DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A16EA
Revision 11

AMERICAN GENERAL
AA-5,
AA-5A, AA-5B
AG-5B

August 25, 1993

TYPE CERTIFICATE DATA SHEET NO. A16EA

This date sheet, which is a part of Type Certificate No. A16EA, 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:	American General Aircraft Holding Co., Inc. 2900 One Liberty Place 1650 Market St. Philadelphia, PA 19103

I. - Model AA5, Traveler, 4 PCLM, Utility Category, approved November 12, 1971; Normal Category, approved November 12, 1971

Engine	Lycoming O-320-E2G (Carburetor MA-4 SPA with settings 10-5062 or 10-5009.
Fuel	80/87 minimum grade aviation gasoline
Engine Limits	For all operations, 2700 rpm (150 hp)
Propeller and Propeller Limits	1. McCauley Model 1C172 (either 1C172/BTM-7359 fixed pitch propeller with B-4381 spacer (aluminum) or 1C172/ SBTM-7359 fixed pitch propeller with B-4425 spacer (steel). (Note: When steel spacer is installed, an "S" will be stamped in front of the BTM on the propeller hub by the airframe manufacturer.) Static rpm at maximum permissible throttle setting; not over 2375; not under 2250. No additional tolerance permitted. Diameter: not over 73 inches, not under 71.5 inches. No additional tolerance permitted. 2. McCauley Model 1C172 (either 1C172/ BTM-7357 fixed pitch propeller with B-4381 spacer (aluminum) or 1C172/ SBTM-7357 fixed propeller with B-4425 spacer fixed propeller with B04425 spacer (steel). (Note: When steel spacer is installed, an "S" will be stamped in front on the BTM on the propeller hub by the airframe manufacturer.) Static rpm at maximum permissible throttle setting: not over 2348, not under 2250; no additional tolerance permitted. Diameter: not over 73 inches, not under 71.5 inches. No additional tolerance permitted.
Propeller Spinner	(Original spinner installation) Backplate Assembly 5506006-501, Shim 6602035-1, Front Bulkhead 5506005-1 or -3 and Spinner 5506001-1 or -510; or (Globe spinner installation) Bulkhead Assembly Aft 5506008-503, Bulkhead Assembly Fwd 5506010-501, Doubler 5506011-1 and Spinner 5506009-3.

Airspeed Limits (CAS)	V_{ne}	Never exceed	190 mph	(165 knots)
	V_{no}	Maximum structural cruising	150 mph	(130 knots)
	V_a	Maneuvering utility category	122 mph	(106 knots)
	V_a	Maneuvering normal category	122 mph	(104 knots)
	V_{fe}	Flaps extended	120 mph	(104 knots)
		Canopy partially ppened	130 mph	(113 knots)

C.G. Range

Normal	(+87.25	to	(+90.1)	at	2,200 lbs.
	(+80.0)	to	(+90.1)	at	1,700 lbs.
Utility	(+82.2)	to	(+84.5)	at	1,850 lbs.
	(+80.0)	to	(+84.5)	at	1,700 lbs.

Straight line variation between points given.

Empty Weight C. G. Range: None

Maximum Weight:
1,850 lbs. (Utility Category)
2,200 lbs. (Normal Category)

Number of Seats:
2 at (+90.6)
2 at (+126.0)

Maximum Baggage: 120 lbs. at (+148.0)

Maximum Cargo (Rear Seat Folded Down): 340 lbs. at (+116.4)

Fuel Capacity: 37 gallons (2 wing tanks) at (+90.9)
(See NOTE 1 for unusable fuel)

Oil Capacity: 8 quarts at (+32.0) (6 quarts usable)
(2 quarts minimum)

Control Surface Movements (Nominal from Neutral)

Elevator	30° ± 2°	up	20° ± 2°	down
Rudder	25° ± 2°	left	25° ± 2°	right
Ailerons	15° + 2-0°	up	7.5° + 2½-0°	down
Flaps			30° ± 2°	down
Elevator Trim Tab	16° ± 2°	up	19° ± 2°	down

Serial Numbers Eligible: AA5-0001 and up (Normal and Utility Category)

Service Life Limit

Information with respect to service life limited parts on this Model is contained in the applicable manufacturer's service manual, "Model AA-5, AA-5A, AA-5B, AG-5B Service Manual," Section 3-00, "Service Life Limited Components." Service life limits appearing in this manual may not be changed without FAA Engineering approval.

