
EU TYPE-APPROVAL CERTIFICATE

COMMUNICATION CONCERNING THE ~~EU TYPE-APPROVAL~~ / EXTENSION OF EU TYPE-APPROVAL / ~~REFUSAL OF EU TYPE-APPROVAL~~ / ~~WITHDRAWAL OF EU TYPE-APPROVAL~~ OF AN ~~ENGINE TYPE~~/ENGINE FAMILY WITH REGARD TO GASEOUS AND PARTICULATE POLLUTANT EMISSION PURSUANT TO REGULATION (EU) 2016/1628, AS LAST AMENDED BY (COMMISSION DELEGATED) REGULATION 2016/1628 (OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL)

EU type-approval No: e5*2016/1628*2016/1628SYB3/P*0137*01

Reason(s) for extension : New DF calculation

SECTION I

- 1.1. Make (trade name(s) of manufacturer): Briggs & Stratton Corporation
- 1.2. Commercial name(s) (if applicable): Not applicable
- 1.3. Company name and address of manufacturer: Briggs & Stratton Corporation
3300 N. 124th Street
Wauwatosa, WI 53222-3106
United States of America
- 1.4. Name and address of manufacturer's authorised representative (if any):
Briggs & Stratton Germany GmbH.
Max-Born-Straße 2,
68519 Viernheim,
Germany
- 1.5. Name(s) and address(es) of assembly/manufacture plant(s):
Briggs & Stratton (Chongqing)
Engine Co., Ltd
No. 10, Jia Gong Road 3
New North Zone
Chongqing, 401122
China
- 1.6. ~~Engine type designation~~/engine family designation/ET : 25V3 / LBSXS.4082HB - Y

- 1.7. Category and sub-category of the ~~engine type~~/engine family : NRS-vi-1b
- 1.8. Emissions durability period category: Cat 3
- 1.9. Emissions stage: V
- 1.10. Engine for snow throwers No

SECTION II

1. Technical service responsible for carrying out the test(s): VCA Europe S.r.l.
2. Date(s) of the test report(s): As before (4 June 2020) and 05 March 2021
3. Number(s) of the test report(s): As before (TR2016_1628 0137 00) and XLW000915/USW505584

SECTION III

The undersigned hereby certifies the accuracy of the manufacturer's description in the attached information document of the ~~engine type~~/engine family described above, for which one or more representative samples, selected by the approval authority, have been submitted as prototypes and that the attached test results apply to the ~~engine type~~/engine family .

1. The ~~engine type~~/engine family meets the requirements laid down in Regulation (EU) 2016/1628.
2. The approval is extended
3. The approval is granted in accordance with Article 35 of Regulation (EU) 2016/1628 and the validity of the approval is thus limited to dd/mm/yyyy Not applicable
4. Restrictions to validity : None
5. Exemptions applied : None

Place: Borlänge

Date: 25 MARCH 2021

Signature:



Fredrik Glas

Type Approval Certification Officer

Attachments:

Information package

Test report(s)

Where applicable, the name(s) and specimen(s) of the signature(s) of the person(s) authorised to sign statement of conformity and a statement of their position in the company

Where applicable, a completed specimen of a statement of conformity

NB:

If this model is used for EU type-approval of an engine as an exemption for new technologies or new concepts, pursuant to Article 35(4) of Regulation (EU) 2016/1628, the heading of the certificate shall read 'PROVISIONAL EU TYPE-APPROVAL CERTIFICATE VALID ONLY ON THE TERRITORY OF ...

ADDENDUM

EU type-approval number: e5*2016/1628*2016/1628SYB3/P*0137*01

PART A — CHARACTERISTICS OF THE ~~ENGINE TYPE~~/ENGINE FAMILY

2. Common design parameters of the ~~engine type~~/engine family
- 2.1. Combustion Cycle: Four stroke cycle
- 2.2. Ignition Type: Spark ignition
- 2.3.1. Position of the cylinders in the block: Single
- 2.6. Main Cooling medium: Air
- 2.7. Method of air aspiration: Naturally aspirated
- 2.8.1. Fuel Type(s): Petrol (E10)
- 2.8.1.1. Sub Fuel type (Natural gas/Biomethane only): Not applicable
- 2.8.2. Fuelling arrangement: Liquid-fuel only
- 2.8.3. List of additional fuels compatible with use by the engine declared by the manufacturer in accordance with point 1 of Annex I to Delegated Regulation (EU) 2017/654 (provide reference to recognised standard or specification): Not Applicable
- 2.8.4. Lubricant added to fuel: No
- 2.8.5. Fuel supply type: Carburettor
- 2.9. Engine management systems: Mechanical

