

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号认可证数据单

THE VALIDATION DATA SHEET

编号/No.: VTC0351E

版次/Revision: 0

型号/Type:

IO-520-CB

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职务/Title: Director General of CAAC-AAD

日期/Date: 2018 年 7 月 12 日

本数据单是型号认可证（编号：VTC351E）的组成部分，它规定了符合中国民用航空局的适航要求所颁发此型号认可证的产品状态和限制。

This data sheet, which is part of Validation of Type Certificate (No: VTC0188E), prescribes condition and limitation under which the product for which the type certificate was issued meets the airworthiness requirements of the Chinese Civil Aviation Regulation.

型号认可证持有人/Validation of Type Certificate Holder:

大陆发动机公司/Continental Motors Inc.

2039 Broad Street

Mobile, Alabama 36615

America

有效页清单/List of effective pages :

页数/ Pages	1	2	3	4	5	6								
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第1部分 概述

Section 1 GENERAL

1. CAAC 认可数据单和型号合格证数据单/CAAC Validation Data Sheet and Type Certificate Data Sheet

	中国民用航空总局认可数据单号、版次和颁发日期 CAAC Validation Data Sheet Number, Revision and issuance date	型号合格证数据单号、版次和颁发日期 Type Certificate Data Sheet Number, Revision and issuance date
当前 Current	VTC351E, 版次0, 2018年7月12日 VTC351E, Revision 0, July 12, 2018	TCDS No. E5CE, 第26版, 2011年11月2日 TCDS No. E5CE, Revision 26, November 2, 2011

2. 类别/Category: 航空发动机/Aeroengine

3. 认可当局/Validation Authority: 中国民用航空局/CAAC
审定当局/Certifying Authority: 美国联邦航空局/FAA

4. 型号合格证持有人/Type Certificate Holder: Continental Motors
P. O. Box 90
Mobile, Alabama 36601

5. ETOPS: 不适用/NA

6. CAAC 专用要求/Special Requirements: 无/NONE

第2部分 数据单

Section 2 DATA SHEET

型号/Models	IO-520-CB
类型/Type	6 缸水平对置/6HOA
额定最大持续功率-转速, 海平面压力下 ICAO 或者 ARDC 标准大气 Rating, ICAO or ARDC Standard Atmosphere Max Continuous hp-r.p.m at Sea Level Pressure Altitude	285-2700
全油门海平面压力, 5 分钟起飞功率、转速 Takeoff hp., 5 min, r.p.m full throttle at sea level pressure altitude	285-2700
燃油 (最低航空燃油等级) Fuel (minimum grade aviation)	ASTM D910 标准 100LL, 100 号 100LL, 100 per ASTM D910 or B95/130CIS
滑油/Lubricating Oil	SAE-J1899 标准润滑油或满足 CMI MHS-24 标准 J1966 滑油 Lubricating oils qualified under SAE-J1899 or J1966 are considered qualified under CMI Spec MHS-24
缸径和冲程, 英寸/Bore and Stroke, in.	5.25×4.00
排量, 立方英寸/Displacement, in ³	520
压缩比/Compression ratio	8.5:1
重量 (干重) 磅/Weight (dry) pounds	417
重心 (发动机本体) C.G. location (Basic Engine)	
附件箱结合面向前, 英寸 Fwd. of rear face acc. Case, in	11.7
曲轴中心线下, 英寸 Below Crankshaft Centerline, in	0.5
曲轴中心线向 1-3-5 气缸侧 Beside crankshaft centerline toward the 1-3-5 side	0.12
螺旋桨轴/Propeller Shaft	ARP-502 标准 1 型, 外径 4-7/8 英寸, 在 4 英寸直径上分部 6 个 1/2 英寸的螺栓孔 ARP-502, Type I flange 4-7/8 in. O.D. with six ½ in. bolt holes in 4 in. diameter circle
燃油喷射/Fuel Injection	CMI 公司燃油喷射系统 C 639177A2、CB639177A、M 641057A4、MB 641057A CMI injection system C 639177A2, CB639177A, M 641057A4, MB 641057A
双点火/Ignition, dual	(见注 9/See NOTE 9)
正时/Timing, °BTC	22
火花塞/Spark plugs	(见注 10/See NOTE 10)
滑油量, 夸脱/Oil Sump Capacity, qt.	12; 仰角 20° 时可用容量 7; 俯角 15° 时可用容量 7 12; 7 usable at 20° noseup and 7 usable at 15° nosedown attitudes

审定基础/Certification Basis 1965年6月15日生效的民用航空规章第13部，修正案13-1至13-5。型号合格证E5CE于1963年5月28日颁发，IO-520-CB在1978年5月4日加入。
Part 13, Civil Air Regulations, effective June 15, 1956, as amended by 13-1 through 13-5. Type Certificate No. E5CE issued May 28, 1963 IO-520-CB added May 4, 1978.

生产基础/Production Basis 生产合格证/Production Certificate No. 508

注 1/NOTE 1. 最高许用温度/Maximum permissible temperature:
缸头（卡口式热电偶）/Cylinder head bayonet thermocouple 460° F
缸筒/Cylinder barrel 310° F
滑油进口/Oil inlet 240° F

注 2/NOTE 2. 燃油压力限制/Fuel pressure limits:
进口至喷油泵/Inlet to injection pump 最低负2 p.s.i.g./min. minus 2 p.s.i.g.
最高正10 p.s.i.g./max. plus 10 p.s.i.g.
出口至蒸发气体回收管/Outlet to vapor return line 最大正3.5 p.s.i.g./plus 3.5 p.s.i.g. max

注 3/NOTE 3. 滑油压力限制/Oil pressure limits:
2-4-6缸体一侧/2-4-6 side – 正常/Normal 30-60 p.s.i.a.
慢车/Idle 10 p.s.i.a. min.
最大（冷油）/Maximum (cold oil) 100 p.s.i.a.