Service life limited parts must be retired in accordance with the following schedule:

Component	Part Number	Service Life (Hours)
Inboard Spar Assembly	5102310-501	12,000
Wing Spar Assembly	5201002-501	12,500
Wing Outboard Spar Assembly	5201189-501	12,500
Shoulder Bolt	901044-2	7,250

II. - Model AA-5A, Cheetah, 4 PCLM, Utility Category, approved July 28, 1975; Normal Category, approved July 28, 1975

Engine	Lycoming O-230-E2G (Carburetor MA-4 SPA with settings 10-5062 or 10-5009)
Fuel	80/87 minimum grade aviation gasoline
Engine Limits	For all operations, 2,700 rpm (150 hp)
Propeller and Propeller Limits	1. McCauley Model 1C172 (either 1C172/BTM-7359 fixed pitch propeller with B-4381 spacer (aluminum) or 1C172/SBTM-7359 fixed pitch propeller with B-4425 spacer (steel). (Note: When steel spacer is installed, an "S" will be stamped in front of the BTM on the propeller hub by the airframe manufacturer.) Static rpm at maximum permissible throttle setting; not over 2375; not under 2250. Diameter: not over 73 inches; not under 71.5 inches. No additional tolerance permitted. 2. McCauley Model 1C172 (either 1C172/BTM-7357 fixed pitch propeller with B-4381 spacer (aluminum) or 1C172/SBTM-7357 fixed pitch propeller with B-4425 spacer (steel). (Note: When steel spacer is installed, an "S" will be stamped in front on the BTM on the propeller hub by the airframe manufacturer.) Static rpm at maximum permissible throttle setting; not over 2348; not under 2250. No additional tolerance permitted. Diameter: not over 73 inches; not under 71.5 inches. No additional tolerance permitted.

Airspeed Limits (CAS)				
V_{ne}	Never exceed	190 mph	(165 knots)
V_{no}	Maximum structural cruising	150 mph	(130 knots)
V_a	Maneuvering utility category	122 mph	(106 knots)
V_a	Maneuvering normal category	122 mph	(106 knots)
V_{fe}	Flaps extended	120 mph	(104 knots)
	Canopy partially opened	130 mph	(113 knots)

C.G. Range						
Normal	(+85.60)	to	(+92.5)	at	2,200 lbs.
	(+81.0)	to	(+92.5)	at	1,780 lbs.
Utility	(+81.8)	to	(+86.0)	at	1,850 lbs.
	(+81.0)	to	(+86.0)	at	1,780 lbs.

Straight line variation between points given.

Empty Weight C. G. Range	None
Maximum Weight	1,850 lbs.(Utility Category) 2,200 lbs. (Normal Category)
Number of Seats	2 at (+90.6) 2 at (+126.0)
Maximum Baggage	120 lbs. at (+148.0)
Maximum Cargo (Rear Seat Folded Down)	340 lbs. at (+116.4)
Fuel Capacity (Standard Tanks)	37 gallons (2 wing tanks) at (+90.9) (See NOTE 1 for unusable fuel)
Fuel Capacity (Optional Tanks)	51 gallons (2 wing tanks) at (+94.8) (See NOTE 1 for unusable fuel)
Oil Capacity	8 quarts at (+32.0) (6 quarts usable) (2 quarts minimum)

Control Surface Movements (Nominal from neutral)	Elevator	23° ± 1°	up	17° ± 2°	down
	Rudder	25° ± 2°	left	25° ± 2°	right
	Ailerons	15° + 2-0°	up	7.5° + 2½-0°	down
	Flaps			45° ± 2°	down
	Elevator Trim Tab	14° ± 3°	up	30° ± 1°	down

Serial Numbers Eligible — AA5-0001 and up (Normal and Utility Category)

Service Life Limit — Information with respect to service life limited parts on this Model is contained in the applicable manufacturer's service manual, "Model AA-5, AA-5A, AA-5B, AG-5B Service Manual, " Section 3-00, "Service Life Limited Components." Service life limits appearing in this manual may not be changed without FAA Engineering approval.

