

中国民用航空总局

GENERAL ADMINISTRATION OF CIVIL AVIATION OF CHINA

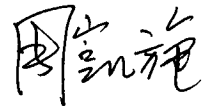
编号/No.: VTC0179E

修订 / Rev: 0

型号 / Models:

IO-550-B IO-550-N

批准人 / Approved by:



日期 / Date: 2007-1-19

型号认可证数据单编号:VTC0179E

Validation Type Certificate Data Sheet No. VTC0179E

本数据单, 作为型号认可证(编号: **VTC0179E**)的一部分, 规定了一些条件和限制, 在此条件和限制下, 获得本型号认可证的产品满足下述“认可审定基础”段落给出的适航要求。

This data sheet which is a part of Validation Type Certificate No. **VTC0179E** prescribes conditions and limitations under which the product for which the Validation Type Certificate was issued meets the airworthiness requirements indicated in the paragraph “Validation Basis”.

IO-550-B 型于 1983 年 10 月 13 日由美国 FAA 颁发的型号合格证 No. E3S0 批准, 最新数据单版次为 FAA 于 2002 年 2 月 4 日批准的第 7 版。

Model IO-550-B is approved by Type Certificate No. E3S0 issued by American FAA on October 13, 1983. The latest Data Sheet is revision 7 approved by FAA on February 4, 2002.

IO-550-N 型于 1996 年 8 月 16 日由美国 FAA 颁发的型号合格证 No. E3S0 批准, 最新数据单版次为 FAA 于 2002 年 2 月 4 日批准的第 7 版。

Model IO-550-N is approved by Type Certificate No. E3S0 issued by American FAA on August 16, 1996. The latest Data Sheet is revision 7 approved by FAA on February 4, 2002.

型号合格证持有人: Teledyne Continental Motors 美国阿拉巴马州 莫比尔市 36601

TYPE CERTIFICATE HOLDER: Teledyne Continental Motors Mobile, Alabama 36601

型号/Model

IO-550-B

IO-550-N

型式/Type

--

ICAO 或 ARDC 标准大气下的额定值/

Rating, ICAO or ARDC Standard atmosphere

最大连续 马力, r.p.m 海平面 压 力 高 度 /Max.continuous hp,r.p.m.in.Hg.at: Sea level pressure altitude	300-2700	310-2700
起飞 马力, 5 分钟, r.p.m 全油 门, 海平面压力高度/Takeoff hp,5 min,r.p.m.full throttle at sea level pressure altitude	300-2700	310-2700
燃油 (航空汽油, 最低品级) / Fuel(aviation gasoline,minimum grade)	100,100LL, ~~100~~ 130CIS	100,100LL, ~~100~~ 130CIS
润滑油/Lubricating oil	TCM Spec MHS No.24	--
气缸内径和行程, 英寸/Bore and stroke, in.	5.25 x 4.25	--
气缸容积/ Displacement, cu.in	552	--
压缩比/Compression ratio	8.5:1	8.5:1
干重, 磅/Weight(dry), lb	430.72	428.97
重心位置 (基本发动机) / C.G Location(basic engine)	12.20	12.76
附件机匣后端前向, 英寸/Fwd of rear face accessory case, in		
曲轴中线下, 英寸/ Below crankshaft centerline, in	.54	.21
曲轴中线下向 1-3-5 侧, 英寸 /Below crankshaft centerline toward 1-3-5side, in	.25	.23
螺旋桨轴/Propeller shaft	APR-502, Type I flange,4-7/8in.OD with	--

six-1/2 in.bolt holes in 4
in.diameter circle

燃油喷嘴/Fuel injection	TCM Injector	--
点火，双磁电机/Ignition, dual magnetos	见注 2/See Note2	--
正时/Timing, ° BTC	22	--
火花塞/Spark plugs	见注 3/See Note3	--
滑油箱容积，夸脱/Oil sump capacity, qts	12 夸脱:上仰 26°时可用量为 6.1 夸脱, 下俯 13.5° 时可用量为 6.1 夸脱/12;6.1 usable at 26° nose up &6.1 usable at 13.5° nose down	8 夸脱:上仰 16°时可用量为 5 夸脱, 下俯 10° 时可用量为 4.5 夸脱/8;5 usable at 16° nose up &4.5 usable at 10° nose down

