

型号认可证数据单
TYPE VALIDATION CERTIFICATE DATA SHEET

编号/No.: VTC0260E

版次/Revision: 0

型号/Type:

O-360- A1A1, A1A2, A2A1, A2A2, A3A1,
A3A2, B1A1, B1A2, B2A1, B2A2,
B3A1, B3A2, B4A1, B4A2, B5A1,
B5A2, B6A1, B6A2, C1A1, C1A2,
C2A1, C2A2, C2A1, C3A2, D1A1,
D1A2, D2A1, D2A2, D3A1, D3A2,
D4A1, D4A2, D5A1, D5A2, D6A1,
D6A2, E1A1, E1A2, E2A1, E2A2,
E3A1, E3A2

IO-360- A1A1, A1A2, A2A1, A2A2, A3A1,
A3A2, B1A1, B1A2, B2A1, B2A2,
B3A1, B3A2, B4A1, B4A2, B5A1,
B5A2, B6A1, B6A2, C1A1, C1A2,
C2A1, C2A2, C2A1, C3A2, D1A1,
D1A2, D2A1, D2A2, D3A1, D3A2,
D4A1, D4A2, D5A1, D5A2, D6A1,
D6A2, E1A1, E1A2, E2A1, E2A2,
E3A1, E3A2

批准人/Approved by:

徐超群

日期/Date:

2011.8.29

本数据单是型号认可证(编号: VTC0260E)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: VTC0260E), 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:

Superior Air Parts, Inc.

621 South Royal Lane, Suite 100

Coppell, TX 75019

有效页清单/ List of Effective Page:

页数/ Pages	1	2	3	4	5	6	7	8	9	10	11	
版次/Revision	0	0	0	0	0	0	0	0	0	0	0	

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	编号:VTC0260E; 版次:0; 颁发日期: 2011年8月29日; No.VTC0260E; Revision 0; Date of Issue: 2011-8-29	FAA TCDS E00001SC; 第2版; 2007年10月19日颁发 FAA TCDS E00001SC; Reversion 2; Date of Issue: October.19,2007
历史 History	无/None	无/None

2. 类别/Category: 发动机/ Engine
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: Superior Air Parts, Inc.
621 South Royal Lane, Suite 100
Coppell, TX 75019
5. 制造厂/Manufacturer: Superior Air Parts, Inc.
6. ETOPS: 不适用/NA
7. CAAC专用要求/CAAC Special Requirements: 满足中国100号航空汽油（GB1787-2008）的要求。/Compliance with
requirement of Chinese No.100 Aviation Gasoline (GB1787-2008).

第2部分 数据单

SECTION 2 DATA SHEET

型号/Model	O-360-A1A2, A2A2, A3A2	O-360-B1A2, B2A2, B3A2, B4A2, B5A2, B6A2, C1A2, C2A2, C3A2	O-360-D1A2, D2A2, D3A2, D4A2, D5A2, D6A2	O-360-E1A2, E2A2, E3A2
类型/Type	四汽缸水平对置/4HOA	— —	— —	— —
额定值/Rating 美国标准大气和 ICAO 海平面气压高度 /U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude 起飞/最大连续 马力/ Take-Off/Max. Continuous HP 起飞/最大连续 转/分/ Take-Off/Max. Continuous RPM 起飞/最大连续总管压力 —英寸汞柱/ Take-Off/Max. Cont. Manifold Press. — in Hg	180 2700 29.5	— — — — — —	— — — — — —	— — — — — —
燃油/Fuel 航空汽油/Aviation Gasoline	GB1787-2008, 100 号 ASTM D910, 最小牌号 91/98(铅可选)/Min Grade 91/98 (lead optional)	— —	— —	— —
润滑油/Lubricating Oil	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
气缸内径和行程-英寸/Bore and Stroke – in	5.125 x 4.375	— —	— —	— —
气缸容积-立方英寸/Displacement – cubic in	361	— —	— —	— —
压缩比/Compression Ratio	8.5:1	— —	— —	— —
重量(基本发动机, 干重) —磅/Weight (Basic Engine, Dry) – lbs 对于具体的型号重量见安装和运行手册, SVIOM01/See Installation & Operation Manual, SVIOM01, for detailed model weights	288	291	294	295
重心位置(基本发动机) /C.G. Location (Basic Engine)	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
主要尺寸—英寸/Principal Dimensions – in (长 x 宽 x 高)(Height x Width x Length)	24.6 x 33.4 x 32.8	— —	— —	— —