Service life limited parts must be retired in accordance with the following schedule:

Component	Part Number	Service Life (Hours)
Inboard Spar Assembly	5102310-501	12,000
Wing Spar Assembly (Standard)	5201002-501	12,500
Wind Spar Assembly (Optional)	5201004-501	12,500
Wing Outboard Spar Assembly	5201189-501	12,500
Shoulder Bolt	901044-2	7,250

III. - Model AA-5B, Tiger, 4 PCLM, Utility Category, approved November 27, 1974; Normal Category, approved November 27, 1974

Engine — Lycoming O-360-A4K (Carburetor HA-6 with setting 10-5092)

Fuel — 100/100 minimum grade aviation gasoline

Engine Limits — For all operations, 2,700 rpm (1800 hp)

Propeller and Propeller Limits — MaCauley Model 1A170/FFA-7563 with B-4273 spacer (aluminum) or 1A170/KFA 7563 with B-4273 spacer (aluminum). Static rpm at maximum permissible throttle setting; not over 2325; not under 2175. Diameter: not over 75 inches; not under 74.5 inches. No additional tolerance permitted.

Propeller Spinner — (Original spinner installation) Backplate Assembly 5506006-502, Shim 5502035-2, Front Bulkhead 5506005-2 or -4 and Spinner Assembly 5506002-1 or -503; or (Globe spinner installation) Bulkhead Assembly Aft 5506008-5095, Bulkhead Assembly Fwd 550-6010-503, Doubler 5506011-3 and Spinner 5506009-3.

Airspeed Limits (CAS)

V_{ne}	Never exceed	200 mph	(174 knots)
V_{no}	Maximum structural cruising	165 mph	(143 knots)
V_a	Maneuvering utility category	130 mph	(113 knots)
V_a	Maneuvering normal category	130 mph	(113 knots)
V_{fe}	Flaps extended	120 mph	(104 knots)
	Canopy partially opened	130 mph	(113 knots)

C.G. Range

Normal	(+89.0)	to	(+92.50)	at	2,400 lbs.
	(+81.0)	to	(+92.50)	at	1,920 lbs.
Utility	(+83.17)	to	(+85.32)	at	2,050 lbs.
	(+81.0)	to	(+85.32)	at	1,520 lbs.

Straight line variation between points given.

Empty Weight C. G. Range — None

Maximum Weight	2,050 lbs. (Utility Category) 2,400 lbs. (Normal Category)
Number of Seats	2 at (+90.6) 2 at (+126.0)
Maximum Baggage	120 lbs. at (+148.0)
Maximum Cargo (Rear Seat Folded Down)	340 lbs. at (+116.4)
Fuel Capacity	51 gallons (2 wing tanks) at (+94.8) (See NOTE 1 for unusable fuel)
Oil Capacity	8 quarts at (+32.0) (6 quarts usable) (2 quarts minimum)

Control Surface Movements (Nominal from neutral)

Elevator	23° ± 1°	up	17° ± 2°	down
Rudder	25° ± 2°	left	25° ± 2°	right
Ailerons	15° + 2-0°	up	7.5° + 2½-0°	down
Flaps			45° ± 2°	down
Elevator Trim Tab	14° ± 3°	up	30° ± 1°	down

Serial Numbers Eligible: AA5B-0001 and up (Normal and Utility Category)

Service Life Limit: Information with respect to service life limited parts on this Model is contained in the applicable manufacturer's service manual, "Model AA-5, AA-5A, AA-5B, AG-5B Service Manual," Section 3-00, "Service Life Limited Components." Service life limits appearing in this manual may not be changed without FAA Engineering approval.