FAA 审定基础

FAA Certification Basis

对 IO-550-B 型/ Applicable to Model IO-550-B:

1965年2月1日生效的联邦航空规章第33部的1至8修正案（1977年5月2日颁发）。

Federal Aviation Regulations Part 33 effective February 1, 1965, as amended through Amendment 33-8,dated May 2,1977.

对 IO-550-N 型/ Applicable to Model IO-550-N:

1965年2月1日生效的联邦航空规章第33部的1至14修正案（1990年8月10日颁发）。

Federal Aviation Regulations Part 33 effective February 1, 1965, as amended through Amendment 33-14,dated August 10,1990.

CAAC 认可审定基础

CAAC Validation Certification Basis

CAAC 接受 FAA 的审定基础为认可审定基础

CAAC accepts FAA certification basis as validation basis for this validation program

生产基础

生产许可证 No.508

Production Basis

Production Certificate No.508

注 1/Note 1

最大许用温度/Maximum permissible temperature:

对 IO-550-N 型/ Applicable to Model IO-550-N:

气缸头 bayonet, 热电偶/Cylinder head bayonet,thermocouple
滑油进口/Oil inlet

460°F
240°F

注 2/Note 2

重量变化如下所示的下列装有适用导线的磁电机可安装在相应发动机上/The following magnetos with the appropriate harness are eligible on applicable engines at the indicated weight change.

	IO-550-B (Weight Change)	IO-550-N (Weight Change)
TCM/Bendix Scintilla S6RN-201 和 S6RN-205 各 1 个	-1 磅/lb	N/A
TCM/Bendix Scintilla S6RN-1201 和 S6RN-1205 各 1 个	无/None	N/A
2 个 TCM/Bendix Scintilla S6RN-25	无/None	无/None
2 个 TCM/Bendix S6RN-1225	无/None	N/A
2 个 Bendix S6RSC-25	无/None	无/None
2 个 Slick Electro Model 6210	-4 磅/lb	N/A
2 个 Slick Electro Model 6310	-4 磅/lb	N/A

注 3/Note 3

下列火花塞经批准，可用于相应型号发动机：

对 IO-550-N 型/ Applicable to Model IO-550-N:

AC 271, 273, 281, 281IR, 283, 283R, 291, 293

Auto Lite PL350,SO350

Champion RHB32E, RHB32N, RHB32P, RHB32W, RHB33E, RHB36P, RHB36W

注 4/Note 4

燃油压力限制/Fuel pressure limits:

对 IO-550-N 型/ Applicable to Model IO-550-N:

燃油喷射泵进口/Inlet to injection pump,	min-	-3.5 p.s.i.g
	max-	+6.0 p.s.i.g
上回油管出口/Outlet to upper return line,	max-	+3.5 p.s.i.g

注 5/Note 5

滑油压力限制/Oil pressure limits:

对 IO-550-N 型/ Applicable to Model IO-550-N:

2-4-6 侧/side	- 正常/Normal	30-60 p.s.i.g
	- 慢车/Idle	10 p.s.i.g
	- 最大（冷滑油）Maximum(cold oil)	100 p.s.i.g

注 6/Note 6

对 IO-550-N 型/ Applicable to Model IO-550-N:

附件传动或安装规定如下/The following accessory drive or mounting provisions are available:

