIÉTÉ NATIONALE DE
CERTIFICATION ET D'HOMOLOGATION

s.à r.l.

Registre de Commerce: B 27180

L-5201 Sandweiler



Référence: E13*59R00*59R01*0011*00

Annexes: - Rapport Technique
- Fiche de Renseignements du constructeur

Sandweiler, le 11 décembre 2012

Communication concernant:⁽²⁾

Communication concerning:



- la délivrance d'une homologation

approval granted

- l'extension d'homologation

approval extended

- le refus d'homologation

approval refused

- le retrait d'homologation

approval withdrawn

- l'arrêt définitif de la production

production definitely discontinued

d'un type de dispositif silencieux d'échappement de remplacement ou d'élément d'un tel dispositif en application du Règlement N° 59.

of a type of replacement silencing system or components of the said system pursuant to Regulation No. 59.


Numéro d'homologation par type:

Approval number:

E13*59R00*59R01*0011*00

Marque d'homologation:

Approval mark:

 59R – 000011

- 1. Marque de fabrique ou de commerce du dispositif silencieux d'échappement:**
Trade name or mark of the silencing system: BMW
- 2. Type du dispositif silencieux d'échappement:**
Type of the silencing system: F30_N20
- 3. Nom et adresse du fabricant:**
Manufacturer's name and address: Red Arch Manufacturing Ltd
Wroxtton Business Centre
Braunston
Northants NN117JG
United Kingdom
- 4. Le cas échéant, nom et adresse de son mandataire:**
If applicable, name and address of manufacturer's representative: Not applicable
- 5. Description sommaire du dispositif silencieux (avec/sans* / matériaux fibreux, etc.):**
Brief description of the silencing system (with/without* / fibrous material, etc.): Refer to Manufacturer's Information Document

- 6. Marque de fabrique ou de commerce du type de véhicule auquel le dispositif silencieux est destiné:**
Trade name or mark of the vehicle type for which the silencing system is intended: BMW
- 7. Type de ce véhicule, à commencer par le numéro de série:**
Vehicle type, starting from serial number: Refer to Manufacturer's Information Document
- 8. Nature du moteur:**
Kind of engine: Positive ignition
- 9. Cycle:**
Cycles: Four-stroke
- 10. Cylindrée:**
Cylinder capacity: Refer to Manufacturer's Information Document
- 11. Puissance du moteur (kW/ECE):**
Engine power (kW ECE): Refer to Manufacturer's Information Document
- 12. Nombre de rapports de la boîte de vitesses:**
Number of gears: Refer to Manufacturer's Information Document
- 13. Rapport(s) utilise(s):**
Gears used: Refer to Annex B in Technical Report
- 14. Rapport(s) du pont:**
Final drive ratio(s): Refer to Manufacturer's Information Document
- 15. Régime de puissance maximale:**
Maximum power: Refer to Manufacturer's Information Document
- 16. Conditions de charge du véhicule pendant l'essai:**
Load conditions of vehicles during test: Running order mass
- 17. Valeurs du niveau sonore:**
Sound levels:
- **Véhicule en marche [db(A)]:**
Vehicle in motion [dbA]: Refer to Annex B in Technical Report
 - **Vitesse stabilisée avant accélération à [km/h]:**
Steady speed before acceleration of [km/h]: Refer to Annex B in Technical Report
 - **Véhicule à l'arrêt [db(A)] à [tr/min]:**
Vehicle stationary [dbA] with engine running at [rpm]: Refer to Annex B in Technical Report
- 18. Valeur de la contre-pression:**
Value of the back pressure: Refer to Annex B in Technical Report
- 19. Dispositif silencieux présenté**
Silencing system submitted
- **à l'homologation le:**
for approval on: 06.08.2012
 - **à l'extension de l'homologation le:**
for extension of approval on: Not applicable

20. **Autorité déléguée:** *Société Nationale de Certification et d'Homologation*
Assigned authority: *L-5201 Sandweiler*
- Service technique chargé des essais d'homologation:**
Technical service responsible for conducting approval tests:
Luxcontrol S.A.
B.P. 349
L-4004 Esch-sur-Alzette
21. **Date du procès-verbal émis par ce service:** 06.12.2012
Date of report issued by that service:
22. **Numéro du procès-verbal émis par ce service:** LCA 51 0835 002 12
Number of report issued by that service:
23. **L'homologation est (*):** Granted / ~~refused~~
Approval:
24. **Emplacement sur le dispositif silencieux de la marque d'homologation:** On metal plate underside of muffler
Position of approval mark on the vehicle:
25. **Lieu:** Sandweiler
Place:
26. **Date:** 11 décembre 2012
Date:
27. **Signature:**
Signature:

Pour le Département des Transports



Marco FELTES
Inspecteur principal 1^{er} en rang

Pour la SNCH



Claude LIESCH
Directeur



28. **Sont annexes à la présente communication les pièces suivantes qui portent le numéro d'homologation indiqué ci-dessus:**
The following documents, bearing the approval number shown above, are annexed to this communication:
- **dessins, schémas et plans du dispositif silencieux**
- drawings, diagrams and plans of the silencing system
 - **photographies du dispositif silencieux**
- photographs of the silencing system
 - **bordereau des éléments, dûment identifiés, formant le dispositif silencieux**
- list of components, duly identified constituting the silencing system

² **Biffer la mention qui ne convient pas**
Strike out what does not apply



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Référence: E13*59R00*59R01*0011*00

Annexes: - Rapport Technique
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Sandweiler, le 11 décembre 2012

Index du dossier d'homologation

Index to type-approval report

	Numéro d'homologation: Approval number:	E13*59R00*59R01*0011*00
	Révision: Revision:	00
	Marque de fabrication ou de commerce: Trade name or mark:	BMW
	Type: Type:	F30_N20
1.	Procès-verbal d'essai: Test report:	No. LCA 51 0835 002 12
	- Test report:	Page 1 to 6;
	- Index:	Annex A - Page 1;
	- Test results:	Annex B - Page 1.
2.	Dossier du constructeur: Report of the manufacturer:	Annex C
	- Index:	Refer to Annex A in Technical Report
3.	Autres documents annexés: Other documents annexed:	Not applicable
4.	Date de délivrance de l'homologation initiale: Date of issue of initial type approval:	11.12.2012
5.	Date de la dernière délivrance de pages révisées: Date of last issue of revised pages:	Not applicable
6.	Date de la dernière délivrance d'une homologation révisée: Date of last extension:	Not applicable

TECHNICAL REPORT

No.: LCA 51 0835 002 12

Inspection concerning the

Approval of replacement silencing systems

performed according to the

ECE-Regulation No. R59

Type: **F30_N20**
Manufacturer: **Red Arch Manufacturing Ltd**
Wroxton Business Centre
Braunston
Northants NN117JG
United Kingdom

Index:

1. General	2
2. Inspections and their results	4
3. Evaluation of test results	5
4. Statement of compliance	6
5. Annex (beginning with an index)	

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1. **General**

1.1. **Test Provisions**

The inspection was carried out according to ECE-Regulation No. R59 including the 01 series of amendments which entered into force on April 13, 2012.

1.2. **Information concerning the vehicle type and the requested approval**

The statements below apply to the previous ECE type-approval as referred to on page 1.

1.2.1. **[] Numbering according to the communication concerning the approval following ECE-R59.**

[1.] Trade name or mark of the silencing system:

BMW

[2.] Type of silencing system:

Type: **F30_N20**

Commercial description: --

[3.] Manufacturer's name and address:

**Red Arch Manufacturing Ltd
Wroxton Business Centre
Braunston
Northants NN117JG
United Kingdom**

[4.] If applicable, name and address of manufacturer's representative

Not applicable

[5.] Brief description of the silencing system (with/without fibrous material, etc.)

See annex C

[6.] Trade name or mark of the vehicle type to which the silencing system is intended

See annex C

[7.] Vehicle type (starting from serial number):

See annex C

...



- [8.] Kind of engine:
See annex B
- [9.] Cycles:
See annex B
- [10.] Cylinder capacity:
See annex C
- [11.] Engine Power:
See annex C
- [12.] Number of gears:
See annex C
- [13.] Gears used:
See annex B
- [14.] Final drive ratio(s):
See annex C
- [15.] Maximum Power:
See annex C
- [16.] Load conditions of vehicle during test:
Running order mass
- [17.] Sound levels:
See annex B
- [18.] Value of the back pressure:
See annex B
- [19.] Silencing system submitted for approval on:
August 6, 2012

...



