DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

	3A14
	Revision 15
	CESSNA
(Military TO-1D, O-1D, O-1F)	305B
	305E
	April 4, 1994

TYPE CERTIFICATE DATA SHEET NO. 3A14

Type Certificate Holder	Regal Air Incorporated 2040 Airway Ave. Fort Collins, Colorado 80524

I - Model 305B (Military TO-1D, 0-1D or 0-1F), 2 PCLM (Utility Category), Approved April 11, 1956

Engine	Continental 0-470-15	
*Fuel	80 minimum grade aviation gasoline	
*Engine Limits	Takeoff (5 min.) , 2600 r.p.m. (213 hp.) For all other operations, 2300 r.p.m. (190 hp.)	
*Airspeed Limits	Never exceed	190 m.p.h. (165 knots) True Ind.
	Maximum structural cruising	145 m.p.h. (126 knots) True Ind.
	Flaps extended	100 m.p.h. (87 knots) True Ind.
	Maneuvering	134 m.p.h. (116 knots) True Ind.
*C.G. Range	(+34.5) to (+40.0) at 2100 lb. or less (+37.0) to (+40.0) at 2400 lb. Straight line variation between points given	
Empty Wt. C.G. Range	None	
*Maximum Weight	2400 lb.	
No. of Seats	1 (+36 and +77)	
Maximum Baggage	100 lb. (+100) See NOTE 2C(3)	
Fuel Capacity	Metal Tanks 41 gal. total, 36 gal. usable (two 20.5 gal. tanks in wings at +44) Self-sealing tanks (equipment item 602) 44 gal. total, 38 gal. usable (two 22 gal. tanks in wings at +44) See NOTE 1 for weight of unusable fuel	
Oil Capacity	2-1/2 gal. (-15) See NOTE 1 for weight of unusable oil	

Control Surface Movements	Wing flaps				Down	60°
	Ailerons	Up	20°		Down	14°
	Elevator tab	Up	16°		Down	24°
	Elevators	Up	26°		Down	20°
	Rudder	Right	16°		Left	16°

Serial Nos. Eligible: 23489 through 23588 and 23950 and up. 305M-0001 and up. Prior to civil certification the airplanes must be modified in accordance with Cessna dwg. 0600012 which may be obtained from the manufacturer. An FAA representative upon determination of compliance with the above-mentioned modification drawing may issue an airworthiness certificate.

Required Equipment: Items: 1(a) and (b), 101 (a) and (b), 102, 103, 201(a), (b), or (c), 202(a), 204(a) and 601

II - Model 305E (Military T0-1D, 0-1D or 0-1F), 2 PCLM (Normal Category); 2 PCLM (Utility Category), Approved September 28, 1967

Engine: Continental 0-470-15

*Fuel: 80 minimum grade aviation gasoline

*Engine Limits: Takeoff (5 min.), 2600 r.p.m. (213 hp.)
For all other operations, 2300 r.p.m. (190 hp.)

*Airspeed Limits:

Never exceed	192 m.p.h. (167 knots) True Ind.
Maximum structural cruising	152 m.p.h. (131 knots) True Ind.
Flaps extended	100 m.p.h. (87 knots) True Ind.
Maneuvering	128 m.ph. (111 knots) True Ind.

*C.G. Range:
Normal Category
Landplane (+33.5) to (+42.0) at 2050 lb. or less
(+37.0) to (+42.0) at 2800 lb.
Straight line variation between points given
Utility Category
Landplane (+33.5) to (+40.0) at 1985 lb. or less
(+37.0) to (+40.0) at 2400 lb.
Straight line variation between points given

Empty Wt. C.G. Range: None

*Maximum Weight:
Normal Category
Landplane 2800 lb.
Utility Category
Landplane 2400 lb.