附件 /Accessory	方向或旋 转 /Direction or Rotation	曲轴传动 比 /Drive Ratio to Crankshaft	最大扭矩/Max Torque (英寸-磅/In-Lbs) 连续/Cont 静态/Static		最大垂悬 力矩 /Max Overhang Moment	衬垫构型 /Pad Configuration
* 						
转速计 /Tachometer	CCW	.5:1	7	50	25	AND 20005
螺旋桨调 速器 /Propeller Gov	CW	1:1	29	825	50	(Mod)AND 20010
磁电机 /Magnet	CCW	1.5:1	-	-		特殊/Special
启动机 Starter	CCW	48:1	200	400	60	特殊/Special
燃油泵 /Fuel Pump	CW	1:1	25	680	60	特殊/Special
** 附件传 动 (2) /Accessory Drive(2)	CW	1.5:1	100	800	40	AND20000 or mod per MS3325
交流发电 机齿轮传 动 /Alternator Gear Drive	CCW	3:1	100	500	150	特殊/Special

* CW-Clockwise/顺时针方向, CCW-Counterclockwise(viewing drive pad)/逆时针方向

注 7/Note 7

IO-550-N 型发动机安装有带 one 4th,one 5th and two 6th order 减震器的曲轴。/

Model IO-550-N incorporate a crankshaft with one 4th,one 5th and two 6th order damper.

注 8/Note 8

IO-550-N 型发动机可安装氟利昂压缩机驱动系统/Model IO-550-N is eligible for installation of the freon compressor drive system

注 9/Note 9

重量变化如下所示的下列交流发电机可安装在 IO-550-N 型发动机上的/

The following alternators are eligible on Model IO-550-N engine at the indicated weight change.

重量变化/Wt.Change

TCM 50AMP-24V	+12.31 磅/LBS
TCM 100AMP-24V	+17.56 磅/LBS
Prestolite 70AMP-24V	+11.6 磅/LBS

注 10/Note 10

适用于 12V 和 24V 系统/Applicable to both 12V and 24V systems.

注 11/Note 11

可在发动机型号编号中加后缀以定义发动机所做的设计小改/Engine model numbers may include a suffix to define minor specification changes.Example/例如:IO-550-B(1B)

注 12/Note 12

适用的经 FAA 批准和/或可接受的手册/Applicable FAA approved and/or accepted manuals:

使用 and 安装手册/Operation&Installation	X30565A
维护手册/Maintenance	X305634A
大修手册/Overhaul	X30568A

中国民用航空总局

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IO-550-B IO-550-N

批准人 / Approved by:

日期 / Date: 2007-1-19

型号认可证数据单编号:VTC0179E

Validation Type Certificate Data Sheet No.VTC0179E

本数据单, 作为型号认可证(编号: **VTC0179E**)的一部分, 规定了一些条件和限制, 在此条件和限制下, 获得本型号认可证的产品满足下述“认可审定基础”段落给出的适航要求。

This data sheet which is a part of Validation Type Certificate No. **VTC0179E** prescribes conditions and limitations under which the product for which the Validation Type Certificate was issued meets the airworthiness requirements indicated in the paragraph “Validation Basis”.

IO-550-B 型于 1983 年 10 月 13 日由美国 FAA 颁发的型号合格证 No. E3S0 批准, 最新数据单版次为 FAA 于 2002 年 2 月 4 日批准的第 7 版。

Model IO-550-B is approved by Type Certificate No. E3S0 issued by American FAA on October 13, 1983. The latest Data Sheet is revision 7 approved by FAA on February 4, 2002.

IO-550-N 型于 1996 年 8 月 16 日由美国 FAA 颁发的型号合格证 No. E3S0 批准, 最新数据单版次为 FAA 于 2002 年 2 月 4 日批准的第 7 版。

Model IO-550-N is approved by Type Certificate No. E3S0 issued by American FAA on August 16, 1996. The latest Data Sheet is revision 7 approved by FAA on February 4, 2002.