2. Inspections and their results

2.1. Version of the tested vehicle

One vehicle version was submitted for the type-approval of separate technical unit to cover the different vehicle types mentioned in point (1.2.).

The test results stated in point (17) and (18) were measured with the reference test vehicle:

See annex B

2.2. Inspection items

	Inspector	Location of test:	Date of receipt of test item:	Date of test:
Main report	M. Moscardelli	BMW A.G. Testgelände Nördlicher Speicherseeweg D-85609 Aschheim	August 2012	August 6, 2012

Ambient conditions

Test Track:	According to Annex 8 of regulation R51
Air temperature:	22°C
Wind direction:	Variable
Wind speed:	< 2 m/s
Ambiant noise:	< 50 dB(A)

2.2.1. General specifications:

The requirements of paragraph 6, point 6.1.1. and 6.1.2. of this regulation are fulfilled.

2.2.2. Sound level of the moving vehicle

Test result: see item (17).

The limit value for the sound level of the moving vehicle is according to the R51.02, which was valid at the time of the granting of the type-approval for the vehicle.

The requirements of paragraph 6, point 6.2.1.2. of this regulation are fulfilled.

2.2.3. Sound level of the stationary vehicle

Test result: see item (17).

The requirements of paragraph 6, point 6.2.1.2. of this regulation are fulfilled.

...



2.2.4. Measurement of vehicle performance

Test result: see item (18).

The requirements of paragraph 6, point 6.3.3. of this regulation are fulfilled.

2.2.5. Conditioning of silencers containing fibrous materials:

Continuous road operation.

2.2.6. Markings:

The requirements of paragraph 4 of this regulation are fulfilled.

2.3. Remarks

Inspection items are only applicable to items which have been tested.

For the inspections under point 2.2.2. to 2.2.4. the vehicle had to undergo comparison tests with the following fittings:

- with exhaust systems corresponding to the one fitted to the vehicle types at the time of the granting of the type approval and
- with exhaust systems as separate technical unit

2.4. Test facilities

Calibration of measuring and test equipment used to carry out the inspections is in accordance with the EEC-Directive and/or ECE-Regulation stated in 1.1. of this report and with ISO 17025.

Inspectors stated under 2.2. of this report were in charge of performing and/or evaluating the tests.

3. Evaluation of test results

3.1. Variants and equipment covered

The tests carried out cover the following vehicle variations and equipment as far as these are relevant for this directive:

- silencer and silencer tail pipes as stated in annex C
- vehicle engines as stated in annex C
- vehicle variants and versions as stated in Annex C

3.2. Remarks

Tested vehicle version and relative test values are worst case scenario for all equipment listed under Annex C.

3.2.1. Main report:

not applicable

...



4. **Statement of compliance**

The inspections items and measurements carried out have shown the compliance of the vehicle type described in this report and the attached Annex with the requirements of the ECE-Regulation No. R59 including the 01 series of amendments which entered into force on April 13, 2012.

Esch-sur-Alzette, December 6, 2012

Luxcontrol s.a.
Service Homologation-automobile

Mauro Moscardelli
Ingénieur-Inspecteur

Patrizio Vinciarelli
Ingénieur-Inspecteur

Annex



Index to the information package, including a summary in chronological order, concerning extensions and/or amendments

ECE type-approval No.: E13*R59R00*R59R01*--*00

Main Report

Technical Report No.: LCA 51 0835 002 12 Page 1 to 6

Composition of the Annex:

A: Index	Page 1
B: Results of the approval tests	Page 1
C: Information folder	Page 1 to 5

Index to the information folder:

- manufacturer's information document (page 1 to 5)



Test results:

		Sound Level Values [dB(A)]										Back pressure [%]					
		Vehicle in motion					Stationary vehicle										
Make	Commercial description	Engine type	Working principle	Cycle	Rated Power [kW @ min-1]	Transmission type	Used gear	Replacement	Original	Vehicle type approval	Speed [km/h]	Limit value	Replacement	Original	Vehicle type approval	rpm	
BMW	328i	N20B20	Pos. Ign.	4 stroke	180 @ 5000	MT6	3	71	71	71	50	75 (*)	77	77	77	3750	- 34.0

(*) limit value of the directive which was valid by vehicle type homologation

Information Document

Information document No 1 relating to EC type-approval as separate technical unit of exhaust systems for motor vehicles (Directive 70/157/EEC, as last amended by Directive 2007/34/EC) see Annex II Appendix 1.

