

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A18NM
Revision 1
Boeing
KC-97G

September 18, 1989

Type Certificate Data Sheet No. A18NM

This data sheet which is part of Type Certificate No. A18NM prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder: Philip W. Stiffler
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Edmonds, Washington 98020

I. Model PSI-KC-97G (Restricted Category) Approved

Engines: 4 - P&W R-4360-59B

Fuel: Aviation Gasoline 114/145 Grade
For Alternate Fuels See T.O. 1C-97 (K) G-1 Sec. V

Engine Limits: Maximum Wet Power, Sea Level
3500 BHP @ 2700 RPM and 247 TPSI (Torque)

Maximum Dry Power, Sea Level
3250 BHP @ 2700 RPM and 230 TPSI (Torque)

See Airplane Flight Manual T.O. 1C-97 (K) G-1 and Appendix T.O.
1C-97G-1 Part 2 for complete engine and power and performance data.

Propellers: 4 - Hamilton Standard 34G60, Blade No. R-C7021D-8
See T.O. 1C-97 (K) G-1 Sec. V for limitations

Airspeed Limits: V_{NE} = 302 KTS. or Mach 0.62 whichever is less.
 V_A = 206 KTS. IAS Maneuvering.
 V_F = 155 KTS. IAS for 55% to 100 % flaps.
 V_{LO} = 200 KTS. IAS Landing Gear Extension

C.G. Range: Operating Range 18.5% to 30.5% MAC

DATUM: 50 in. fwd. of nose (distance from datum to nose jacking cone 228.6 in.)

Leveling Means: Indicator below floor in forward lower compartment (STA. 356)

Maximum Gross Wt.: Takeoff = 153,000 Lbs.

Landing Weight: (10 FPS sink speed - 130,000 lbs.)
(8 FPS sink speed - 153,000 lbs.)
NOTE: Chart for contact sinking speed between 130,000 and
153,000 lbs. provided in Flight Manual T.O. 1C-97 (K) G-1Sec. V.

Maximum Zero Fuel Weight - 128,000 lbs.
(See Flight Manual T.O. 1C-97 (K) G-1 for fuel loading distribution and limitations)

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Minimum Crew: Pilot, Copilot, and Flight Engineer and the number of persons essential to perform the special purpose operation.

Fuel Capacity: 7,790 gals. total - 2 outboard 1,770 gal. ea.
2 inboard 1,520 gal. ea.
1 center tank 1,210 gal.

Bulk Liquid Capacity: 5,810 gals. total - Fwd. deck tanks 2,898 gals.
Aft deck tanks 2,912 gals.

External Tanks: 1,382 gals. total - Right Hand 691 gals.
(See Note 4) Left Hand 691 gals.

Oil Capacity: 186 gals. total - 4 engine tanks 32.5 gals. ea.
2 transfer tanks 56 gals. ea.

Cargo Capacity: See Flight Manual T.O. 1C-97 (K) G-1 Sec. V.

Control Surface Movements

| CONTROL SURFACE | POSITION | MOVEMENT FROM NEUTRAL POSITION IN DEGREES | TRAILING EDGE MOVEMENT IN INCHES |
|---|----------|---|----------------------------------|
| Ailerons | UP | 25 (± 1) | 9.22 (± .38) |
| | DOWN | 25 (± 1) | 9.22 (± .38) |
| Aileron Trim Tabs | UP | 5.5 (± 1) | .75 (± .06) |
| | DOWN | 5 (± 1) | .75 (± .06) |
| Elevators | UP | 20 (± 1) | 12.45 (± .62) |
| | DOWN | 15 (± 1) | 9.36 (± .62) |
| Elevator Trim Tabs | | | |
| Right | UP | 12 (± 2) | 2.55 (± .43) |
| | DOWN | 12 (± 2) | 2.55 (± .43) |
| Left - Wing Flaps Up, Neutral Position of Trim Tab with Elevator in Neutral Position | UP | 1.5 (+.5/- .25) | .32 (+.11/- .05) |
| Wing Flaps Down 45 Degrees, Elevator in Neutral Position Measured from Position given above | UP | 3 (± ½) | .64 (± .11) |
| Rudder (By Pedal with Rudder Boost On) | RIGHT | 22 (± 1) | 24.94 (± 1.12) |
| | LEFT | 22 (± 1) | 24.94 (± 1.12) |
| (By Trim Knob with Rudder Boost On) | RIGHT | 15.5 (+1/-1.5) | 17.62 (1.11/-1.69) |
| | LEFT | 15.5 (+1/-1.5) | 17.62 (1.11/-1.69) |
| Rudder Tab | RIGHT | 20 (± 1) | 2.95 (± .15) |
| | LEFT | 20 (± 1) | 2.95 (± .15) |
| Wing Flaps | DOWN | 45 (± 2) | |

Serial Numbers Eligible: USAF Serial Numbers 53-223 and 52-0883

Certification Basis: FAR 21.25(a) (7) dated May 1974, Amendment 21-1 through 21.54
Restricted Type Certificate Issued January 21.1986

- Production Basis: None - Prior to original airworthiness certification of each aircraft, an FAA representative must perform an inspection for workmanship, materials, and conformity with the approved technical data, and assure that the applicant has conducted a satisfactory flight check.
- Equipment: The basic required equipment as prescribed in the applicable Airworthiness Regulation (See Certification Basis, must be installed in the aircraft for certification. In addition, an FAA-Approved Airplane Flight Manual Supplement is required in addition to the operating limitations specified in Section V of T.O. 1C-97 (K) G-1.
- Note 1. Current weight and balance report and loading instructions for Model PSI-KC-97G aircraft must agree with Section V of T.O. 1C-97 (K) G-1.
- Note 2. A. This approval applies to USAF (Boeing) KC-97G aircraft with modifications described in PSI Enterprises Drawing List PSI-5, dated January 8, 1986 or later FAA-approved revision thereto.
- B. Aircraft certified for the special purpose of carriage of Bulk Liquid cargo.
- (1) Operation over densely populated areas is prohibited.
- (2) In addition to the operating limitations in this data sheet, area, economic, passenger and other appropriate operating limitations in accordance with FAR 21.25 shall be shown on placards or listings accessible to the pilot.
- (3) The following placard shall be displayed in front of and in clear view of the pilot:
“RESTRICTED CATEGORY”
“This airplane must be operated as a restricted category airplane in compliance with the operating limitations stated in the form of placards, markings, and manuals.”
- Note 3. The aircraft must be serviced and maintained in accordance with USAF T.O. 1C-97 (K) E (C) -2-1.
- Note 4. When External Tanks are used T.O. 1C-97 (K) G-1 Appendix pages 2A1-1 and on shall be used in determining performance specification.
- Note 5. The serial refueling boom and associated equipment shall be removed and reference to this equipment will be disregarded. Removal is in accordance with T.O. 1C-97 (K) E (C) -2-6.
- Note 6. The Bulk Liquid Tanks and manifold system are separate and distinct from the aircraft fuel system.
- Note 7. The aircraft, S/N 52-0883, must be operated in accordance with the FAA-Approved AFM Supplement, Revision 1, dated September 14, 1989.

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