

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A22NM Revision 16 A-1 A-1A A-1B October 21, 2005

TYPE CERTIFICATE DATA SHEET NO. A22NM

This data sheet which is part of Type Certificate No.A22NM prescribes conditions and limitations under which the product for which the type certificate was issued meets the Airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Sky International Inc. (See Note 11)
672 South Washington Street
Afton, Wyoming 83110

Type Certificate Ownership Record:

Christen Industries transferred ownership of Type Certificate A22NM to Aviat, Inc. on April 4, 1991.

Aviat, Inc. transferred ownership of Type Certificate A22NM to White International, LTD. on December 3, 1992.

White International, LTD. transferred ownership of Type Certificate A22NM to Sky International, Inc. on January 10, 1996.

Model A-1, 2PCLM (Normal Category), Approved May 1, 1987

Engine Lycoming O-360-C1G (180 HP), or
Lycoming O-360-A1P (180 HP)

Fuel 100/100LL grade aviation gasoline

Engine Limits For all operations, 2700 RPM

Propeller and Propeller Limits Hartzell HC-C2YK-1Bf/F7666A (Constant Speed)
Diameter not over 76 in., not under 72 in.
(See Note 3)
Pitch settings at 30 in. station low
11.7° ± .2°, high 29.0° ± 1.0°,
(See Note 9)
Hartzell spinner assy 836-60 (Required).

Hartzell governor V3-6
Placard required: **"AVOID CONTINUOUS OPERATIONS
BETWEEN 2000-2250 RPM"**

Page No.	1	2	3	4	5	6	7	8	9
Rev. No.	15	13	12	16	16	16	16	15	15

Model A-1, 2PCLM (Normal Category), Approved May 1, 1987(cont'd)

Airspeed Limits (CAS)	Never Exceed Maximum Structural Cruising Maneuvering Flaps Extended	153 mph (133 knots) 119 mph (103 knots) 94 mph (82 knots) 73 mph (63 knots)
C.G. Range	(+74.5) to (+78.4) at 1800 lbs (+72.5) to (+78.4) at 1500 lbs and below Straight line variation between points given	
Empty wt. C.G. Range	None Datum 60 in. forward of wing leading edge	
Leveling Means	Cabin door, lower sill	
Maximum Weight	1800 lbs	
No. of Seats	2 (1 at +72.5 and 1 at +99.0)	
Maximum baggage	50 lb. (at +120.0)	
Fuel Capacity	52 gal. (two 26 gal. Tanks in wings at +84.0) 50 gal usable. See NOTE 1 for data on unusable fuel.	
Oil Capacity	8 qts. (+25.9)	
Control Surface Movements	Elevator UP 29°±1° DOWN 15°±1° Ailerons UP 20° ± 2° DOWN 20° ± 2° Rudder LEFT 25° ± 2° RIGHT 25° ± 2° Flaps UP 0° DOWN 30° + 0°, -2°	
Serial Nos. Eligible	1001 To 1394	
Certification Basis	Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-12,. FAR 21 amended thru 21-57 Application for Type Certificate dated November 20, 1985. Type Certificate No. A22NM issued May 1, 1987.	
Production Basis	Production Certificate No. 2NM	
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. In addition, the following items of equipment are required: 1. FAA Approved Airplane Flight Manual 2. Stall Warning indicator. 3. Cylinder head temperature gage.	

Model A-1A, 2PCLM (Normal Category), Approved January 28, 1998

The A-1A is a derivative model of the A-1. The A-1A has a gross weight of 1890 lbs. The airframe has been modified structurally to accept this higher gross weight.