GENERAL

0.1 Make (trade name of manufacturer): BMW

0.2 Type and general commercial description(s): F30_N20

0.5 Name and address of manufacturer:

Red Arch Manufacturing Ltd
Wroxton Business Centre
Braunston
Northants NN11 7JG
UK

0.7 In case of components and separate technical units, location and method of affixing of the EC approval marks:

The EC approval marks will be etched on the underside of the muffler or on a metal plate welded onto the exhaust silencer as shown below. See table in 2.2



0.8 Address(es) of assembly plant(s):
as 0.3 above

1. DESCRIPTION OF THE VEHICLE FOR WHICH THE DEVICE IS INTENDED (if the device is intended to be fitted to more than one vehicle type the information under this point shall be supplied for each type concerned)

- 1.1. **Make (trade name of manufacturer):** BMW
- 1.2. **Type and general commercial description(s):** See table (attached)
- 1.3. **Means of identification of type, if marked on the vehicle:** not applicable
- 1.4. **Category of vehicle:** M1
- 1.5. **EC type-approval number with regard to sound level:**

Vehicle Type	Type approval numbers
330-N20B20	E13*51R00*51R02*10178 *00

- 1.6. **All the information mentioned in items 1.1. to 1.5. of the type-approval certificate concerning the vehicle:** see type approval documentation under 1.5 above.

2. DESCRIPTION OF THE DEVICE

- 2.1. **A description of the replacement exhaust system indicating the relative position of each system component, together with mounting instructions:** Mounting is as the standard system service rear muffler for all variants. For all derivatives the rear muffler only, with trims and appropriate fixing clamp are supplied.
- 2.2. **Drawings of each component, so that they can easily be located and identified. These drawings must indicate the place provided for the compulsory affixing of the EC type approval mark:**

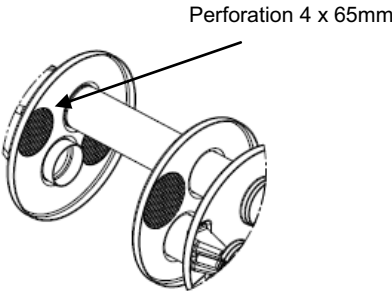
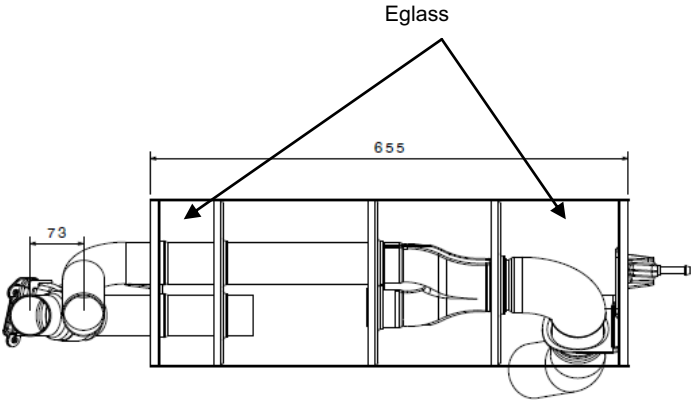
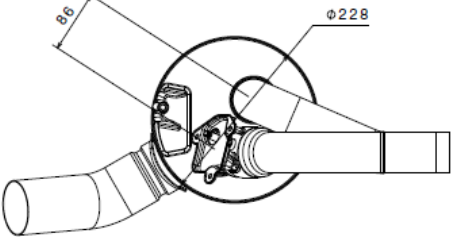
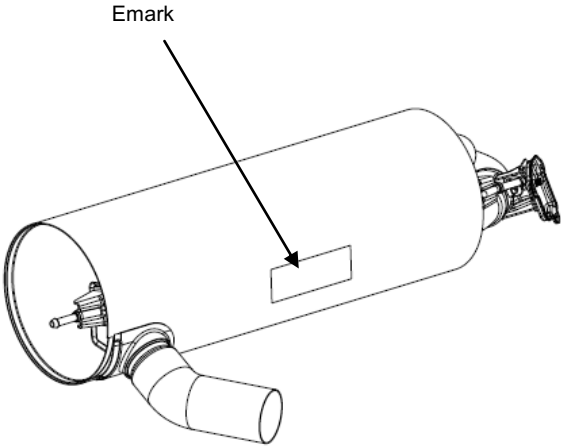
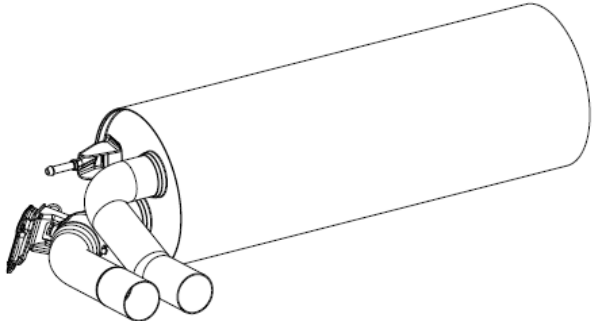
Version	Body work	Model	Transmission	Identification Number	Position
All	All	F30 328i	All	T743	On metal plate Underside of muffler