Service Life limited parts must be retired in accordance with the following schedule:

Component	Part Number	Service Life (Hours)
Inboard Spar Assembly	5102310-502	12,000
Wing Spar Assembly	5201004-501	12,500
Wing Outboard Spar Assembly	5201189-501	12,500
Shoulder Bolt	901044-2	7,250

IV. Model AG-5B, Tiger, 4 PCLM, Utility Category, approved September 21, 1990; Normal Category, approved September 21, 1990

Engine	Lycoming O-360-A4K (Carburetor HA-6 with setting 10-5092)
Fuel	100/100 minimum grade aviation gasoline
Engine Limits	For all operations, 2,700 rpm (180 hp)
Propeller and Propeller Limits	Sensenich Model 76EM8S10-0-61, 76EM8S10-0-63 and 76EM8S10-0-65. Diameter: 76 inches.
Propeller Spinner	Bulkhead Assembly Aft 5506008-505, Bulkhead Assembly Fwd 5506010-503, Doubler 5506011-3 and Spinner 5506009-3.

Airspeed Limits (CAS)

V_{ne}	Never exceed	200 mph	(174 knots)
V_{no}	Maximum structural cruising	165 mph	(143 knots)
V_a	Maneuvering utility category	130 mph	(113 knots)
V_a	Maneuvering normal category	130 mph	(113 knots)
V_{fe}	Flaps extended	120 mph	(104 knots)
	Canopy partially opened	130 mph	(113 knots)

C.G. Range	Normal	(+89.0)	to	(+92.50)	at	2,400 lbs.
		(+81.0)	to	(+92.50)	at	1,920 lbs.
	Utility	(+83.17)	to	(+85.32)	at	2,050 lbs.
		(+81.0)	to	(+85.32)	at	1,520 lbs.

Straight line variation between points given.

Empty Weight C. G. Range: None

Maximum Weight: 2,050 lbs. (Utility Category)
2,400 lbs. (Normal Category)

Number of Seats: 2 at (+90.6)
2 at (+126.0)

Maximum Baggage: 120 lbs. at (+148.0)

Maximum Cargo (Rear Seat Folded Down): 340 lbs. at (+116.4)

Fuel Capacity: 51 gallons (2 wing tanks) at (+94.8)
(See NOTE 1 for unusable fuel)

Oil Capacity: 8 quarts at (+32.0) (6 quarts usable)
(2 quarts minimum)

Control Surface Movements (Nominal from neutral)

Elevator	23° ± 1°	up	17° ± 2°	down
Rudder	25° ± 2°	left	25° ± 2°	right
Ailerons	15° + 2-0°	up	7.5° + 2½-0°	down
Flaps			45° ± 2°	down
Elevator Trim Tab	14° ± 3°	up	30° ± 1°	down

Serial Numbers Eligible: 10000 and up (Normal and Utility Category)

Service Life Limit: Information with respect to service life limited parts on this Model is contained in the applicable manufacturer's service manual, "Model AA-5, AA-5A, AA-5B, AG-5B Service Manual, " Section 3-00, "Service Life Limited Components." Service life limits appearing in this manual may not be changed without FAA Engineering approval.

Service life limited parts must be retired in accordance with the following schedule:

Component	Part Number	Service Life (Hours)
Inboard Spar Assembly	5102310-503	12,000
Wing Spar Assembly	5201004-501	12,500
Wing Outboard Spar Assembly	5201189-501	12,500
Shoulder Bolt	901044-2	7,250

DATA PERTINENT TO ALL MODELS

Datum: 50.0 inches forward of front face of firewall (wing chord 53.32 inches)

Leveling Means: Canopy Slide Rail

Certification Basis: FAR 23 effective February 1, 1965, and Amendments 23-1 through 23-8, Date of Application for Type Certificate, July 2, 1970. Type Certificate No. A16EA issued November 12, 1971.

Production Basis — Licensing agreement between Gulfstream Aerospace Corporation (holder of Type Certificate No. A16EA) of Savannah, Georgia and American General Aircraft Corporation (licensee) of Greenville, Mississippi holder of Production Certificate No. 331CE.

Equipment — The basic equipment prescribed in the applicable airworthiness regulations (see Certificate Basis) must be installed in the airplane for certification. In addition, an FAA approved Airplane Flight Manual dated February 26, 1979, is required for the following aircraft:

Model AA-5A: S/N 0729, 0741, 0745, 0750, 0754, 0766, 0770, 0774, 0791, 0826 and subsequent.

Model AA-5B: S/N 0973, 0975, 1021, 1029, 1088, 1092, 1101, 1103, 1104, 1108 and subsequent.