- 2.10. Miscellaneous devices: No
- 2.10.1. Exhaust gas recirculation (EGR): No
- 2.10.2. Water injection: No
- 2.10.3. Air injection: No
- 2.10.4. Others (specify): No
- 2.11. Exhaust after-treatment system: No
- 2.11.1. Oxidation catalyst: No
- 2.11.2. DeNO_x system with selective reduction of NO_x (addition of reducing agent): No
- 2.11.3. Other DeNO_x systems: No
- 2.11.4. Three-way catalyst combining oxidation and NO_x reduction: No
- 2.11.5. Particulate after-treatment system with passive regeneration: No
- 2.11.6. Particulate after-treatment system with active regeneration: No
- 2.11.7. Other particulate after-treatment systems: No
- 2.11.8. Other after-treatment devices (specify): No
- 2.11.9. Other devices or features that have a strong influence on emissions (specify): No

3. Essential characteristics of the engine type(s)

Item Number	Item Description	Parent Engine / Engine type	Engine types within the family (if applicable)		
3.1.1.	Engine Type Designation:	25V3			
3.1.2.	Engine type designation shown on engine mark: Yes/No	Yes			
3.1.3.	Location of the manufacturer's statutory marking:	Fuel tank			
3.2.1.	Declared rated speed (rpm):	3600			
3.2.1.2.	Declared rated net Power (kW):	9.0			
3.2.2.	Maximum power speed (rpm):	3600			
3.2.2.2.	Maximum net power (kW):	9.0			
3.2.3.	Declared maximum torque speed (rpm):	2400			
3.2.3.2.	Declared maximum torque (Nm):	29.1			
3.6.3.	Number of Cylinders:	1			
3.6.4.	Engine total swept volume (cm ³):	408			
3.8.5.	Device for recycling crankcase gases: Yes/ No	No			
3.11.3.12.	Consumable reagent: Yes/No	No			
3.11.3.12.1.	Type and concentration of reagent needed for catalytic action:	NA			
3.11.3.13.	NO _x sensor(s): Yes/No	No			
3.11.3.14.	Oxygen sensor: Yes/No	No			
3.11.4.7.	Fuel borne catalyst (FBC): Yes/No	No			

Particular conditions to be respected in the installation of the engine on non-road mobile machinery:

Item Number	Item Description	Parent Engine / Engine type	Engine types within the family (if applicable)		
3.8.1.1.	Maximum allowable intake depression at 100 % engine speed and at 100 % load (kPa) with clean air cleaner:	3			
3.8.3.2.	Maximum charge air cooler outlet temperature at 100 % speed and 100 % load (deg. C):	NA			
3.8.3.3.	Maximum allowable pressure drop across charge cooler at 100 % engine speed and at 100 % load (kPa) (if applicable):	NA			
3.9.3.	Maximum permissible exhaust gas back- pressure at 100 % engine speed and at 100 % load (kPa):	3			
3.9.3.1.	Location of measurement:	Exhaust port			
3.11.1.2.	Maximum temperature drop from exhaust system or turbine outlet to first exhaust after-treatment system (deg. C) if stated:	NA			
3.11.1.2.1.	Test conditions for measurement:	NA			

PART B — TEST RESULTS As before and

3.8. Manufacturer intends to use ECU torque signal for in-service monitoring: No

3.8.1. Dynamometer torque greater than or equal to $0,93 \times$ ECU torque: No

3.8.2. ECU torque correction factor in case that dynamometer torque less than $0,93 \times$ ECU torque: Not applicable

11.1. Cycle emissions results

Emissions	CO (g/kWh)	HC (g/kWh)	NOx (g/ kWh)	HC+NOx (g/kWh)	PM (g/ kWh)	PN #/kWh	Test Cycle
NRSC final result with DF.	372.81	NA	NA	5.21	NA	NA	G1
NRTC Final test result with DF	NA	NA	NA	NA	NA	NA	NA

