

BELL HELICOPTER TEXTRON

MODELS: Bell (Army) P-63C, P-63E (Approved 7/17/47)

T.C. NUMBER: Spec. No. L-21-3 Eligible for Certification in Limited Category only  
(Holder of Limited T.C.: Bell Aircraft Corp., Buffalo, NY)

Engine	Allison V-1710-117 for P-63C; Allison V-1710-109 (E-22) for P-63E
Fuel	Grade 100/130
Engine limits	V-1710-117: Maximum continuous (S.L.) 43.8 in. Hg., 2600 rpm (1050 hp) (21000 ft.) 45.5 in. Hg., 2600 rpm (1000 hp) Take-off (five minutes) (S.L.) 54.0 in. Hg., 3000 rpm (1325 hp) V-1710-109 (E-22): Maximum continuous (S.L.) 43.8 in. Hg., 2600 rpm (1050 hp) (24000 ft.) 42.5 in. Hg., 2600 rpm (950 hp) Take-off (five minutes) (S.L.) 59.5 in. Hg., 3000 rpm (1425 hp)
Propellers	Aeroproducts A642S-D2/A2721107 (11'7" diameter) or A642S-E2/A2891107 (11'6" diameter)
Airspeed limits (See NOTE 2b)	Glide or dive 450 mph (with droppable fuel tanks installed 350 mph).
Maximum weight	Take-off 11,000 lb.; landing 10,400 lb.
C.G. range	P-63C-141.27 in. to 146.70 in.; P-63E-141.21 in. to 146.70 in.
Datum	36.8 in. forward to center line of forward hoisting point
Other operation limitations	Army Technical Order AN-01-110FQ-1
Specifications Pertinent to All Models:	
Certification basis	Limited Type Certificate No. 21 (CAR 9) effective 11/21/46
Production basis	None may be produced under this approval
Export eligibility	Not eligible for export certificate

EQUIPMENT: No equipment other than engines and propellers are specified.  
However, such equipment as required by CAR 43.30 for the particular

operation authorized for NC aircraft must be installed. Also, any additional equipment necessary for the proper operation of the aircraft. In addition, the aircraft may incorporate such military equipment (except armament) as was originally incorporated in the type for military or naval service. Additional equipment may be installed as can be substantiated on the basis that it presents no obvious hazard to safety.

NOTE 1. Weight and balance report including list of equipment included in the certificated empty weight must be submitted for each aircraft. Army and Navy weight records in current condition may be submitted in lieu of an actual weight. The equipment list need include no more than the following:

- (a) Required equipment as defined under "Equipment" above.
- (b) Additional items as may be reasonably considered removable and are so located or of such weight that their removal or addition could noticeably affect the weight and balance of the aircraft. Item built into the aircraft structure need not be listed. The equipment list must be prepared by the applicant for the approval the certificating CAA representative, and in such form that it can be attached to the CAA Operation Limitations.

NOTE 2. The following placards must be prominently displayed in the positions indicated:

- (a) In full view of passengers: "This is a military type aircraft and under the Civil Air Regulations shall not be used for the carriage of passengers or cargo for compensation or hire."
- (b) In the cockpit in full view of the pilot:
  - "Do not exceed 300 mph with wheels down."
  - "Do not exceed 200 mph with flaps down."
  - "Do not operate landing gear or flaps above 180 mph."
  - "Intentional spins and snap rolls prohibited."

NOTE 3. The following statement must appear on the operation limitation, "This airplane must be operated at all times within the limitations set forth in Army Technical Order AN-01-110FQ-1 except for limitations specifically called out in Aircraft Specification AL-21 in which case the values given in the spec. must be observed. A copy of Army Technical Orders and Aircraft Spec. AL-21 must be carried during flight." In all cases it will be the responsibility of the applicant to secure copies of the Army Technical Orders. The CAA does not have these documents available for distribution.

NOTE 4. If any repairs or modifications are made prior to and/or subsequent to NL certification, it is the responsibility of the owner to furnish sufficient evidence to a CAA representative to show that the modified airplane maintains the same degree of airworthiness as the original. The CAA can give no technical assistance on such matters since complete structural data for NL aircraft are not required by Part 9 and therefore are not available in the CAA.

NOTE 5. For certification for night flying the following must be accomplished:

- (a) Replace the wing position lights with certificated units or satisfactorily modify the lights if pertinent. NOTE: Type A-9 wing position lights (AN-3033-5 through -8) may be satisfactorily modified by painting the inside frosted portion of the cover black. Type A-9 (AN-3033-1 through -4) are satisfactory without modification.
- (b) Replace the tail light with a certificated unit.
- (c) If "Bright and Dim" conditions are provided for the position lights, either the resistors should be disconnected from the circuits and a single-pole-single-throw switch should be used to replace the two single-pole-double-throw switches presently installed for wing-tip and tail lights, or the switches should be placarded to indicate that only the "bright condition" should be used. In either case the tail light and wing-tip lights should operate on one switch.

The list of mandatory changes required prior to original certification may be obtained from CAA Aircraft Division, Washington, D.C., Attn: W-298.