TYPE-CERTIFICATE
DATA SHEET

No. E.055

for

TAE 125 series engines

Type Certificate Holder

Technify Motors GmbH
Platanenstr. 14
D-09356 Sankt Egidien
Germany

For Models:

TAE 125-01
TAE 125-02-99
TAE 125-02-114
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I. General

1. Type/ Model/ Variants

TAE 125 / TAE 125-01, TAE 125-02-99, TAE 125-02-114

2. Type Certificate Holder

Technify Motors GmbH
Platanenstr. 14
D-09356 Sankt Egidien
Germany

DOA EASA.21J.010

Previous TC Holder (before 19 August 2013):

Thielert Aircraft Engines GmbH
Platanenstr. 14
D-09350 Lichtenstein
Germany

3. Manufacturer

Technify Motors GmbH

Previous Manufacturer (before 19 August 2013):

Thielert Aircraft Engines GmbH

4. Date of Application

<table>
<thead>
<tr>
<th>Variant</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAE 125-01</td>
<td>27 Feb. 2001</td>
</tr>
<tr>
<td>TAE 125-02-99</td>
<td>3 June 2005</td>
</tr>
<tr>
<td>TAE 125-02-114</td>
<td>13 Febr. 2007</td>
</tr>
</tbody>
</table>

Note: Application for TAE 125-01 had been made to JAA before EASA was established.

5. EASA Type Certification Date

<table>
<thead>
<tr>
<th>Variant</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAE 125-01</td>
<td>03 May 2002</td>
</tr>
<tr>
<td>TAE 125-02-99</td>
<td>14 Aug. 2006</td>
</tr>
<tr>
<td>TAE 125-02-114</td>
<td>06 March 2007</td>
</tr>
</tbody>
</table>

Note: TAE 125-01 had been certified by LBA Germany (TC/TCDS 4631) prior to EASA existence. This TCDS replaces LBA TCDS No 4631. Transfer date to EASA Type Certificate: 24 March 2006. The TAE 125-02-114 engine model was previously approved as Major Change (power increase to 114 kW) to the initial 99 kW engine version under EASA approval number EASA.E.C.01379 on 3 Jan. 2007 (application date: 11 Sept. 2006). The TAE 125-02-99 engine model was previously approved as TAE 125-02.
II. Certification Basis

1. EASA Certification Basis

1.1. Airworthiness Standards

| TAE 125-01 | JAR-E, Change 10, 15 August 1999 |
| TAE 125-02-99 | CS-E, 23 September 2003 except CS-E 130 (h) (see Note 2) |
| TAE 125-02-114 |

1.2. Special Conditions (SC)

| TAE 125-01 | SC1 Electronic Engine Control System  
| SC2 Contaminated Fuel  
| SC3 Failure Analysis  
| SC4 Fire Precautions  
| SC5 Certification of Programmed Logic Devices |
| TAE 125-02-99 | SC1 Failure Analysis |
| TAE 125-02-114 |

1.3. Equivalent Safety Findings

| TAE 125-01 | ESF1 Propeller Functioning Test  
| ESF2 Engine Test Control Parameters  
| ESF3 Engine Type Design |
| TAE 125-02-99 | CS-E 70 and CS-E100: Engine Type Design |
| TAE 125-02-114 |

1.4. Deviations

none

1.5. Environmental Protection

none (not required for piston engines)
III. Technical Characteristics

1. Type Design Definition
   TAE 125-01: TDD 02-01, Issue 2 dated February 02, 2002 or later approved issue/revision
   TAE 125-02-99: TDD 02-02, Issue 1 dated June 30, 2006 or later approved issue/revision
   TAE 125-02-114: TDD 02-02, Issue 2 dated Dec. 11, 2006 or later approved issue/revision

2. Description
   The TAE 125 engine is a 4-cylinder, four stroke Diesel piston engine with an displacement of 1689 cm³ (TAE 125-01) resp. 1991 cm³ (TAE 125-02-99, TAE 125-02-114), equipped with common rail high pressure direct injection, turbocharger, gearbox with reduction ratio of 1 : 1.689, propeller governor and FADEC.