An FAA approved Airplane Flight Manual dated September 21, 1990, is required for the following aircraft:

Model AG-5B: S/N 10000 and subsequent.

NOTE 1: A current weight and balance report, including a list of equipment in the certificated empty weight and also loading instructions, must be provided for each airplane at the time of original certification.

A. Applicable to Model AA-5 and Model AA-5A (with Standard Tanks)
The certificated weight empty and corresponding center-of-gravity location must include 6 lbs. (1 gallon) at (+90.9) of unusable fuel. (Undrainable fuel and oil is negligible.)

B. Applicable to Model AG-5B, AA-5B and Model AA-5A (with Optional Tanks)
The certificated weight empty and corresponding center-of-gravity location must include 9.6 lbs. (1.6 gallons) at (+94.8) of unusable fuel. (Undrainable fuel and oil is negligible.)

NOTE 2: The following placard must be installed in full view of the pilot:

(a) "THIS AIRPLANE MUST BE OPERATED AS A NORMAL OR UTILITY CATEGORY AIRPLANE IN COMPLIANCE WITH THE OPERATING LIMITATIONS STATED IN THE FORM OF PLACARDS, MARKINGS, AND MANUALS."

NORMAL CATEGORY

MAXIMUM DESIGN WEIGHT	2,200 LBS. (AA-5 & AA-5A) 2,400 LBS. (AA-5B & AG-5B)
DESIGN MANEUVERING SPEED, V_a	122 MPH CAS (AA-5 & AA-5A) 130 MPH CAS (AA-5B & AG-5B)
FLIGHT LOAD FACTORS:	
FLAPS UP	+3.8, -1.52
FLAPS DOWN	+3.5

NO ACROBATIC MANEUVERS, INCLUDING SPINS, APPROVED.

UTILITY CATEGORY

MAXIMUM DESIGN WEIGHT	1,850 LBS (AA-5 & AA-5A) 2,050 LBS (AA-5B & AG-5B)
DESIGN MANEUVERING SPEED, V_a	122 MPH CAS (AA-5 & AA-5A) 130 MPH CAS (AA-5B & AG-5B)
FLIGHT LOAD FACTORS:	
FLAPS UP	+4.4, -1.76
FLAPS DOWN	+3.5

REAR SEAT MUST NOT BE OCCUPIED.

ACROBATIC MANEUVERS ARE LIMITED TO THE FOLLOWING:

MANEUVER	ENTRY SPEED (MPH, CAS)
CHANDELLES	122 (AA-5 & AA-5A) 130 (AA-5B & AG-5B)
LAZY EIGHTS	122 (AA-5 & AA-5A) 130 (AA-5B & AG-5B)
STEEP TURNS	122 (AA-5 & AA-5A) 130 (AA-5B & AG-5B)
STALLS (EXCEPT WHIP STALLS)	SLOW DECELERATION

SPINS PROHIBITED

MAXIMUM ALTITUDE LOSS IN STALLS	350 FEET (AA-5A & AA-5B & AG-5B) 300 FEET (AA-5)
DEMONSTRATED CROSSWIND VELOCITY	18 MPH (AA-5A & AA-5B & AG-5B) 17 MPH (AA-5)

THIS AIRPLANE IS NOT APPROVED FOR FLIGHT IN ICING CONDITIONS (AA-5A, AA-5B AND AG-5B). KNOWN ICING CONDITIONS TO BE AVOIDED (AA-5).

THIS AIRPLANE IS CERTIFICATED FOR THE FOLLOWING OPERATIONS AS OF DATE OF ORIGINAL AIRWORTHINESS CERTIFICATE.

IFR, VFR, DAY, NIGHT

REFER TO WEIGHT AND BALANCE FOR LOADING INSTRUCTIONS.

READ FUEL GAUGES IN LEVEL FLIGHT ONLY.

FOR NORMAL OPERATION, MAINTAIN FUEL BALANCE.

(b) On left side of cabin:
"130 MPH MAXIMUM CANOPY OPEN TO HERE. NO FLIGHT WITH CANOPY OPEN BEYOND THIS POINT."

(c) In baggage compartment:
"120 POUNDS MAXIMUM BAGGAGE. FOR ADDITIONAL LOADING INSTRUCTIONS, SEE WEIGHT AND BALANCE DATA. NO HEAVY OBJECTS ON HAT SHELF."