No. of Seats: 2 (+36 and +77)

Maximum Baggage: 100 lb. (+100)
See NOTE 2C(3)

Fuel Capacity	Metal tanks 41 gal. total, 36 gal. usable (two 20.5 gal. tanks in wings at +44) Self-sealing tanks (equipment item 602) 44 gal. total, 38 gal. usable (two 22 gal. tanks in wings at +44) See NOTE 1 for weight of unusable fuel				
Oil Capacity	2-1/2 gal. (-15) See NOTE 1 for weight of unusable oil				
Control Surface Movements	Wing flaps			Down	60°
	Ailerons	Up	20°	Down	14°
	Elevator tab	Up	27°	Down	16°
	Elevators	Up	26°	Down	20°
	Rudder	Right	16°	Left	16°
Serial Nos. Eligible	305M-0001 and up. All Models 305B that have been modified per Cessna dwg. 0600523. Prior to civil certification, the airplanes must be modified in accordance with Cessna dwg. 0600066 which may be obtained from the manufacturer. An FAA representative upon determination of compliance with the above-mentioned modification drawing may issue an airworthiness certificate.				
Required Equipment	Items: 1(a) and (b), 101(a) and (b), 102, 103, 201(a), (b) or (c), 202(a), 204(a) and 601				

Specifications Pertinent to All Models

Datum	Front face of lower firewall
Leveling Means	Horizontal control stick torque tube
Certification Basis	Part 3 of the Civil Air Regulations effective November 1, 1949, as amended by 3-1 through 3-13. Type Certificate No. 3A14 issued April 11, 1956. Application for type certificate dated November 16, 1955.
Production Basis	(a) Production Certificate No. 4 for S/N 23489 through 23588 and 23950 through 24159 of Model 305B. (b) Production Certificate No. 312 for Models 305B and 305E, S/N 305M-0001 and up. Model 305E, S/N - All 305B airplanes modified per Cessna dwg. 0600523. (c) Effective February 15, 1985, and on, Production Certificate No. 4 is applicable to all spares production.

Equipment: A plus (+) or minus (-) sign preceding the weight of an item of equipment indicates net weight change when that item is installed.

Propeller and Propeller Accessories

1.	McCauley constant speed propeller	
	(a) Hub 2A36C1, blades 90M-0 to -10 Diameter: not over 90 in., not under 80 in. Pitch settings at 36 in. sta.: low 7.0°, high 22.5° for 90M-0 low 9.0°, high 22.5° for 90M-10	64 lb. (-42)
or	(b) Hub 2A34C66, blades 90AT-0 Diameter: not over 90 in., not under 88 in. Pitch settings at 36 in. sta.: low 9.5° high 22.5°	55 lb. (-42)
	(c) Propeller governor, Woodward 210105	4 lb. (- 2)

Engine and Engine Accessories - Fuel and Oil System

101.	Fuel pumps	
	(a) Engine-driven, Lear-Romec Type G-18 RG9080, RG9080F-1, RG9080-2	2 lb. (- 3)
	(b) Electric, Adel 20653-2	1 lb. (+16)
	(c) Engine-driven, M.C. Mfg. Co., MC-518	2 lb. (- 3)
	(d) Engine-driven, MS29584-1	2 lb. (- 3)
102.	Oil radiator, Heat Exchangers, Inc. Model 1100 or 1100B	10 lb. (-31)
103.	Carburetor oil filter, Air-Maze Type P-1A or P-57A or AC Spark Plug A6486197	1 lb. (-32)
104.	Starter, Eclipse Type J-1	20 lb. (+ 1)
	(a) AN 4116R1	
	(b) Bendix 756-10C, -16C, -22C, -22D	
	(c) Garwin G-760	
105.	Vacuum pump	5 lb. (-2.5)
	(a) Pesco Type B-11	
or	(b) Garwin G-450	
or	(c) Bendix 692-2A or 692-2	
or	(d) ARO Corp. A-513D8	
or	(e) Pesco 3P-194F or 3P-194FA	

Landing Gear

201.	Two main wheel-brake assemblies 6.00-6, Type III	
	(a) Goodyear Model LF6HBD	15 lb. (+17.5)
	Wheel assembly No. 511960-M	
	Brake assembly No. 953-839	
	(b) Cleveland	16 lb. (+17.5)
	Wheel assembly No. 40-97E	
	Brake assembly No. 30-63K	
	(c) Cleveland	
	Wheel assembly No. 40-75F	19 lb. (+17.5)
	Brake assembly No. 30-52L	
202.	(a) Two main wheel 4-ply rating tires 7.00-6, Type III (with regular tubes)	+18 lb. (+17.5)
204.	Tail wheel assembly	
	(a) Scott Model 3200A, steerable, swiveling	8 lb. (+248.5)
205.	Cross-wind gear installation per Cessna dwg. 0600513	+6 lb. (+17.5)

