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## **I - General**

**1. Type / Models:** Continental C90 / Continental C90-8F, C90-8FJ, C90-12F, C90-12FH, C90-12FJ, C90-12FP, C90-14F, C90-14FH, C90-14FJ, C90-16F, Continental O-200 / Continental O-200-A, O-200-B, O-200-C, O-200-D

**2. Type Certificate Holder:**

Teledyne Continental Motors  
P.O. Box 90  
Mobile, Alabama 36601, USA

**3. Manufacturer:** Teledyne Continental Motors

**4. EASA Certification Application Date:**

|            |  |  |  |  |  |
|------------|--|--|--|--|--|
| O-200-D    |  |  |  |  |  |
| 7 May 2010 |  |  |  |  |  |

**5. EASA Certification Date:**

|               |  |  |  |  |  |
|---------------|--|--|--|--|--|
| O-200-D       |  |  |  |  |  |
| 28 March 2011 |  |  |  |  |  |

EASA Type-Certification for the Continental C90-8F, -8FJ, -12F, -12FH, -12FJ, -12FP, 14F, -14FH, -14FJ, -16F, O-200-A, O-200-B, and O-200-C engine models is granted, in accordance with Article 2 paragraph 3(a)(i) of EU Commission Regulation EC 1702/2003, based on the respective EU Member States approvals prior to 28 September 2003.

## **II - Certification Basis**

1. Airworthiness Standards:

All except O-200-D: CAR 13

O-200-D: CS-E Initial Issue

2. Special Conditions (SC): none

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:**

As defined by TCM stocklist.

#### **2. Description:**

The Continental C90/O-200 engine is a carbureted, horizontally opposed, four cylinder four stroke, spark-ignited, air-cooled, wet sump engine incorporating a bottom induction and exhaust system, and provisions for rear mounted accessories. C90 series engines suffixed by the letter J are equipped with a fuel injector instead of a carburetor.

Displacement: 3.29 dm<sup>3</sup> (201 cu. in.)  
Bore x stroke: 103.2 mm x 98.4 mm (4.0625 in. x 3.875 in.)  
Compression ratio: 7 : 1 (all except O-200-D)  
8.5 : 1 (O-200-D)  
Gear ratio: N/A

#### **3. Equipment:**

Magnetos: 2 Bendix-Scintilla S4RN-21 or -1227; or Slick –Electro 443 or 4003 magnetos or 1 each Bendix-Scintilla S4RN-200 and 204 (for C90-8F)  
2 Bendix-Scintilla S4LN-21 or -1227 or 1 each S4LN-200 and -204; Slick-Electro 447, 4001 or 4201 magnetos (for C90-12F, -14F, -16F; O-200-A, -B, -C)  
Slick Electro 4301 (both sides) or 1 each TCM S4LSC-200 and S4LSC204 or 1 each TCM S4LSC-200 and S4LSC204T or TCM S4LSC-21 (both sides) (for O-200-D)  
Spark Plugs: Ref. TCM Service Information Letter SIL03-2 or latest FAA approved revision  
Alternators: The engine is provided with a gear driven alternator.

#### **4. Dimensions:**

| Model          | C90-8F           | C90-8FJ          | C90-12F           | C90-12FH          |
|----------------|------------------|------------------|-------------------|-------------------|
| Overall Length | 747 mm (29.4 in) | 747 mm (29.4 in) | 795 mm (31.3 in)  | 795 mm (31.3 in)  |
| Overall Height | 709 mm (27.9 in) | 709 mm (27.9 in) | 730 mm (28.75 in) | 730 mm (28.75 in) |
| Width          | 800 mm (31.5 in) | 800 mm (31.5 in) | 800 mm (31.5 in)  | 800 mm (31.5 in)  |

| Model          | C90-12FJ          | C90-12FP          | C90-14F           | C90-14FH          |
|----------------|-------------------|-------------------|-------------------|-------------------|
| Overall Length | 795 mm (31.3 in)  | 795 mm (31.3 in)  | 795 mm (31.3 in)  | 795 mm (31.3 in)  |
| Overall Height | 730 mm (28.75 in) | 730 mm (28.75 in) | 730 mm (28.75 in) | 730 mm (28.75 in) |
| Width          | 800 mm (31.5 in)  | 800 mm (31.5 in)  | 800 mm (31.5 in)  | 800 mm (31.5 in)  |

