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I - General

1. Type / Models : TAE 110 / TAE 110-01

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. EASA Certification Application Date:

TAE 110-01				
13 Sept. 1999				

Note: Application for TAE 110-01 had been made to JAA before EASA was established.

5. EASA Certification Date:

TAE 110-01				
08 March 2001				

Note: TAE 110-01 had been certified by LBA Germany (TC/TCDS 4628) prior to EASA existence.
This TCDS replaces LBA TCDS No 4628.
Transfer date to EASA Type Certificate: 19 August 2013

II - Certification Basis

- 1. Airworthiness Standards:** JAR-22, Change 5, Subpart H
- 2. Special Conditions (SC):** SC1 Electronic Engine Control System
SC2 Equipment with High Energy Rotors
- 3. Equivalent Safety Findings (ESF):** none
- 4. Deviations:** none
- 5. Environmental Standards:** none (not required for piston engines)

III - Technical Characteristics

1. Type Design Definition: TDD 01-01, issue 2 dated 06 December 2000 or later approved revision

2. Description:

The TAE 110 engine is a 4-cylinder, four stroke Diesel piston engine with an displacement of 1689 cm³, equipped with common rail high pressure direct injection, turbocharger, gearbox with reduction ratio of 1:1.4138, and FADEC.

3. Equipment:

See Installation Manual.

4. Dimensions:	Overall Length:	650 mm
	Overall Height:	580 mm
	Width:	740 mm

5. Dry Weight: 141 kg

6. Ratings (ISA, SLS):

Max. Takeoff (5 min.):	81 kW at 3675 rpm
Maximum Continuous:	66 kW at 3400 rpm

7. Control System

The engine is equipped with a Full Authority Digital Engine Control (FADEC).
EEC P/N 01-7610-5500102 or later approved standard.

Software: TAE-110 ECU v.3.00 or later approved standard
Software verified to level C according to RTCA Document DO-178B.

8. Fluids (Fuel/Oil/Additives):

See Operation & Maintenance Manual for approved fluids.

9. Aircraft Accessory Drives:

There are no provisions for customer/aircraft furnished equipment.

IV - Operational Limitations

1. Temperature limits:

Max. Oil Temperature:	140°C
Max. EGT:	790°C
Max. Intake Air Temperature (after the turbocharger):	100°C
Max. Cooling Fluid Temperature:	105°C
Min. opening up Fuel Temperature:	-5°C (see OM 01-01)

2. Speed Limits:

Maximum Engine Speed (Crankshaft Speed):	3675 rpm
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3. Pressure Limits:

Minimum Fuel Pressure (at inlet of LP engine pump):	400 mbar
Minimum Oil Pressure:	1.0 bar
Oil Pressure (normal operation):	1.2 ... 5.0 bar
Maximum Oil Pressure (for cold start, max. up to 20 sec):	6.5 bar

V - Operational and Service Instructions

1. Installation Manual: IM 01-01
2. Maintenance Manual: Operation & Maintenance Manual OM 01-01
4. Service Bulletins and Service Letters: As Required

VI - Notes

- Note 1:** The Engine/Propeller combination must be approved as part of the aircraft type certification upon compliance with the applicable airworthiness requirements.
The TAE 110-01 engine is approved for installation in VLA and powered gliders only.
- Note 2:** For the TAE 110 engine a recommended engine life has been established. The Time Between Replacement (TBR) is published in chapter 7 of the Operation & Maintenance Manual.
- Note 3:** 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 4:** Overhaul is not permitted.
- Note 5:** Installation Assumptions: See Installation Manual
- Note 6:** The engine is approved for Diesel fuel according to EN590.
However, the cloud point (CFPP) of this type of fuel is regulated by national annexes to the EN590 standard and 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 01-01, Chapter 4.6).
- Note 7:** The EEC must not be installed in a dedicated fire zone. The installation conditions are defined in the Installation Manual.