

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRCRAFT TYPE CERTIFICATE NO. A00003AK

A00003AK
Super 18
S18-180
July 29, 2009
Rev. Original

Type Certificate Holder

Super 18 LLC
48473 262 St.
Valley Springs, SD 57068

I. - Model S18-180, 2 PCLM (Normal Category), Approved July 29, 2009.

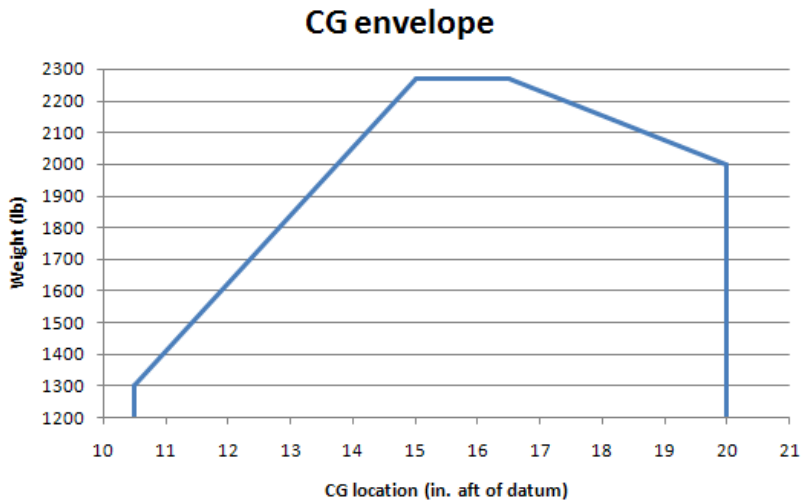
Engine Lycoming 0-360-C4P

Fuel 100 (green) or 100LL (blue) aviation gasoline.

Engine Limits All operations, 2700 r.p.m. (180 hp.)
See Engine Type Certificate Data Sheet E-286 for additional limitations

Airspeed Limits Maneuvering 117 mph (102 knots)
Maximum Structural Cruise 121 mph (105 knots)
(CAS) Never exceed 148 mph (129 knots)
Flaps extended 89 mph (77 knots)

C. G. Range At 1300 lb fwd limit is 10.5 inches
From 1300 lb at 10.5 linear variation to 2270 lb at 15 inches for fwd limit
From 2270 lb at 15 inches to 2270 lb at 16.5 inches
From 2270 lb at 16.5 inches to 2000 lb at 20 inches
From 2000 lb to 1300 lb aft limit is 20 inches.



Maximum Weight Takeoff: 2270 lb
Landing: 2200 lb

Number of Seats 2 at (+11) and (+37)

| | |
|--------------------------------|--|
| <u>Standard Baggage</u> | 180 lb. at (+57) |
| <u>Extended Baggage</u> | 20 lb. at (+88) |
| <u>Under rear seat baggage</u> | 50 lb. at (+37) |
| <u>Fuel Capacity - Total</u> | 46 gallons at (2 wing tanks at +21) (39 Gal. Useable) |
| <u>Oil Capacity</u> | 8 quarts at (-36) |
| <u>Serial Numbers Eligible</u> | NONE |
| <u>Required Equipment</u> | In addition to the pertinent required basic equipment specified in FAR 23, the following items of equipment must be onboard: The latest FAA approved copy of revision of "Airplane Flight Manual for the Super 18-180." In addition, a current weight and balance report including any additional equipment must be onboard the aircraft. |

Specifications Pertinent to All Models

| | |
|--|--|
| <u>Datum</u> | Wing leading edge |
| <u>Leveling Means</u> | Right door sill, IAW <u>Super 18 Maintenance Manual</u> |
| <u>Control Surface Movements</u> | Stabilizer $2\frac{1}{2}^{\circ} \pm \frac{1}{2}^{\circ}$ Up $4^{\circ} \pm \frac{1}{2}^{\circ}$ Down Elevator $30^{\circ} \pm 2^{\circ}$ Up $15^{\circ} \pm 2^{\circ}$ Down Aileron $18^{\circ} \pm 2^{\circ}$ Up $18^{\circ} \pm 2^{\circ}$ Down Rudder $30^{\circ} \pm 2^{\circ}$ Left $30^{\circ} \pm 2^{\circ}$ Flap 0° Up $50^{\circ} \pm 2^{\circ}$ Down |
| <u>Certification Basis</u> | Part 23 of the Federal Aviation Regulations (FAR) effective December 18, 1964, as amended by 23-1 through 23-55. FAR 36 -28 |
| <u>Equivalent Level of Safety (ELOS) findings:</u> | Emergency exit requirements of FAR 23.807 in accordance with ELOS No. ACE-07-02 as detailed in FAA memo dated April 10, 2007 |
| <u>Federal Regulation Exemption:</u> | Dynamic seat test requirements of FAR 23.562, in accordance with Summary Notice No. PE-2004-53 dated July 2, 2004. |
| <u>Production Basis</u> | TC Only |
| <u>Equipment</u> | A plus (+) or minus (-) preceding the weight of an item indicates net weight change when that Item is installed. |

Propeller and Propeller Accessories

1. With Lycoming O-360 engine only
 - A. McCauley Model 1A200/FA - 82" dia. pitch 40-44 inches. +0 lb (-58)

Engine and Engine Accessories – Intake and Oil Systems

1. Oil Cooler - Niagra Model 20004H (ten element) +0 lb. (-10)
2. Air filter – Fram CA3416, NAPA 6225, or WIX 46225

Landing Gear

1. Two main wheel-brake assemblies
 - (a) Brakes: Cleveland Model 30-52N +0 lb (+ 3.125)
 - (b) Wheels: Cleveland Model 40-75T +0 lb (+ 3.125)