See drawing attached



Version – All

Rear muffler



Report number RAE28-04 Vehicle Type and General Description.

F30 328i

Typ	Modell	Motor	Getriebe	Motorbauart / Zylinder / Ventile pro Zyl.	Hubraum	Leistung / bei Drehzahl	Drehmoment / bei Drehzahl		Getr. Bezeichnung	Achsenübersetzung
							Nm	1/min		
328i	Limousine	N20B20	Automatikgetriebe 8	Reihenmotor / 4 / 4	1997	180 / 5000-6500	350	1250-4800	8HP45	3.154
328i	Limousine	N20B20	Automatikgetriebe 8	Reihenmotor / 4 / 4	1997	160 / 4700	350	1250-4250	8HP45	3.154
328i	Limousine	N20B20	Handschaltgetriebe 6	Reihenmotor / 4 / 4	1997	160 / 4700	350	1250-4250	I-350-Turbo	3.909
328i xDrive	Limousine	N20B20	Automatikgetriebe 8	Reihenmotor / 4 / 4	1997	180 / 5000	350	1250	8HP45	3.154
328i xDrive	Limousine	N20B20	Handschaltgetriebe 6	Reihenmotor / 4 / 4	1997	180 / 5000	350	1250	K	3.385
328i	Limousine	N20B20	Automatikgetriebe 8	Reihenmotor / 4 / 4	1997	179 / 5000-6000	350	1250-4800	8HP45	3.154
328i	Limousine	N20B20	Handschaltgetriebe 6	Reihenmotor / 4 / 4	1997	179 / 5000-6000	350	1250-4800	I-350-Turbo	3.909
328i xDrive	Limousine	N20B20	Automatikgetriebe 8	Reihenmotor / 4 / 4	1997	179 / 5000-6000	350	1250-4800	8HP45	3.154
328Li	Limousine	N20B20	Automatikgetriebe 8	Reihenmotor / 4 / 4	1997	180 / 5000-6500	350	1250-4800	8HP45	3.154
328i	Touring	N20B20	Automatikgetriebe 8	Reihenmotor / 4 / 4	1997	180 / 5000-6500	350	1250-4800	8HP45	3.154
328i	Touring	N20B20	Handschaltgetriebe 6	Reihenmotor / 4 / 4	1997	180 / 5000-6500	350	1250-4800	I-350-Turbo	3.909

Fitting Instructions for a replacement Rear Muffler

1. Remove the existing rear muffler by cutting the exhaust at the manufacturers service cut point. This is identified by the middle of three depressions in the exhaust pipe at some point before the rear muffler. Carefully remove the vacuum connection to the exhaust flap (if present).
2. Install the replacement rear muffler using the clamp(s) provided. Do not tighten the clamp(s) until the system is correctly aligned.
3. Align the system to ensure there is no contact to the vehicle body or other parts of the vehicle and that the hanging system is functioning correctly.
4. Firmly tighten all clamps.
5. Re-Attach the vacuum connection to the exhaust flap if present.
6. Fit the exhaust trims (if supplied separately) aligning correctly to the bumper aperture and with any printed logo in the uppermost position.
7. Start the engine to check for gas leaks.
8. Re-tighten all exhaust fixings after a short running-in period