3. Equipment

4. Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>TAE 125-01</th>
<th>TAE 125-02-99</th>
<th>TAE 125-02-114</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Length</td>
<td>816 mm</td>
<td>816 mm</td>
<td>816 mm</td>
</tr>
<tr>
<td>Overall Height</td>
<td>636 mm</td>
<td>636 mm</td>
<td>636 mm</td>
</tr>
<tr>
<td>Width</td>
<td>778 mm</td>
<td>778 mm</td>
<td>778 mm</td>
</tr>
</tbody>
</table>

5. Dry Weight

<table>
<thead>
<tr>
<th>Model</th>
<th>TAE 125-01</th>
<th>TAE 125-02-99</th>
<th>TAE 125-02-114</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>134 kg</td>
<td>134 kg</td>
<td>134 kg</td>
</tr>
</tbody>
</table>

6. Ratings

<table>
<thead>
<tr>
<th>Rating</th>
<th>TAE 125-01</th>
<th>TAE 125-02-99</th>
<th>TAE 125-02-114</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take-off</td>
<td>99 kW at 3900 rpm</td>
<td>99 kW at 3900 rpm</td>
<td>114 kW at 3900 rpm</td>
</tr>
<tr>
<td>Max. Continuous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Recommended Cruising</td>
<td>71 kW at 3400 rpm</td>
<td>71 kW at 3400 rpm</td>
<td>97 kW at 3400 rpm</td>
</tr>
<tr>
<td>Max. Best Economy Cruising</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The performance values specified above correspond to minimum values defined under the conditions of ICAO or ARDC standard atmosphere.
7. Control System

The engine is equipped with a Full Authority Digital Engine Control (FADEC). Software verified to level C according to RTCA Document DO-178B.

TAE 125-01:
- FADEC P/N 02-7610-55001 R1 or later approved standard
- Software: TAE-125 m2.91 or later approved standard
- Software Mapping: Refer to Service Bulletin TM TAE 000-0007 for approved software P/N.

TAE 125-02-99, TAE 125-02-114:
- FADEC P/N 05-7610-K000101 or later approved standard
- Software: TAE-125 m3.0 or later approved standard
- Software Mapping: Refer to Service Bulletin TM TAE 000-0007 for approved software P/N.

8. Fluids (Fuel, Oil, Coolant, Additives)

See Operation & Maintenance Manual for approved fluids (see also Note 4).

9. Aircraft Accessory Drives

There are no provisions for customer/aircraft furnished equipment.

IV. Operating Limitations

1. Temperature Limits

- Minimum opening up Fuel Temperature (for Diesel fuel operation only, see also OM-02-01 resp. OM-02-02): -5 °C (23 °F)
- Minimum opening up Oil Temperature: 50 °C (122 °F)
- Max. Oil Temperature: 140 °C (284 °F)
- Minimum ambient temperature for starting: -32 °C (-26 °F)
- Minimum opening up Cooling Fluid Temperature: 60 °C (140 °F)
- Max. Cooling Fluid Temperature: 105 °C (221 °F)
- Max. Gearbox Temperature: 120 °C (248 °F)

2. Speed Limits

- Maximum Engine Overspeed (Crankshaft Speed): 4220 rpm

3. Pressure Limits

- Minimum Fuel Pressure (at inlet of LP engine pump): 200 mbar (2.9 psi)
- Minimum Oil Pressure: 1.0 bar (14.5 psi)
- Oil Pressure (normal operation): 2.3 ... 6.0 bar (33.4 ... 87 psi)
- Maximum Oil Pressure (for cold start, max. up to 20 sec): 6.5 bar (94.3 psi)
V. Operating and Service Instructions

<table>
<thead>
<tr>
<th>Manual Type</th>
<th>TAE 125-01</th>
<th>TAE 125-02-99</th>
<th>TAE 125-02-114</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation Manual</td>
<td>IM-02-01</td>
<td>IM-02-02</td>
<td>IM-02-02</td>
</tr>
<tr>
<td>Operation &amp; Maintenance Manual</td>
<td>OM-02-01</td>
<td>OM-02-02</td>
<td>OM-02-02</td>
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<tr>
<td>Overhaul Manual</td>
<td>OHM-02-01</td>
<td>OHM-02-02</td>
<td>OHM-02-02</td>
</tr>
<tr>
<td>Service Bulletins and Service Letters</td>
<td>as issued</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VI. Notes

Note 1: Engine model numbers may include suffixes in parentheses to define installation specific configuration changes. The software of the electronic engine control for each application has a specific software mapping. See Service Bulletin TM TAE 000-0007 for the installation versions and software mappings. Also refer to Installation Manual for appropriate installation.

Note 2: The applicable EASA Certification Basis for the TAE 125-02 engine models would have been the same as for the TAE 125-01 engine model, however, TAE elected to comply to CS-E except for CS-E 130 (h).

Note 3: The TAE 125 engine is approved for the installation in Part 23 normal and utility category airplanes.