2. Two main wheel tires (with regular tubes when required) (for pressure requirements, see the Maintenance Manual)
 - (a) 8.50x6, Type III, 4 ply rating +0 lb. (+3.125)
 - (b) 26.00x6, Goodyear, 6 ply rating +22 lb (+3.125)
 - (c) 26.00x6, 26126.R Alaskan Bushwheel +30 lb (+3.125)
 - (d) 29.00x6 29136.R Alaskan Bushwheel +36 lb (+3.125)
 - (e) 31.00x6 31136.R Alaskan Bushwheel +42 lb (+3.125)

3. Tail Wheel Assembly
 - (a) Scott Model 3200 per Super 18 Dwg. No. DC3200S +0 lb. (+200)
 - (b) Alaskan Bushwheel ABI-3200A +0 lb (+200)
 - (i). 280 X 2.5 X 4 tailwheel tire +0 lb (+207)
 - (c) Alaskan Bushwheel ABI-3200B ("baby bushwheel," incl. tires) +4 lb (+200)

Electrical Equipment

1. Battery – Hawker SBSJ16 +0 lb. (-20.5)

2. Landing lights in wing leading edge +0 lb. (+5)
 Bulb # GE-H7604 Installation per DCA Dwg. 13396

Interior Equipment

1. Current FAA Approved Airplane Flight Manual.
 (Document S18-AFM-01, Rev IR 7/7/2009)

2. H3R Aviation model RT A400 Fire extinguisher. +0 lb (+30)

Miscellaneous (Not listed above)

- NOTE 1 The following placards must be displayed:
- (a) On the Instrument Panel, in full view of the pilot:
 - (1) "This aircraft must be operated as a normal category aircraft in compliance with the operating limitations stated in the form of placards, markings, and manuals. No acrobatic maneuvers (including spins) are approved. This aircraft is approved for V.F.R. day / night operations only. Flight into known icing is prohibited."
 - (2) "No Smoking."
 - (3) "Maneuvering Speed 117 CAS"
 - (4) (applicable registration number placard)
 - (c) On interior face of Baggage Compartment Door:
 - (1) "Forward Cargo Compartment - Max Capacity 180 lbs. – Cargo Tie Down Rated 50 lbs each"
 - (2) "Extended Cargo Compartment - Max Capacity 20 lbs. – Distribute Load Evenly"
 - (d) On the Instrument Panel:
 - (1) "Maximum Fuel Imbalance – 10 Gallons difference between tanks"
 - (2)

| Nxxxxx | | | | | | |
|------------------|---|-----|-----|---------|-----|-----|
| FOR | N | 30 | 60 | E | 120 | 150 |
| STEER | | | | | | |
| FOR | S | 210 | 240 | W | 300 | 330 |
| STEER | | | | | | |
| Month, Day, Year | | | | Airpath | | |

- (e) At Fuel Selector:
- (1) "FUEL
LEFT – Usable Fuel 19.5 Gal Level Flight Only
RIGHT – Usable Fuel 19.5 Gal Level Flight Only
BOTH – Usable Fuel 39 US Gal OFF – Full Clockwise to Stop"
- (f) On left panel, under sliding windows:
- (1) "EMERGENCY EXIT – PUSH WINDOWS OUT"
- (g) On outside of sliding glass window:
- (1) "EMERGENCY EXIT – PULL WINDOWS OUT"
- (h) Flaps placard, on or next to flap handle:
- (1) "FLAPS
89 mph MAX CAS"
- (i) Next to sight gauges:
- (1) "FUEL CAPACITY – 19.5 US GALLONS USABLE"
- (j) On front floorboard:
- (1) "PARKING BRAKE
To set, press both brake pedals and move both parking brake levers up.
To release, slowly lower levers to stop."
- (k) On door , inside and outside near handle:
- (1) "TO OPEN ROTATE HANDLE"
- (l) On wing, next to tank filler:
- (1) "100 OR 100LL
Avgas 19.5 US Gal Useable"
- (m) On top inboard end of all lift struts:
- (1) "NO STEP"
- (n) Inside under-seat storage compartment:
- (1) "MAXIMUM CAPACITY – 50 LBS"
- (o) On cross bar behind passenger seat:
- (1) "SEAT BAR MUST BE SECURED BEFORE FLIGHT"
- (p) On top center of instrument panel:
- (1) "This aircraft is equipped with HIGH PRESSURE BRAKES
Aggressive braking action COULD result in aircraft damage"
- (q) Next to engine exhaust tailpipe:
- (1) "FOR ELECTRICAL GROUND ATTACH TO EXHAUST TAILPIPE"
- (r) Upper storage accessory compartment door:
- (1) "ELT LOCATED INSIDE"
- (s) Near each fuel drain:
- (1) "FUEL DRAIN"
- (t) Near stall warning inlet:
- (1) "STALL WARNING – KEEP CLEAR"
- (u) next to fuel sight gauges:
- (1) "FUEL CAPACITY 19.5 US GALLONS USABLE"
- (v) On inside of right engine cowl:
- (1)

| OIL | | |
|-----------------------------|---------------------------|--------------------------------------|
| Capacity 8 Quarts | | |
| Approved Types | | |
| Average Ambient Temperature | J-1966 Mineral SAE Grades | J-1899 Ashless Dispersant SAE Grades |
| All Temperatures | - | 15W-50 or 20W-50 |
| Above 80°F | 60 | 60 |
| Above 60°F | 50 | 40 or 50 |
| 30°F to 90°F | 40 | 40 |
| 0°F to 70°F | 30 | 30, 40, or 20W-40 |
| Below 10°F | 20 | 30 or 20W-30 |

NOTE 2

Airworthiness limitations: Airframe limited to 300 hours pending fatigue testing.

.....END.....