型号合格证持有人: Teledyne Continental Motors 美国阿拉巴马州 莫比尔市 36601

TYPE CERTIFICATE HOLDER: Teledyne Continental Motors Mobile,Alabama 36601

型号/Model

IO-550-B

IO-550-N

型式/ Type

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ICAO 或 ARDC 标准大气下的额定值/

Rating, ICAO or ARDC Standard atmosphere

最大连续 马力, r.p.m 海平面 压 力 高 度 /Max.continuous hp,r.p.m.in.Hg.at: Sea level pressure altitude	300-2700	310-2700
起飞 马力, 5 分钟, r.p.m 全油 门, 海平面压力高度 /Takeoff hp,5 min,r.p.m.full throttle at sea level pressure altitude	300-2700	310-2700
燃油 (航空汽油, 最低品级) / Fuel(aviation gasoline,minimum grade)	100,100LL	100,100LL
润滑油/Lubricating oil	TCM Spec MHS No.24	--
气缸内径和行程, 英寸/Bore and stroke, in.	5.25 x 4.25	--
气缸容积/ Displacement, cu.in	552	--
压缩比/Compression ratio	8.5:1	8.5:1
干重, 磅/Weight(dry), lb	430.72	428.97
重心位置 (基本发动机) / C.G Location(basic engine)	12.20	12.76
附件机匣后端前向, 英寸/Fwd of rear face accessory case, in		
曲轴中线下, 英寸/ Below crankshaft centerline, in	.54	.21
曲轴中线下向 1-3-5 侧, 英寸 /Below crankshaft centerline toward 1-3-5side, in	.25	.23
螺旋桨轴/Propeller shaft	APR-502, Type I flange,4-7/8in.OD with	--

six-1/2 in.bolt holes in 4
in.diameter circle

燃油喷嘴/Fuel injection	TCM Injector	--
点火，双磁电机/Ignition, dual magnetos	见注 2/See Note2	--
正时/Timing, ° BTC	22	--
火花塞/Spark plugs	见注 3/See Note3	--
滑油箱容积，夸脱/Oil sump capacity, qts	12 夸脱:上仰 26°时可用量为 6.1 夸脱,下俯 13.5°时可用量为 6.1 夸脱/12;6.1 usable at 26° nose up & 6.1 usable at 13.5° nose down	8 夸脱:上仰 16°时可用量为 5 夸脱,下俯 10°时可用量为 4.5 夸脱/8;5 usable at 16° nose up & 4.5 usable at 10° nose down

FAA 审定基础

FAA Certification Basis

对 IO-550-B 型/ Applicable to Model IO-550-B:

1965年2月1日生效的联邦航空规章第33部的1至8修正案（1977年5月2日颁发）。

Federal Aviation Regulations Part 33 effective February 1, 1965, as amended through Amendment 33-8,dated May 2,1977.

对 IO-550-N 型/ Applicable to Model IO-550-N:

1965年2月1日生效的联邦航空规章第33部的1至14修正案（1990年8月10日颁发）。

Federal Aviation Regulations Part 33 effective February 1, 1965, as amended through Amendment 33-14,dated August 10,1990.

CAAC 认可审定基础

CAAC Validation Certification Basis

CAAC 接受 FAA 的审定基础为认可审定基础

CAAC accepts FAA certification basis as validation basis for this validation program

生产基础

生产许可证 No.508

Production Basis

Production Certificate No.508

注 1/Note 1

最大许用温度/Maximum permissible temperature:

对 IO-550-N 型/ Applicable to Model IO-550-N:

气缸头 bayonet, 热电偶/Cylinder head bayonet,thermocouple	460°F
滑油进口/Oil inlet	240°F

注 2/Note 2

重量变化如下所示的下列装有适用导线的磁电机可安装在相应发动机上/The following magnetos with the appropriate harness are eligible on applicable engines at the indicated weight change.