Engine	Lycoming O-360-A1P (180 HP)	
Fuel	100/100LL grade aviation gasoline	
Engine Limits	For all operations, 2700 RPM	
Propeller and Propeller Limits	Hartzell HC-C2YK-1BF/F7666A (Constant Speed) Diameter not over 76 in., not under 72 in. (See Note 3) Pitch setting at 30 in. station low $11.7^{\circ} \pm .2^{\circ}$, high $29.0^{\circ} \pm 1.0^{\circ}$ Hartzell governor V3-6 Placard required: "AVOID CONTINUOUS OPERATIONS BETWEEN 2000-2250 RPM"	
Airspeed Limits (CAS)	Never Exceed	153 mph (133 knots)
	Maximum Structural Cruising	119 mph (103 knots)
	Maneuvering	99 mph (86 knots)
	Flaps Extended	
	S/N 1395 to 1429	73 mph (73 knots)
	S/N 1430 and up	80 mph (70 knots)
	(See Note 14)	
C.G. Range	(+74.5) to (+78.4) at 1890 lbs (+72.5) to (+78.4) at 1500 lbs and below Straight line variation between points given	
Empty wt. C.G. Range	None	
Datum	60 in. forward of wing leading edge	
Leveling Means	Cabin door, lower sill	
Maximum Weight	1890 lbs	
No. of Seats	2 (1 at +72.5 and 1 at +99.0)	
Maximum baggage	50 lbs (+120.0)	
Fuel Capacity	52 gal. (two 26 gal. Tanks in wings at +84.0) 50 gal usable. See NOTE 1 for data on unusable fuel.	
Oil Capacity	8 qts. (+25.9)	
Control Surface Movements	Elevator UP $29^{\circ} \pm 1^{\circ}$ DOWN $15^{\circ} \pm 1^{\circ}$ Ailerons UP $20^{\circ} \pm 2^{\circ}$ DOWN $20^{\circ} \pm 2^{\circ}$ Rudder LEFT $25^{\circ} \pm 2^{\circ}$ RIGHT $25^{\circ} \pm 2^{\circ}$ Flaps UP 0° DOWN $30^{\circ} + 0^{\circ}, -2^{\circ}$	
Serial Nos. Eligible	1395 to 1999	

Model A-1A, 2PCLM (Normal Category), Approved January 28, 1998 (cont'd)

Certification Basis	Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-12,. FAR 21 amended thru 21-57 Application for Type Certificate dated August 25, 1997. Type Certificate No. A22NM issued January 28, 1998.
Production Basis	Production Certificate No. 704NM
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. In addition, the following items of equipment are required: <ol style="list-style-type: none"> 1. FAA Approved Airplane Flight Manual 2. Stall Warning indicator 3. Cylinder head temperature gage

Model A-1B, 2PCLM (Normal Category), Approved January 28, 1998

The A-1B is a derivative model of the A-1. The A-1B has a gross weight of 2000 lbs. The airframe has been modified structurally to accept this higher gross weight. The C.G. envelope has been expanded forward and aft. NOTE: See serial numbers eligible under this model.

(See Engine Option Group Configuration for optional propeller and propeller limits.)

Engine Lycoming O-360-A1P (180 HP)
Fuel 100/100LL grade aviation gasoline

Engine Limits For all operations, 2700 RPM

Propeller and Propeller Limits Hartzell HC-C2YK-1BF/f7666A (Constant Speed)
Diameter not over 76 in., not under 72 in. (See Note 3)
Pitch setting at 30 in. station
low 11.7° ± .2°, high 29.0° ± 1.0°

Hartzell spinner assy 836-60 (Required).
Hartzell governor V3-6

Placard required: **"AVOID CONTINUOUS OPERATIONS BETWEEN 2000-2250 RPM"**

Airspeed Limits (CAS)	Never Exceed	153 mph (133 knots)
	Maximum Structural Cruising	119 mph (103 knots)
	Maneuvering	113 mph (98 knots)
	Flaps Extended	80 mph (70 knots)
	(See Engine Option Group Configuration for Airspeed Limits.)	