(d) On rear seat base (visible with seat in cargo position):
"NO PASSENGERS. 340 POUNDS MAXIMUM CARGO. DISTRIBUTE EVENLY. FOR ADDITIONAL LOADING INSTRUCTIONS, SEE WEIGHT AND BALANCE DATA AND OWNER'S MANUAL."

(e) Under rear seat base (visible with rear seat back upright):
"NO STEP - BEFORE FLIGHT - REAR SEAT MUST BE TURNED DOWN TO COVER THIS AREA."

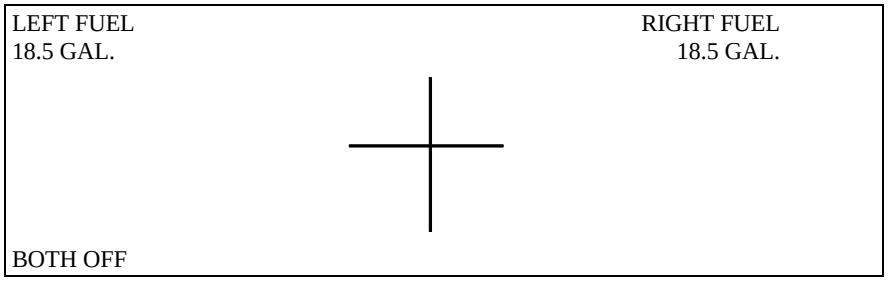
(f) Near fuel caps:
Model AA-5 and Model AA-5A with Standard Fuel Tanks:

"FUEL MINIMUM 80/87 OCTANE 19 U.S. GAL. CAP"

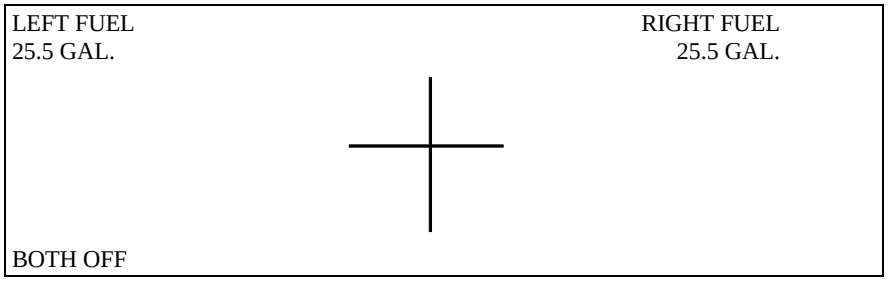
Model AA-5A with Optional Fuel Tanks:
"FUEL MINIMUM 80/87 OCTANE 26.3 U.S. GAL. CAP"

Model AA-5B and Model AG-5B:
"FUEL MINIMUM 100/100 OCTANE 26.3 U.S. GAL. CAP"

(g) Fuel control panel:
Model AA-5 and Model AA-5A Standard Fuel Tanks:



Model AA-5A Optional Fuel Tanks, Model AA-5B and Model AG-5B Standard Fuel Tanks;



(h) On glove box door:
Model AA-5 and Model AA-5A:

TIRE PRESSURE	NOSE 21 LBS.
	MAIN 24 LBS.

Model AA-5B and Model AG-5B:

TIRE PRESSURE	NOSE 25 LBS.
	MAIN 34 LBS.

(i) On instrument panel:
"CAUTION: FLASHING BEACON IN CLOUDS MAY CAUSE VISUAL DISORIENTATION."

"TURN OFF STROBE IN CLOUD, FOG, OR HAZE. TAXI WITH STROBE OFF."

Model AA-5B:
"AVOID CONTINUOUS OPERATION BETWEEN 1850 AND 2250 RPM WHILE DESCENDING."

(j) On left hand side panel:
"FOR FLIGHT WITH REAR SEAT OCCUPANTS AND/OR CARGO, CHECK WEIGHT BALANCE."

(k) On baggage door:
"TO PEN DOOR FROM INSIDE, SLIDE HANDLE FORWARD."

(l) On throttle quadrant:
"FRICTION ADJ."

(m) On eye brow:
"NO SMOKING."

...END...