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号/Model	O-360-A1A2, A2A2, A3A2	O-360-B1A2, B2A2, B3A2, B4A2, B5A2, B6A2, C1A2, C2A2, C3A2	O-360-D1A2, D2A2, D3A2, D4A2, D5A2, D6A2	O-360-E1A2, E2A2, E3A2
螺旋桨轴/Propeller Shaft	直的, SAE 修正 2 型按照 AS127/Direct, SAE Modified Type 2 per AS127	— —	— —	— —
燃油系统/Fuel System	精密气动化油器 MA-4-5 型/Precision Airmotive Carburetor MA-4-5 type	— —	— —	— —
点火—双磁电机/Ignition – Two Magnetos	装有适用点火装置的 Unison 脉冲磁电机 4371 /Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —	— —
正时/Timing – °BTC	右/R: 25°,左/L: 25°	— —	— —	— —
火花塞/Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —	— —
滑油箱容积/Oil Sump Capacity	8 夸脱/quarts; 20°上仰时可用量为 6 夸脱, 10°下俯时可用量为 6.5 夸脱/6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —	— —

— — 代表与前述型号相同/ indicates "same as preceding model"

型号/Model	O-360-A1A1, A2A1, A3A1	O-360-B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1	O-360-D1A1, D2A1, D3A1, D4A1, D5A1, D6A1	O-360-E1A1, E2A1, E3A1
类型/Type	四汽缸水平对置/4HOA	— —	— —	— —
额定值/Rating 美国标准大气和 ICAO 在海平面气压高度 /U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude				
起飞/最大连续 马力/ Take-Off/Max. Continuous HP	168	— —	— —	— —
起飞/最大连续 转/分/ Take-Off/Max. Continuous RPM	2700	— —	— —	— —
起飞/最大连续总管压力 —英寸汞柱/ Take-Off/Max. Cont. Manifold Press. – in Hg	29.5	— —	— —	— —

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号/Model	O-360-A1A1, A2A1, A3A1	O-360-B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1	O-360-D1A1, D2A1, D3A1, D4A1, D5A1, D6A1	O-360-E1A1, E2A1, E3A1
燃油/Fuel 航空汽油/Aviation Gasoline	GB1787-2008, 100 号 ASTM D910, 最小牌号 91/98(铅可选)/Min Grade 91/98 (lead optional)	— —	— —	— —
润滑油/Lubricating Oil	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
气缸内径和行程-英寸/Bore and Stroke – in	5.125 x 4.375	— —	— —	— —
气缸容积-立方英寸/Displacement – cubic in	361	— —	— —	— —
压缩比/Compression Ratio	7.2:1	— —	— —	— —
重量(基本发动机, 干重)——磅/Weight (Basic Engine, Dry) – lbs 对于具体的型号重量见安装和运行手册, SVIOM01/See Installation & Operation Manual, SVIOM01, for detailed model weights	288	291	294	295
重心位置(基本发动机)/C.G. Location (Basic Engine)	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
主要尺寸——英寸/Principal Dimensions – in (长 x 宽 x 高)(Height x Width x Length)	24.6 x 33.4 x 32.8	— —	— —	— —
螺旋桨轴/Propeller Shaft	直的, SAE 修正 2 型按 照 AS127/Direct, SAE Modified Type 2 per AS127	— —	— —	— —
燃油系统/Fuel System	精密气动化油器 MA-4-5 型/Precision Airmotive Carburetor MA-4-5 type	— —	— —	— —
点火——双磁电机/Ignition – Two Magnetos	装有适用点火装置的 Unison 脉冲磁电机 4371 /Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —	— —
正时/Timing – °BTC	右/R: 25°, 左/L: 25°	— —	— —	— —
火花塞/Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —	— —