C.G. Range (+73.6) to (+80.0) at 2000 lbs
(+71.0) to (+80.0) at 1530 lbs and below
Straight line variation between points given

Empty wt. C.G. Range None

Datum 60 in. forward of wing leading edge

Leveling Means Cabin door, lower sill

Maximum Weight 2000 lbs

No. of Seats 2 (1 at +72.5 and 1 at +99.0)

Maximum baggage	50 lb. (+120.0)
Fuel Capacity	52 gal. (two 26 gal. Tanks in wings at +84.0) 50 gal usable. See NOTE 1 for data on unusable fuel.
Oil Capacity	8 quarts. (+25.9)
Control Surface Movements	Elevator UP 29° ± 1° DOWN 15° ± 1° Ailerons UP 20° ± 2° DOWN 20° ± 2° Rudder LEFT 25° ± 2° RIGHT 25° ± 2° Flaps UP 0° DOWN 30° + 0°, -2° Note: For Model A-1B, serial numbers 2285, 2288, 2289, 2291 and up, Aileron UP 15.5° ± 2° DOWN 15.5° ± 2°
Serial Nos. Eligible	2000 and up New optional rear spar material incorporated at S/N 2001. Was 6061-T6. Is: 7075-T76. (See Engine Option Group Configuration for Serial Nos. Eligible.)
Certification Basis	Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-12,. FAR 21 amended thru 21-57. Application for Type Certificate dated August 25, 1997. Type Certificate No. A22NM issued January 28, 1998.
Production Basis	Production Certificate No. 704NM
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations must be installed in the aircraft for certification. In addition, the following items of equipment are required: 1. FAA Approved Airplane Flight Manual 2. Stall Warning indicator. 3. Cylinder head temperature gage.

Engine Option Group Configuration without Flap (Normal Category). Approved August 18, 2003

(The Engine Option Group Configuration without Flap is a model A-1B, 2PCLM)

Model A-1B, effective serial numbers NF0001 through NF0006, NF0008 and above, are equipped with all of the following optional items. Notes 3, 4, 5, 6, 8, 9, 13, 15, 16, 18, 19, 20, and 21 do not apply to Engine Option Group Configuration.

Note: A-1B with Engine Option Configuration requires Approved Airplane Flight Manual dated August 18, 2003 or later FAA approved revisions.

- | | | |
|----|------------------|--|
| A. | Engine | Lycoming O-320-D2A (160 HP)
Type Certificate Data Sheet (TCDS) E-274 |
| | Fuel | 100 or 100LL grade aviation gasoline |
| B. | Engine Limits | For all operations, 2700 RPM |
| | Propeller | Sensenich 74DM6S8-0-58 |
| | Propeller Limits | Diameter: Not over 74 in., not under 72 in.
Static RPM Not over 2350 RPM, not under
2150 RPM
No additional tolerance permitted.
Sensenich spinner assy C2366 (Required). |

- C. Flapless Wing
(No Flaps or flap control system installed, Wing tips unique)
- D. Unique Engine Cowl
- E. Approved main gear tires with this option group.
6.00 x 6 4-ply Type III tube
8.00 x 6 4-ply, Type III tube.
8.50 x 6 6-ply, Type III tube.
- F. Aircraft with Engine Option Group are approved for Day VFR only. Aircraft with Engine Option Group equipped with Anti-Collision, Taxi/Landing, Position, and Instrument Flood Red/White lights are approved for both Day and Night VFR. Not approved for Instrument Flight Rules (IFR) operation under the provisions of § 91.205(d) of the Federal Aviation Regulations
- G. Control Surface Movements Elevator UP $29^{\circ} \pm 1^{\circ}$ DOWN $15^{\circ} \pm 1^{\circ}$
Ailerons UP $20^{\circ} \pm 2^{\circ}$ DOWN $20^{\circ} \pm 2^{\circ}$
Rudder LEFT $25^{\circ} \pm 2^{\circ}$ RIGHT $25^{\circ} \pm 2^{\circ}$
- H. Serial Nos. Eligible NF0001 through NF0006, NF0008 and up
- I. Certification Basis Part 23 of the Federal Aviation Regulations dated February 1, 1965 as amended by 23-1 thru 23-31 (Normal Category) and FAR 36 amended thru 36-24. FAR 21 amended thru 21-57.