Electrical Equipment

301.	Generator, 24 v. 50 a.	14 lb. (-13.5)
	(a) Eclipse 1345-3-A	
or	(b) Eclipse 30B24-1-A	
302.	Battery, 24 v. 11 a. hr.	35 lb. (+10)
303.	Landing light, G.E. 4591(2)	1 lb.(+28)
304.	Voltage regulator, Type 1589-1D	3 lb. (+10)
305.	Reverse current relay (Hartman) A-700A	2 lb. (+5.5)

Interior Equipment

401.	Cabin heater valve assemblies (2)	1 lb. (-1)

Miscellaneous

601.	Safe Flight stall warning indicator	
602.	Self-sealing fuel tank kit, Cessna dwg. 0600514	21 lb. (+46.5)
603.	Radio installation, Cessna dwg. 0660510 (requires military redesignation 0-1F)	Use act. wt. & arm
604.	Radio installation, Cessna dwg. 0600515 (requires military redesignation 0-1D)	Use act. wt. & arm
605.	Radio installation, Cessna dwg. 0600521	Use act. wt. & arm

NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight and loading instructions when necessary must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include unusable fuel of 30 lb. at (+42) included in total fuel capacity and unusable oil of 6.0 lb. at (-15) included in total oil capacity.

NOTE 2. The following placards must be displayed as indicated:

A. Model 305B:

(1) Below instrument panel:
"This airplane must be operated as a utility category airplane in compliance with the operating limitations stated in the form of placards and markings. Inverted maneuvers and intentional spins prohibited.

Approved Maneuvers -		Flight maneuvering load factors:	
Chandelle	134 m.p.h.		
Lazy Eight	134 m.p.h.	Flaps Up	+4.4 to -1.76
Steep Turn	134 m.p.h.	Flaps Extended	+2.0
Stall	Slow Deceleration		

Maximum design weight 2400 lb.
Pilot's window - maximum speed open 120 m.p.h.
Rear window - maximum speed open 145 m.p.h.
Solo from front seat only."

Flaps: Takeoff 0° to 30°
Landing 0° to 60°

B. Model 305E:

(1) "This airplane must be operated in compliance with the operating limitations stated in the form of placards and markings

	Normal Category	Utility Category
Maximum design weight	2800 lb.	2400 lb.
Maximum speed flaps down	100 m.p.h.	100 m.p.h.
Maximum maneuvering speed	128 m.p.h.	134 m.p.h.
Maneuvering load factors		
Flaps Up	+3.8 to -1.52	+4.4 to -1.76
Flaps Down	+3.5	+3.5
Solo	Front seat only	

Approved Maneuvers	Normal Category (2800 lb.)	Utility Category (2400 lb.)
Chandelle	No acrobatic	134 m.p.h.
Lazy Eight	maneuvers	134 m.p.h.
Steep Turn	including	134 m.p.h.
Stall (except whip stalls)	spins	Slow deceleration
Spins	approved	Intentional spins not permitted
Inverted maneuvers		Not permitted"

Flap position: Takeoff 0° to 30°
Landing 0° to 60°

C. Models 305B and 305E:

(1) On instrument panel:
"Caution - Do not operate rotating beacon during instrument flight."

(2) On fuel selector valve: (Metal fuel tanks installed):
"Main tank 18 gal.
Auxiliary tank 18 gal.
Usable fuel in level flight 20 gal. each tank."

On fuel selector valve: (Self-sealing tanks installed):
"Main tank 19 gal.
Auxiliary tank 19 gal.
Usable fuel in level flight 20.5 gal."

(3) In baggage compartment:
"No baggage allowable" or "Max. baggage 100 lb. - for additional loading instructions see weight and balance data."

Note: The amount of baggage is dependent upon the radio equipment installed.
The applicable placard is determined from the weight and balance per NOTE 1.

In addition to the placards specified above, the prescribed operating limitations indicated by an asterisk (*) under Sections I and II of this specification must also be displayed by permanent markings.

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