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号/Model	O-360-A1A1, A2A1, A3A1	O-360-B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1	O-360-D1A1, D2A1, D3A1, D4A1, D5A1, D6A1	O-360-E1A1, E2A1, E3A1
滑油箱容积/Oil Sump Capacity	8 夸脱/quarts; 20°上仰时可用量为 6 夸脱, 10°下俯时可用量为 6.5 夸脱/ 8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —	— —

— — 代表与前述型号相同/ indicates "same as preceding model"

型号/Model	IO-360-A1A2, A2A2, A3A2	IO-360-B1A2, B2A2, B3A2, B4A2, B5A2, B6A2, C1A2, C2A2, C3A2	IO-360-D1A2, D2A2, D3A2, D4A2, D5A2, D6A2	IO-360-E1A2, E2A2, E3A2
类型/Type	四汽缸水平对置/4HOA	— —	— —	— —
额定值/Rating 美国标准大气和 ICAO 在海平面气压高度 /U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude 起飞/最大连续 马力/ Take-Off/Max. Continuous HP 起飞/最大连续 转/分/ Take-Off/Max. Continuous RPM 起飞/最大连续总管压力 一英寸汞柱/ Take-Off/Max. Cont. Manifold Press. – in Hg	180 2700 29.5	— — — — — —	— — — — — —	— — — — — —
燃油/Fuel 航空汽油/Aviation Gasoline	GB1787-2008, 100 号 ASTM D910, 最小牌号 91/98(铅可选)/Min Grade 91/98 (lead optional)	— —	— —	— —
润滑油/Lubricating Oil	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
气缸内径和行程-英寸/Bore and Stroke – in	5.125 x 4.375	— —	— —	— —
气缸容积-立方英寸/Displacement – cubic in	361	— —	— —	— —
压缩比/Compression Ratio	8.5:1	— —	— —	— —

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号/Model	IO-360-A1A2, A2A2, A3A2	IO-360-B1A2, B2A2, B3A2, B4A2, B5A2, B6A2, C1A2, C2A2, C3A2	IO-360-D1A2, D2A2, D3A2, D4A2, D5A2, D6A2	IO-360-E1A2, E2A2, E3A2
重量(基本发动机, 干重) — 磅/Weight (Basic Engine, Dry) — lbs 对于具体的型号重量见安装和运行手册, SVIOM01/See Installation & Operation Manual, SVIOM01, for detailed model weights	290	293	296	297
重心位置(基本发动机) /C.G. Location (Basic Engine)	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
主要尺寸—英寸/Principal Dimensions — in (长 x 宽 x 高)(Height x Width x Length)	24.6 x 33.4 x 32.8	— —	— —	— —
螺旋桨轴/Propeller Shaft	直的, SAE 修正 2 型按照 AS127/Direct, SAE Modified Type 2 per AS127	— —	— —	— —
燃油系统/Fuel System	精密气动化油器 RSA-5 型/Precision Airmotive Carburetor RSA-5 type	— —	— —	— —
点火—双磁电机/Ignition — Two Magnetos	装有适用点火装置的 Unison 脉冲磁电机 4371 /Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —	— —
正时/Timing — °BTC	右/R: 25°, 左/L: 25°	— —	— —	— —
火花塞/Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —	— —
滑油箱容积/Oil Sump Capacity	8 夸脱/quarts; 20° 上仰时可用量为 6 夸脱, 10° 下俯时可用量为 6.5 夸脱/8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —	— —