注 4/NOTE 4. 以下附件驱动或安装规定适用/The following accessory drive or mounting provisions are available:

原附件 Original Accessory	转向* Direction of Rotation*	发动机曲轴传动比 （转每分） Drive Ratio to Crankshaft	最大持续扭矩 Maximum Torque Continuous	静力矩 Static (in-lb)	最大悬臂力矩 英寸磅（牛米） Max Overhang Moment (In. lb)
转速计/Tachometer					
AND 20005	可选/Optional	0.5:1	7	50	25
**螺旋桨调速器/Propeller governor	C	1:1	29	825	50
***可选（2）左侧和右侧 Optional (2) Left and right side	C	1.5:1	100	800	40
齿轮驱动/ Gear Driven					
-CB	CC	3:1	150	800	150
滑油冷却器/Oil Cooler	—	—	—	—	65
启动机/Starter	CC	48:1	200	400	60

*C – 顺时针，面对驱动盘/Clockwise viewing drive pad; CC – 逆时针/Counterclockwise

** 改进的AND 20010驱动盘/Modified AND 20010 pad.

*** 改进的AND 20010驱动盘。如果其他驱动没有超过100英寸-磅连续扭矩，则一个驱动连续扭矩载荷可以达到160英寸-磅连续扭矩。

Modified AND 20000 pads. One drive eligible at 160 in.-lb. continuous torque load if other does not exceed 100 in.-lb. continuous.

- 注 5/NOTE 5. IO-520-CB的曲轴有一个4阶、一个5阶和2个6阶阻尼块。
Models IO-520-CB have crankshaft with one 4th, one 5th and two 6th order dampers.
- 注 6/NOTE 6. IO-520-B与IO-520-A相似，除了滑油槽、曲轴箱和附件箱的设计，整合了一个整体滑油滤，并重新定位了发电机驱动、燃油喷射泵、滑油冷却器、安装盘和空气油门。
Model IO-520-B is similar to IO-520-A except for oil sump, crankcase and accessory case design, incorporation of an integral oil filter, and relocation of generator drive, fuel injection pump, oil cooler mounting pad and air throttle body.
IO-520-CB除了改进了曲轴之外，与IO-520-B相似。
Model IO-520-CB is similar to the IO-520-B except for modified crankshaft.
- 注 7/NOTE 7. 保留/Reserved.
- 注 8/NOTE 8. 该型号发电机可安装自动启动注油系统，设备编号6159。
These models of engines are eligible for installation of Automatic Priming Starting System, Equipment No. 6159.
- 注 9/NOTE 9. 以下磁电机包括合适的线缆可用于该型号发电机，重量改变如下：
The following magnetos equipped with an appropriate harness are eligible on these engines at the indicated weight change:
- | | <u>重量改变/Wt. Change</u> |
|---|------------------------|
| One each CMI/TCM/Bendix S6RN-201 and S6RN-205 | 无/None |
| One each CMI/TCM/Bendix S6RN-1201 and S6RN-1205 | + 1 lb. |
| Two CMI/TCM/Bendix S6RN-25 | + 1 lb. |
| Two Slick Electro Model 662 or 680 | + 2 lb. |
| Two CMI/TCM/Bendix S6RN-1225 | + 1 lb. |
| Two Slick Electro Model 6210 | - 3 lb. |
| One ea.CMI/TCM S6RSC-201 and S6RSC-205 | 无/None |
| Two CMI/TCM S6RSC-25 | + 1 lb. |
- 注 10/NOTE 10. 下列火花塞及列在CMI服务信息信函SIL03-2中的被批准用在该发动机上：
The following spark plugs and/or those listed in CMI Service Information Letter SIL03-2 are approved on this engine:
- | | |
|-----------|--|
| AC | 271, 273, 281, 281IR, 283, 283IR, 291, 293 |
| Auto Lite | PL350, SL350 |
| Champion | RHB32E, RHB32N, RHB32P, RHB32W, RHB33E, RHB36P, RHB36W |
| Red Seal | LJ360 |
- 注 11/NOTE 11. 保留/Reserved.
- 注 12/NOTE 12. Teledyne Crittenden的交流发电机P/N 642056和驱动耦合器P/N 642362以及FAA最新批准的部件可用于适用的发动机型号。交流发电机与航空器的兼容性由安装人员完成。
Teledyne Crittenden alternator P/N 642056 and drive coupling P/N 642362 or latest FAA approved components are eligible for use with applicable engine models. Alternator compatibility with aircraft must be

accomplished by installer.

注 13/NOTE 13. Teledyne Crittenden的交流发电机P/N 642055和驱动耦合器P/N 64362、642362以及FAA最新批准的部件可用于适用的发动机型号。交流发电机与航空器的兼容性由安装人员完成。

Teledyne Crittenden alternator P/N 642055 and drive coupling P/N 64362 642362 or latest FAA approved components are eligible for use with applicable engine models. Alternator compatibility with aircraft must be accomplished by installer.

注 14/NOTE 14. 保留/Reserved.

结束

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