Note 4: The TAE 125 engine is approved for the operation with Jet fuels (see Operation & Maintenance Manual) and Diesel fuel according to EN 590. However, the cloud point (CFPP) of Diesel fuel is regulated by national appendices to the EN 590 Standard, and it varies between the countries and the time of the year. Therefore, the installation of a fuel tank thermometer is required as well as a minimum engine starting temperature is defined (refer to Installation Manual IM-02-01 resp. IM-02-02).

Note 5: The TAE 125-01 engine, including the FADEC, is approved for use with the propeller MTV-6-A/187-129, MTV-6-A/190-129 and MTV-6-A-C-F/CF187-129 models. This approval does not include the approval of the propellers and their control systems (see also Note 12).

The TAE 125-02-99 and TAE 125-02-114 engine models, including the FADEC, are approved for use with the propeller models

MTV-6-A-(1*)(2**)-(3**)-(4****)

(1*) Feather provision (Hub):
- blank = no feather position possible
- C - F = counterweights for pitch change forces to increase pitch and feather position possible

(2**) Position of pitch change pin:
An agency of the European Union

This approval does not include the approval of the propellers and their control systems (see also Note 12).

Note 6: For TAE 125-01: Overhaul is permitted for several engine parts only, see Overhaul Manual OHM-02-01.

Note 7: For the TAE 125-01 core engine a recommended engine life has been established. The Time Between Replacement (TBR) of the TAE 125-01 and the Time Between Overhaul (TBO) of the TAE 125-02 models is published in Service Bulletin TM TAE 125-0001.

Note 8: The engine control system has been tested according to DO-160D for lightning protection and magnetic interference. The demonstrated levels are declared in the Installation Manual.

Note 9: The FADEC must not be installed in a dedicated fire zone. The installation conditions are defined in the Installation Manual.


Note 11: Dispatch Limitations: At present there are no dispatch limitations.

Note 12: This engine design features an integrated propeller control in the FADEC. The software in the FADEC has been developed in accordance with DO-178B at level C. The approval of the engine and its FADEC does not include approval of the propeller control system.

Note 13: Sales name of the model
TAE 125-01: CENTURION 1.7
TAE 125-02-99: CD-135 (previous name until 18 July 2014: CENTURION 2.0)
TAE 125-02-114: CD-155 (previous name until 18 July 2014: CENTURION 2.0 S)
SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations
n/a

II. Type Certificate Holder Record

Technify Motors GmbH
Platanenstr. 14
D-09356 Sankt Egidien
Germany
DOA EASA.21J.010

Previous TC Holder (before 19 August 2013):

Thielert Aircraft Engines GmbH
Platanenstr. 14
D-09350 Lichtenstein
Germany

III. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC Issue</th>
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<tbody>
<tr>
<td>Issue 1</td>
<td>24 March 2006</td>
<td>Initial version</td>
<td>24 March 2006</td>
</tr>
<tr>
<td>Issue 2</td>
<td>14 August 2006</td>
<td>Addition of new model TAE 125-02</td>
<td>14 August 2006</td>
</tr>
<tr>
<td>Issue 3</td>
<td>03 January 2007</td>
<td>For TAE 125-02: Increase of take-off power from 99 kW to 114 kW, decrease of min. ambient temp. for starting from -25°C to -32 °C</td>
<td></td>
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<tr>
<td>Issue 4</td>
<td>06 March 2007</td>
<td>Introduction of TAE 125-02-99 and TAE 125-114 as separate models</td>
<td>06 March 2007</td>
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<tr>
<td>Issue 5</td>
<td>11 May 2007</td>
<td>Editorial change</td>
<td></td>
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<tr>
<td>Issue 6</td>
<td>22 April 2008</td>
<td>Increase of TAE 125-02-114 max. recommended/ best economy cruising power from 71 kW to 97 kW</td>
<td></td>
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<tr>
<td>Issue 7</td>
<td>19 August 2013</td>
<td>Change of TC Holder /Manufacturer</td>
<td>19 August 2013</td>
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<tr>
<td>Issue 8</td>
<td>20 March 2014</td>
<td>Change in Note 5: Approved propellers for TAE 125-02-99 and TAE 125-02-114</td>
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<tr>
<td>Issue 9</td>
<td>18 July 2014</td>
<td>Change of sales names</td>
<td></td>
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<tr>
<td>Issue 10</td>
<td>08 January 2016</td>
<td>Change in Note 6 and 7: Limited overhaul for TAE 125-01 only</td>
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</table>

-END-