IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx ETL 22.0054X**

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Certificate history:
Issue 0 (2023-06-21)

Status: **Current**

Issue No: 1

Date of Issue: 2023-10-30

Applicant: **Champion Aerospace LLC**
1230 Old Norris Road
PO Box 686
Liberty, SC 29657-3508
United States of America

Equipment: **Igniter Plug**

Optional accessory:

Type of Protection: **Ex ec**

Marking: Ex ec IIC Tx Gc

Where :

Tx = T3, -60 °C ≤ Ta ≤ +60 °C

Tx = T1, -60 °C ≤ Ta ≤ +260 °C

IECEx ETL 22.0054X

Approved for issue on behalf of the IECEx Certification Body: **Todd L. Relyea**

Position: **Certification Officer**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

Intertek
3933 US Route 11 South
Cortland NY 13045-2995
United States of America

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Certificate No.: **IECEx ETL 22.0054X** Page 2 of 4

Date of issue: 2023-10-30 Issue No: 1

Manufacturer: **Champion Aerospace LLC**
1230 Old Norris Road
PO Box 686
Liberty, SC 29657-3508
United States of America

Manufacturing locations: **Champion Aerospace LLC**
1230 Old Norris Road
PO Box 686
Liberty, SC 29657-3508
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

US/ETL/ExTR22.0049/00 US/ETL/ExTR22.0049/01

Quality Assessment Report:

NO/PRE/QAR15.0034/05

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Igniter Plug is for a Gas Turbine in an ambient range of 60° C to +60° C for T3 or -60° C to +260° C for T1. This assembly is comprised of an Ignition Lead attached to a Spark Plug Igniter. The ignition leads and igniters vary in length and are equipped with straight or 90 degree elbow fittings. The end of the Igniter, which ignites the mixture within the gas turbine, is sealed from the end that connects to the Ignition Lead by an internal hermetic seal and a specific Igniter Plug suppoer that allows it to penetrate the casing of the gas turbine. This end of the igniter is considered to be in a non-classified area and is not covered by this certification. Therefore, this report pertains to the portion of the ignition lead assembly from the threaded connection on the igniter end to the conduit sealing fitting before the electrical enclosure.

The igniter is mounted securely to the engine via a custom stainless steel mounting assembly which also provide earthing for the igniter. The lead cable is threaded to the end of the igniter and the other end shall be terminated in a suitably approved enclosure for the ignition source (not covered by this certificate).

The Ignition Lead has an electric cable with a center conductor of stranded wire that runs the full length. This electrical cable is installed in a flexible metal conduit, which had a convoluted inner core and an outer jacket of braided stainless steel wire (not covered by this certificate).

SPECIFIC CONDITIONS OF USE: YES as shown below:

- An IECEx approved seal fitting must be installed between the connected conduit seal and the electrical enclosure.
- The external exciter electrical enclosure must be properly grounded.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Updated ambient temperature range from -40°C ≤ Ta ≤ +260°C to -60°C ≤ Ta ≤ +260°C and added ambient temperature range -60°C ≤ Ta ≤ +60°C.
- Added temperature classification T3.
- Added Drawing CH31966-2.

Annex:

SFT-IECEx-OP-19f - Annex for IECEx Certificate of Conformity - Champion.pdf

Annex to IECEx Certificate of Conformity

Certificate No:	IECEx ETL 22.0054X	Issue No. 1
Annex No. 1		

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
Igniter Assembly – Component Parts and Processes	31966-1PP	B	04/27/2012
Igniter CH31966-1 (Datasheet)	CH31966-1	--	--
*Igniter CH31966-2 (Datasheet)	CH31966-2	--	--

*Note: An * is included before the title of documents that are new or revised.*

Required Manufacturer Routine Testing		
Test	Title/Description of Test	Standard and Clause
1	A dielectric strength test with 1500Vrms for 1 minute or 1.2 times the test voltage for 100ms shall be carried out.	IEC 60079-7:2017 Ed.5.1

Additional Equipment Information:

The below tables describes the models number associated with the various lengths and end fittings for this assembly.

Table 1		
Champion Part #	Igniters	Length
CH31966-1	362A3951P001	23.00 in (584.2 mm)
CH31966-2	362A3953P003	23.00 in (584.2 mm)