Engine Option Group Configuration with Flap (Normal Category), Approved October 21, 2005

(The Engine Option Group Configuration with Flap is a model A-1B, 2PCLM)

Model A-1B, effective serial numbers NF0007, WF0001 and above, are equipped with all of the following optional items. Notes 3, 4, 5, 6, 8, 9, 13, 15, 16, 18, 19, 20, and 21 do not apply to Engine Option Group Configuration.

Note: A-1B with Engine Option Configuration requires Approved Airplane Flight Manual dated September 23, 2005 or later FAA approved revisions.

- A. Engine Lycoming O-320-D2A (160 HP)
Type Certificate Data Sheet (TCDS) E-274
- Fuel 100 or 100LL grade aviation gasoline
- B. Engine Limits For all operations, 2700 RPM
- Propeller Sensenich 74DM6S8-0-58
- Propeller Limits Diameter: Not over 74 in., not under 72 in.
Static RPM Not over 2350 RPM, not under 2150 RPM
No additional tolerance permitted.
Sensenich spinner assy C2366 (Required).
- C. Wing with flaps effective serial numbers NF0007, WF0001 and up are equipped with Balanced ailerons, without spades, long flaps, flap control system per Engineering Report 55-4, Revision D, Appendix A, dated 8-25-05 or later FAA approved revisions.
- D. Unique Engine Cowl
- E. Approved main gear tires with this option group.
6.00 x 6 4-ply Type III tube
8.00 x 6 4-ply, Type III tube.
8.50 x 6 6-ply, Type III tube.

- NOTE 8 Models A-1, A-1A and A-1B are approved for use with Aero Ski Models R2800 retractable ski installed per Christen Drawing 35593. Christen Airplane Flight Manual Supplement, dated Nov 7, 1989, or later FAA approved revision for retractable ski operation is required. This note does not apply to Engine Option Group Configurations of model A-1B, 2PCLM.
- NOTE 9 These aircraft propellers may be reset to the page 1 setting if accomplished by an FAA approved propeller repair station. Serial Numbers 1001 thru 1222 were set to a low pitch setting of 13°, +0°, -.5°
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
This note does not apply to Model A-1B, serial numbers 2285, 2288, 2289, 2291 and up.
- NOTE 10 Model A-1, A-1A and A-1B are approved for use with optional skylight panel installed in accordance with Aviat Aircraft Inc. drawing 35640.
- NOTE 11 Aviat Aircraft Inc., P.O. box 1240, 672 South Washington Street, Afton, Wyoming is licensed by Sky International Inc. to manufacture and obtain airworthiness certificate for the Model A-1, A-1A, and A-1B aircraft listed in the Type Certificates Data Sheet.
- NOTE 12 Model A-1 is approved for use with Horizon Instruments Model P-1000 Digital Engine Tachometer. Aviat Aircraft Inc. Flight Manual Supplement date Dec. 4, 1997 or later FAA approved revision is required.
- NOTE 13 The following main gear tires are approved for use on models A-1, A-1A and A-1B:
- 6.00 x 6 4-ply Type III tube
 - 8.00 x 6 4-ply Type III tube.
 - 8.50 x 6 6-ply Type III tube.
 - 24 x 10-6 Type III Tundra
 - 26 x 10.5-6 Tundra and 8.50 x 6 tube.
- This note does not apply to Engine Option Group Configurations of model A-1B, 2PCLM.
- NOTE 14 Model A-1A S/N 1395 to 1429 are eligible for increased flap speed of 80 mph if airspeed indicator P/N 81714 is installed and Airplane Flight Manual is updated to reflect 80 mph flap speed.
- NOTE 15 Models A-1A, and A-1B are approved for use with Baumann Model BF- 2100 Floats installed in accordance with Aviat Aircraft Drawing 37600. The A-1 is float certified at 1980 pounds GW, the A-1A is float certified at 2079 pounds GW (1890 lbs. for A-1A land plane + 189 lbs. for floats), and the A-1B is float certified at 2200 pounds GW. FAA approved Flight Manual Supplement dated August 31, 1998 or later for above float plane configurations is required.
This note does not apply to Engine Option Group Configurations of model A-1B, 2PCLM.
- NOTE 16 Models A-1, A-1A, and A-1B are approved for use with the Alaskan Bushwheel P/N 31136, 31" Diameter Tundra tire. Model A-1 must have the Aero Ski gear P/N 35017-503 and 35017-504 installed in conjunction with the 31" tundra tires P/N 31136. The Scott 10" Model L3450 tail wheel must also be installed per Aviat Aircraft Drawing 35340 on the model A-1 and A-1A or per Aviat Aircraft Drawing 37340 on the Model A-1B. FAA approved Flight Manual Supplement dated September 18, 1998 or later for the Tundra Tire configuration is required.
This note does not apply to Engine Option Group Configurations of model A-1B, 2PCLM.
- NOTE 17 Models A-1A effective serial numbers 1451 and above, A-1B effective serial numbers 2007 and above and A-1B with Engine Option Group Configuration effective serial numbers NF0001 and above are equipped for a baggage area access door located below the right hand aft side window. The door is optional for the A-1A and the A-1B and is available as a production design change only on the serial numbers listed above.