| Model          | C90-14FJ          | C90-16F           | O-200-A           | O-200-B           |
|----------------|-------------------|-------------------|-------------------|-------------------|
| Overall Length | 795 mm (31.3 in)  | 795 mm (31.3 in)  | 775 mm (28.53 in) | 775 mm (28.53 in) |
| Overall Height | 730 mm (28.75 in) | 730 mm (28.75 in) | 589 mm (23.18 in) | 589 mm (23.18 in) |
| Width          | 800 mm (31.5 in)  | 800 mm (31.5 in)  | 802 mm (31.56 in) | 802 mm (31.56 in) |

| Model          | O-200-C           | O-200-D          |  |  |
|----------------|-------------------|------------------|--|--|
| Overall Length | 775 mm (28.53 in) | 666 mm (26.2 in) |  |  |
| Overall Height | 589 mm (23.18 in) | 667 mm (26.2 in) |  |  |
| Width          | 802 mm (31.56 in) | 802 mm (31.6 in) |  |  |

#### **5. Dry Weight:**

| Model  | C90-8F            | C90-8FJ, C90-12F, -12FH, -12FP, -14F, -14FH, -16F | C90-12FJ, -14FJ   | O-200-A, -B, -C,  |
|--------|-------------------|---|-------------------|-------------------|
| Weight | 83.5 kg (184 lbs) | 85.3 kg (188 lbs)                                 | 87.1 kg (192 lbs) | 86.2 kg (190 lbs) |

| Model  | O-200-D             |  |  |  |
|--------|---------------------|--|--|--|
| Weight | 79.6 kg (176.5 lbs) |  |  |  |

**6. Ratings:**

| Rating         |  | C90-8F, -8FJ, -12F, -12FH, -12FJ, -12FP, -14F, -14FH, -14FJ, -16F | O-200-A, -B, -C, -D    |  |
|----------------|--|---|------------------------|--|
| Power, kW (HP) | Take-off, 5 min., full throttle at sea level pressure altitude | 70.8 (95) at 2625 RPM   | 74.6 (100) at 2750 RPM |  |
|                | Max. Continuous at sea level pressure altitude                 | 67.1 (90) at 2475 RPM   | 74.6 (100) at 2750 RPM |  |

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

**7. Control System**

The C90/O-200 series engines are equipped with a carburetor and a two magneto ignition system.

**8. Fluids (Fuel/Oil/Additives):**

Fuel: Aviation Gasoline, minimum grade 80/87 (all except O-200-D), minimum grade 100LL, 100/130 (O-200-D)

Oil: see TCM Spec MHS No. 24

**9. Aircraft Accessory Drives:**

| Designation                         | Rotation direction | Speed ratio to crankshaft | Max. Torque Nm (in. lbs) |             | Max. Overhang moment Nm (in. lbs) |
|-------------------------------------|--------------------|---------------------------|--------------------------|-------------|-----------------------------------|
|                                     |                    |                           | Continuous               | Static      |                                   |
| Tachometer <sup>1)</sup>            | CW                 | 0.5:1                     | 0.79 (7)                 | 5.65 (50)   | 2.82 (25)                         |
| Starter                             | CW                 | 35.7:1                    |                          |             |                                   |
| Fuel Pump (diaphragm) <sup>2)</sup> | CW                 | 0.5:1                     |                          |             |                                   |
| Generator, gear driven              | CW                 | 2.035:1                   | 6.78 (60)                | 67.79 (600) | 11.30 (100)                       |
| Vacuum Pump <sup>3)</sup>           | CCW                | 1:1                       | 11.30 (100)              | 90.39 (800) | 2.82 (25)                         |

Notes : - CW - clockwise; CCW – counter clockwise (viewing drive pad)

<sup>1)</sup> Does not apply to O-200-D engines

<sup>2)</sup> TCM Equipment 5809 incorporating TCM P/N 40585 pump approved as part of type design of the O-200-A, -B, -C engines. AC fuel pump, TCM P/N 631391, available as optional equipment on C90-16F.

<sup>3)</sup> C90-16F, and O-200-A, -B, -C engines only



"J" denotes incorporation of Model B-46 Ex-Cell-O fuel injector, P/N 530499, or American Bosch Model PGC-4A-95A2, P/N 534505, at a weight increase of 4 lbs. over the corresponding carburettor equipped engine.

"P" denotes pusher installation incorporating special crankshaft and thrust bearing.

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