11.2. CO₂ result: 739.79 g/kWh

11.3. In service monitoring reference values

11.3.1. Reference work (kWh): NA

11.3.2. Reference CO₂ mass (g): NA

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8/26/2020

Ms. Ann Holt
Vehicle Certification Agency
41000 West 7 Mile Rd.
Suite 140
Northville, MI 48167-2664

Type Approval Documentation: e5*20161628*20161628SYB3/P*0137*01*00

I. Declaration by manufacturer on compliance with Regulation (EU) 2016/1628

The undersigned: Dan St. Martin, Product Safety and Compliance Manager for Briggs & Stratton Corporation, Hereby declares that the following engine type/engine family (*) complies in all respects with the requirements of Regulation (EU) 2016/1628 of the European Parliament and of the Council (1), Commission Delegated Regulation (EU) 2017/654 (2), Commission Delegated Regulation (EU) 2017/655 (3) and Commission Implementing Regulation (EU) 2017/656 (4) and does not use any defeat strategy. All emission control strategies comply, where applicable, with the requirements for Base Emission Control Strategy (BECS) and Auxiliary Emission Control Strategy (AECS) set-out in section 2 of Annex IV to Delegated Regulation (EU) 2017/654, and have been disclosed in accordance with that Annex and with Annex I to Implementing Regulation (EU) 2017/656.

1.1. Make (trade name(s) of manufacturer):

Briggs & Stratton Corporation

1.2. Commercial name(s) (if applicable):

N/A.

1.3. Company name and address of manufacturer:

Briggs & Stratton Corporation
3300 N. 124th Street
Wauwatosa, WI 53222-3106

1.4. Name and address of manufacturer's authorized representative (if any):

Briggs & Stratton Germany GmbH.
Max-Born-Straße 2, 68519 Viernheim, Germany

1.6 Engine type designation/ engine family designation/ FT (*):

LBSXS.4082HB - Y

Brooke Clementz

8/26/2020

for

Dan St. Martin
Product Safety and Compliance Manager
Briggs & Stratton Corporation

Date





II. Information Document

4082HB Stage V Application (e5 20161628 20161628SYB3P 0137 01 00)

III. Emissions Test Data (Files)

- a. Zero Hour Emission Data: *Zero Hour Data – DUT005457 (e5 20161628 10261628SYB3P 0137 00 00)*
- b. DF Emission Data: *Test Data DF – DUT008608 (e5 20161628 10261628SYB3P 0137 01 00)*
- c. DF Calculation: *DF Calculation – DUT008608 (e5 20161628 10261628SYB3P 0137 01 00)*

IV. Test Bench Installation

Test Bench Installation 2018 2016 1628 3.4

V. AECD Document (File) – 2017/656 Appendix 2 (Proprietary)

Carbureted Engine AECD 2018 2017 656 Appendix 2

VI. Endurance Test Cycle/ Break-In

Endurance Test Cycle: *Endurance Test Cycle 2018 2016 1628*
Break-In: *Break In 2 Hr 2018 2016 1628*

VII. Emission Labels

Statutory Markings 2018 2016 1628 3.1

VIII. Facility Appraisal Report

Completed by Briggs & Stratton and AVL North America and provided via email to VCA on February 16th 2018.

IX. Engine Picture

Engine (e5 20161628 20161628SYB3P 1037 00 00)

X. Engine Combustion Chamber / Piston

Combustion Chamber & Piston (e5 20161628 20161628SYB3P 0137 00 00)

XI. Label Placement

Engine Labeling (e5 20161628 20161628SYB3P 0137 00 00)