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中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号/Model	IO-360-A1A1, A2A1, A3A1	IO-360-B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1	IO-360-D1A1, D2A1, D3A1, D4A1, D5A1, D6A1	IO-360-E1A1, E2A1, E3A1
类型/Type	四汽缸水平对置/4HOA	— —	— —	— —
额定值/Rating 美国标准大气和 ICAO 在海平面气压高度 /U.S. Standard Atmosphere and ICAO at Sea Level Pressure Altitude 起飞/最大连续 马力/ Take-Off/Max. Continuous HP 起飞/最大连续 转/分/ Take-Off/Max. Continuous RPM 起飞/最大连续总管压力 —英寸汞柱/ Take-Off/Max. Cont. Manifold Press. — in Hg	168 2700 29.5	— — — — — —	— — — — — —	— — — — — —
燃油/Fuel 航空汽油/Aviation Gasoline	GB1787-2008, 100 号 ASTM D910, 最小牌号 91/98(铅可选)/Min Grade 91/98 (lead optional)	— —	— —	— —
润滑油/Lubricating Oil	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
气缸内径和行程-英寸/Bore and Stroke – in	5.125 x 4.375	— —	— —	— —
气缸容积-立方英寸/Displacement – cubic in	361	— —	— —	— —
压缩比/Compression Ratio	7.2:1	— —	— —	— —
重量(基本发动机, 干重) —磅/Weight (Basic Engine, Dry) – lbs 对于具体的型号重量见安装和运行手册, SVIOM01/See Installation & Operation Manual, SVIOM01, for detailed model weights	290	293	296	297
重心位置(基本发动机) /C.G. Location (Basic Engine)	见安装和运行手册/See Installation & Operation Manual, SVIOM01	— —	— —	— —
主要尺寸—英寸/Principal Dimensions – in (长 x 宽 x 高)(Height x Width x Length)	24.0 x 33.4 x 32.8	— —	— —	— —
螺旋桨轴/Propeller Shaft	直的, SAE 修正 2 型按 照 AS127/Direct, SAE Modified Type 2 per AS127	— —	— —	— —

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

型号/Model	IO-360-A1A1, A2A1, A3A1	IO-360-B1A1, B2A1, B3A1, B4A1, B5A1, B6A1, C1A1, C2A1, C3A1	IO-360-D1A1, D2A1, D3A1, D4A1, D5A1, D6A1	IO-360-E1A1, E2A1, E3A1
燃油系统/Fuel System	精密气动化油器 RSA-5 型/Precision Airmotive Carburetor RSA-5 type	— —	— —	— —
点火—双磁电机/Ignition – Two Magnetos	装有适用点火装置的 Unison 脉冲磁电机 4371 /Unison Impulse Magnetos 4371 with the appropriate ignition harness	— —	— —	— —
正时/Timing – °BTC	右/R: 25°, 左/L: 25°	— —	— —	— —
火花塞/Spark Plugs	Champion REM40E, Unison UREM40E	— —	— —	— —
滑油箱容积/Oil Sump Capacity	8 夸脱/quarts; 20°上仰时可用量为 6 夸脱, 10°下俯时可用量为 6.5 夸脱/ 8 quarts; 6 qts. usable at 20° noseup, and 6.5 qts. usable at 10° nosedown attitudes	— —	— —	— —

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审定基础/ CERTIFICATION BASIS

FAR33 部第 20 修正案, 2000 年 12 月 13 日生效。/ FAR 33 Through Amendment 20, effective 12/13/2000

CAAC 认可审定基础/ CAAC VALIDATION BASIS

接受 FAA 的审定基础作为认可审定基础。/Accept FAA certification basis as validation basis.

生产基础/PRODUCTION BASIS

生产许可证 14SW。/Production Certificate 14SW

		O-360	IO-360
注 1/NOTE 1.	<u>最大许用温度/Maximum Permissible Temperatures</u>		
	发动机进口处滑油/Oil at Engine Inlet	240° F	— —
	汽缸头/Cylinder Head Temperature	500° F	— —
注 2/NOTE 2.	<u>燃油压力限制/Fuel Pressure Limits</u>		
	进口到泵, 最小/Inlet to Pump, Min.	+0.5 psig	-2 psig
	最大/ Max.	+8 psig	+35 psig

中国民用航空局
CIVIL AVIATION ADMINISTRATION OF CHINA

注 3/NOTE 3. 进入发动机的滑油压力限制/Oil

Pressure Limits into Engine

正常/Normal	55-95 psig	— —
慢车/Idle	20 psig	— —
最大(冷滑油)/Max (Cold Oil)	115 psig	— —

注 4/NOTE 4. 附件传动或安装规定如下/The following accessory drive or mounting provisions are available:

附件/Accessory	旋转方向	曲轴传动比	最大扭矩/Max. Torque		最大悬垂力矩
	/Direction of Rotation*	/Drive Ratio to Crankshaft	(in-lbs)		/Max. Overhang Moment (in-lbs)
转速计/Tachometer	CW	0.5:1	7	50	5
启动机/Starter	CCW	16.56:1	不适用/N/A	450	150
交流发电机(未提供)/ Alternator (not supplied)	CW	3.25:1	60	120	175
螺旋桨调速器, 后面 /Propeller Governor, Rear**	CW	0.866:1	125	825	40
螺旋桨调速器, 前面 Propeller Governor, Front**	CW	0.895:1	125	825	40
燃油泵/Fuel Pump	往复式 /Reciprocating	0.5:1	不适用/ N/A	不适用/ N/A	10
附件传动 Accessory Drive***	CCW	1.3:1	70	450	25

* "CW" – 顺时针/Clockwise; and "CCW" – 逆时针(看传动盘方向)/Counterclockwise (Viewing Drive Pad)

** 传动装置是 AND 20010, 仅适用于装有桨距控制装置的型号, 且应配备防护罩。/This is an AND20010 drive pad and only applicable to models with provisions to control propeller pitch and shall be supplied with a cover.

*** 传动装置是 AND 20000, 且应配备防护罩。/This is an AND20000 drive pad and shall be supplied with a cover.

注 5/NOTE 5

O-360 和 IO-360 系列发动机的具体型号名称包括型号后缀, 它以 O 或者 IO-360-(字母)(数字)(字母)(数字)的格式表明关于发动机构型的细节。后缀第一位是一个字母用以表示曲轴/螺旋桨构型: 'A' 代表定距桨, 带有薄壁型前主轴颈; 'B' 代表液压油控制螺旋桨距, 带有薄壁型前主轴颈; 'C' 代表定距桨, 带有厚壁型前主轴颈; 'D' 液压油控制螺旋桨距, 带有厚壁型前主轴颈; 'E' 代表定距桨, 带有实心前主轴颈。后缀第二位是一个数字用以表示曲轴箱/发动机安装类型: '1' 代表 1 型柔性动态聚焦发动机安装方式, '2' 代表 2 型柔性动态聚焦发动机安装方式, '3' 代表圆锥型发动机安装方式, '4' 代表 1 型柔性动态聚焦发动机安装并带有使用前置螺旋桨调速器的曲轴箱, '5' 代表 2 型柔性动态聚焦发动机安装并带有使用前置螺旋桨调速器的曲轴箱, '6' 代表圆锥型发动机安装方式并带有使用前置螺旋桨调速器的曲轴箱。后缀第三位是一个字母表示附件构型, 'A' 为唯一构型。后缀最后一位是一个数字表示功率额定值/压缩比: '1' 为低压缩比构型, '2' 表示高压缩比构型。

/The O-360 and IO-360 engines' detailed model designation includes a model suffix, which denotes details about the engine configuration in the format: O or IO-360-(letter)(number)(letter)(number). The first suffix digit is a letter which designates the crankshaft/propeller configuration: with 'A' designating provisions for a fixed pitch propeller, with a thin-wall front main bearing journal, 'B' designating provisions to control propeller pitch with pressurized oil, with a thin-wall front main bearing journal, 'C' designating provisions for a fixed

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pitch propeller, with a heavy-wall front main bearing journal, 'D' designating provisions to control propeller pitch with pressurized oil, with a heavy-wall front main bearing journal and 'E' designating provisions for a fixed pitch propeller, with a solid front main bearing journal. The second suffix digit is a number which designates crankcase/engine mount configuration: with '1' designating a #1 dynafocal engine mount type, '2' designating a #2 dynafocal engine mount type, '3' designating a conical engine mount type, '4' designating a #1 dynafocal engine mount with a crankcase utilizing a front mount prop governor, '5' designating a #2 dynafocal engine mount with a crankcase utilizing a front mount prop governor, and '6' designating a conical engine mount with a crankcase utilizing a front mount prop governor. The third suffix digit is a letter which designates accessory configuration, with 'A' being the only configuration. The last digit is a number designating power rating/compression ratio: with '1' being the low-compression configuration and with '2' being the high-compression configuration.

注 6/NOTE 6.

初始大修间隔时间为 1000 小时。/Initial TBO of 1000 Hours.

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—END—