- NOTE 18 Models A-1, A-1A and A-1B are approved for use with the Vision Microsystems Inc. VM1000 Engine Monitoring System when installed in accordance with Aviat Master Drawing List 95-0, dated 25 October 1999. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for the Vision Microsystem VM1000 Engine Monitoring System, dated 18 August 1999 and Supplemental Instructions for Continued Airworthiness - VM1000 Engine Monitoring System, dated 5 August 1999, or later revisions, are required.
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 19 Models A-1, A-1A and A-1B are approved for use with the Vision Microsystems Inc. VM1000 Engine Monitoring System with IFR equipment when installed in accordance with Aviat Master Drawing List 95-0, Revision A dated 25 October 1999. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for the Vision Microsystems VM1000 Engine Monitoring System, dated 18 August 1999 and Supplemental Instructions for Continued Airworthiness - VM1000 Engine Monitoring System, Revision B dated 5 August 1999, or later revisions, are required.
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 20 Models A-1, A-1A and A-1B are approved for use with the Aviat Aft Stowage Compartment when factory-installed in accordance with Aviat Master Drawing List 96-00-00, Revision F dated 5/28/2000, or field installed per Aviat Service Bulletin 16, dated 4/19/2000 as Aviat Kit A-1-351 Revision D. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for Models A-1, A-1A, A-1B with the Aft Stowage Compartment Installed, dated 4/28/2000 and Supplemental Instructions for Continued Airworthiness - Aft Stowage Compartment, dated 4/17/2000, or later revisions, are required.
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 21 Models A-1, A-1A and A-1B are approved for use with the Fluidyne Model C-2200 Retractable Skis when installed in accordance with Aviat Husky Service Bulletin 15, Fluidyne C-2200 Retractable Ski Installation and Operation; A-1/A-1A Forward CG Expansion, dated 6/14/1999. Operation and maintenance in accordance with FAA Approved Airplane Flight Manual Supplement for Fluidyne Skis, dated 6/25/1999 and Supplemental Instructions for Continued Airworthiness - Fluidyne C2200 Retractable Skis, dated 6/25/1999, or later revisions, are required.
This note does not apply to Engine Option Group Configuration of model A-1B, 2PCLM.
- NOTE 22 Model A-1B, effective serial numbers 2285, 2288,2289,2291 and up, are equipped with balanced ailerons, without spades, and longer flaps per Master Changed Drawing List, Document 2000-200-1, Revision A, dated February 15, 2005 or later FAA approved revisions. Approved Airplane Flight Manual, Revision C, dated February 25, 2005 or later FAA approved revision is required. Note 9 does not apply to this configuration of Model A-1B.

.....END.....