DNV·GL

Certificate No:
TAM0000138

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Spark Arrestor

with type designation(s)
DPF, Sizes: DN 9" ; DN 10,5" ; DN 13"

Issued to
Cummins Emission Solutions Inc.
Columbus, IN, USA

is found to comply with
NS-EN 1834-1
DNV GL class programme DNVGL-CP-0282 – Type approval – Spark arrestors

Application :

Products approved by this certificate are accepted for installation onboard ships and offshore units classed by DNV GL

Issued at **Hamburg** on **2019-10-30**
This Certificate is valid until **2024-10-29** .
DNV GL local unit: **Certification & Inspection Services**

Approval Engineer: **Guido Friederich**

for **DNV GL**

Olaf Drews
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Diesel Particle Filters (DPF) successfully tested as Spark Arrester for installation in exhaust gas pipes of combustion engines. The type approved spark arrestors comprise the types listed on the frontpage of this Type Approval Certificate.

Type approved spark arrestor connection sizes. Nominal Inlet / Outlet Diameter:
DN 9" x 5" length; DN 9" x 6" length;
DN 10,5" x 7" length;
DN 13" x 7" length

Material: Steel

Application

The spark arrestors are approved for installation in exhaust gas pipes and exhaust gas after treatment systems on reciprocating combustion engines.
The type of arrestor has to be chosen according to maker's instructions.

Limitation /Exclusions

Any exhaust gas after treatment systems are not included within this type approval.

Type Approval documentation

Job Id: **262.1-028951-1**
Certificate No: **TAM0000138**

Tests carried out

Collection Efficiency Test

Test Standard:	EN-1834-1:2000, Section 6.4 – Spark arrester test, [6.4.1] – Collection efficiency test
Test equipment:	Spark Arrester Test Facility, consisting of: Blower, particle injector, filter for collecting particles which passed through the spark arrester test specimen.
Test results:	ECTO-Lab Spark Arrester Testing – Final Report, dated 2019-07-25 / [1]

Diesel Particulate Filter (DPF) types covered within the type approval testing and certification

Summary of test results

Diameter x Length DPF Catalyst P/N [Cummins P/N]	Tested DPF P/N [Cummins P/N]	Equivalent P/N Covered by test results [Cummins P /N]	Particle size (mm)	Collection Efficiency (%)
9" x 5" A057A061 [5482310]	A061U927 [5507015]	A060J947 [5505717] A061U943 [5507016] A060J944 [5505715]	0,1 / 0,2 / 0,5	99 %
9" x 6" A057A062 [5521392]	Not tested. [2]	A061W129 [5507047] A060J948 [5505718] A061W133 [5507048] A060J945 [5505716]		
10,5" x 7" A056A929 [5475654]	A059L692 [5418434]	A059K739 [5418432] A059V483 [5418643] A057T818 [5418291]	0,1 / 0,2 / 0,5	100 %
13" x 7" A056A927 [5475626]	A059L693 [5418435]	A059K740 [5418433]	0,1 / 0,2 / 0,5	100 %

Note 1:
Spark arrester design carried out as diesel particulate filter providing a collection efficiency of approximately 100% due to the filter micron sieve structure.
Note 2:
Test results of Spark Arrester with 5" length accepted as satisfactory as the shorter length provided worst case test condition.

Marking of product

The product is to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4.

This certificate is only valid if required periodical assessments are carried out with satisfactory results.
To check the validity of this certificate, please look it up in https://approvalfinder.dnvgl.com

End of Certificate