XII. SAE Power Ratings

Power Certification Spreadsheet

XIII. Description of Change

- *Changed the DF data to DUT008608*



Commission Implementing Regulation (EU) 2017/656

Appendix 3 Part A

1. General Information

1.1 Make (trade name(s) of manufacturer):	Briggs & Stratton Corporation
1.2. Commercial name(s) (if applicable):	N/A
1.3. Company name and address of manufacturer:	Briggs & Stratton Corporation 3300 N. 124th Street Wauwatosa, WI 53222-3106
1.4. Name and address of manufacturer's authorised representative (if any):	Briggs & Stratton Germany GmbH. Max-Born-Straße 2, 68519 Viernheim, Germany
1.5. Name(s) and address(es) of assembly/manufacture plant(s):	Briggs & Stratton (Chongqing) Engine Co., Ltd No. 10, Jia Gong Road 3, New North Zone Chongqing, China 401122
1.6. Engine type designation/engine family designation/FT:	25V3 - Y / LBSXS.4082HB - Y
1.7. Category and sub-category of the engine type/engine family:	NRS-vi-1b
1.7. Category and sub-category of the engine type/engine family: (additional)	N/A
1.8. Emissions durability period category:	Cat 3 (Professional Product "Commercial")
1.9. Emissions stage:	Stage V



1.10. In case of NRS < 19 kW only, engine family consisting exclusively of engine types for snow throwers:	No
1.11. Reference power is:	Rated Net Power
1.12. Primary NRSC test cycle:	G1
1.12.1. In case of variable speed IWP category only, Additional propulsion test cycle:	Not Applied
1.12.2. In case of IWP category only, additional auxiliary NRSC test cycle:	Not Applied
1.13. Transient test cycle:	Not Applicable
1.14. Restrictions on use (if applicable):	N/A



Commission Implementing Regulation (EU) 2017/656

Appendix 3 Part B

2. Common Design Parameters of Engine Family

As defined in Annex II to Delegated Regulation (EU) 2017/654

2.1. Combustion Cycle:	Four Stroke Cycle
2.2. Ignition Type:	Spark Ignition
2.3. Configuration of the cylinders	
2.3.1. Position of the cylinders in the block:	Single
2.3.2. Bore centre to centre dimension (mm):	N/A
2.4. Combustion chamber type/design	
2.4.1. Open chamber/divided chamber/other(specify)	Open Chamber
2.4.2. Valve and porting configuration:	Overhead
2.4.3. Number of valves per cylinder:	2
2.5. Range of individual cylinder displacement (cm ³):	408
2.6. Main Cooling medium:	Air



2.7. Method of air aspiration:	Naturally Aspirated
2.8. Fuel	
2.8.1. Fuel Type:	Petrol (E10)
2.8.1.1. Sub Fuel type (Natural gas/Biomethane only):	Not applicable
2.8.2. Fuelling arrangement:	Liquid-fuel only
2.8.3. list of additional fuels, fuel mixtures or emulsions compatible with use by the engine declared by the manufacturer in accordance with point 1.4 of Annex I to Delegated Regulation (EU) 2017/654 (provide reference to recognised standard or specification):	N/A
2.8.4. Lubricant added to fuel:	No
2.8.4.1. Specification:	N/A
2.8.4.2. Ratio of fuel to oil:	N/A
2.8.5. Fuel supply type:	Carburetor
2.9. Engine management systems:	Mechanical
2.10. Miscellaneous devices:	No



2.10.1. Exhaust gas recirculation (EGR):	No
2.10.2. Water injection:	No
2.10.3. Air injection:	No
2.10.4. Others (specify and provide a schematic diagram of the location and order of the devices):	N/A
2.11. Exhaust after-treatment system:	No
2.11.1. Oxidation catalyst:	No
2.11.2. DeNOx system with selective reduction of NOx (addition of reducing agent):	No
2.11.3. Other DeNOx systems:	No
2.11.4. Three-way catalyst combining oxidation and NOx reduction:	No
2.11.5. Particulate after-treatment system with passive regeneration:	No
2.11.5.1. Wall-flow/non-wall-flow	Not applicable
2.11.6. Particulate after-treatment system with active regeneration:	No
2.11.6.1. Wall-flow/non-wall-flow	Not applicable



2.11.7. Other particulate after-treatment systems:	No
2.11.8. Other after-treatment devices (specify):	No
2.11.9. Other devices or features that have a strong influence on emissions (specify):	N/A