	IO-550-B (Weight Change)	IO-550-N (Weight Change)
TCM/Bendix Scintilla S6RN-201 和 S6RN-205 各 1 个	-1 磅/lb	N/A
TCM/Bendix Scintilla S6RN-1201 和 S6RN-1205 各 1 个	无/None	N/A
2 个 TCM/Bendix Scintilla S6RN-25	无/None	无/None
2 个 TCM/Bendix S6RN-1225	无/None	N/A
2 个 Bendix S6RSC-25	无/None	无/None
2 个 Slick Electro Model 6210	-4 磅/lb	N/A
2 个 Slick Electro Model 6310	-4 磅/lb	N/A

注 3/Note 3

下列火花塞经批准，可用于相应型号发动机：

对 IO-550-N 型/ Applicable to Model IO-550-N:

AC	271, 273, 281, 281IR, 283, 283R, 291, 293
Auto Lite	PL350,SO350
Champion	RHB32E, RHB32N, RHB32P, RHB32W, RHB33E, RHB36P, RHB36W

注 4/Note 4

燃油压力限制/Fuel pressure limits:

对 IO-550-N 型/ Applicable to Model IO-550-N:

燃油引射泵进口/Inlet to injection pump,	min-	-3.5 p.s.i.g
	max-	+6.0 p.s.i.g
上回油管出口/Outlet to upper return line,	max-	+3.5 p.s.i.g

注 5/Note 5

滑油压力限制/Oil pressure limits:

对 IO-550-N 型/ Applicable to Model IO-550-N:

2-4-6 侧/side	- 正常/Normal	30-60 p.s.i.g
	- 慢车/Idle	10 p.s.i.g
	- 最大（冷滑油）Maximum(cold oil)	100 p.s.i.g

注 6/Note 6

对 IO-550-N 型/ Applicable to Model IO-550-N:

附件传动或安装规定如下/The following accessory drive or mounting provisions are available:

附件 /Accessory	方向或旋 转 /Direction or Rotation	曲轴传动 比 /Drive Ratio to Crankshaft	最大扭矩/Max Torque (英寸-磅/In-Lbs) 连续/Cont 静态/Static		最大垂悬 力矩 /Max Overhang Moment	衬垫构型 /Pad Configuration
* 						
转速计 /Tachometer	CCW	.5:1	7	50	25	AND 20005
螺旋桨调 速器 /Propeller Gov	CW	1:1	29	825	50	(Mod)AND 20010
磁电机 /Magneto	CCW	1.5:1	-	-		特殊/Special
启动机 Starter	CCW	48:1	200	400	60	特殊/Special
燃油泵 /Fuel Pump	CW	1:1	25	680	60	特殊/Special
** 附件传 动 (2) /Accessory Drive(2)	CW	1.5:1	100	800	40	AND20000 or mod per MS3325
交流发电 机齿轮传 动 /Alternator Gear Drive	CCW	3:1	100	500	150	特殊/Special

* CW-Clockwise/顺时针方向, CCW-Counterclockwise(viewing drive pad)/逆时针方向

注 7/Note 7

IO-550-N 型发动机安装有带 one 4th,one 5th and two 6th order 减震器的曲轴。/

Model IO-550-N incorporate a crankshaft with one 4th,one 5th and two 6th order damper.

注 8/Note 8

IO-550-N 型发动机可安装氟利昂压缩机驱动系统/Model IO-550-N is eligible for installation of the freon compressor drive system

注 9/Note 9

重量变化如下所示的下列交流发电机可安装在 IO-550-N 型发动机上的/

The following alternators are eligible on Model IO-550-N engine at the indicated weight change.

重量变化/Wt.Change

TCM 50AMP-24V	+12.31 磅/LBS
TCM 100AMP-24V	+17.56 磅/LBS
Prestolite 70AMP-24V	+11.6 磅/LBS

注 10/Note 10

适用于 12V 和 24V 系统/Applicable to both 12V and 24V systems.

注 11/Note 11

可在发动机型号编号中加后缀以定义发动机所做的设计小改/Engine model numbers may include a suffix to define minor specification changes.Example/例如:IO-550-B(1B)

注 12/Note 12

适用的经 FAA 批准和/或可接受的手册/Applicable FAA approved and/or accepted manuals:

使用和安装手册/Operation&Installation	X30565A
维护手册/Maintenance	X305634A
大修手册/Overhaul	X30568A