

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

A-749
RYAN
ST-3KR (Army
PT-22, PT-22A)

June 1, 1949

AIRCRAFT SPECIFICATION NO. A-749

Manufacturer Ryan Aeronautical Company
Lindbergh Field
San Diego, California

I - Model ST-3KR (Army PT-22, PT-22A), 2 POLM, Approved February 16, 1942

Engine	Kinner R-5 Series 2 (See also Items 202 and 105 for optional engines).		
Fuel	73 min. octane aviation gasoline		
Engine limits	For all operations, 1850 rpm (160 hp)		
Airspeed limits	Level flight or climb	140 mph	
	Glide or dive	190 mph	
	Flaps extended	100 mph	
	Propeller limits See Items 1, 2 or 101.		
C.G. range	(+33.3) to (+38.5)		
Empty weight C.G. range	(+29.5) to (+30.5). When empty weight C.G. falls within this range, computation of critical fore and aft C.G. positions is unnecessary. Range is not valid for non-standard arrangements.		
Datum	Forward face of firewall.		
Leveling means	Lugs on bulkheads 3 and 4 - right side of rear cockpit.		
Maximum weight	1885 lbs.		
No. seats	2 (one at +42 and one at +89).		
Maximum baggage	53 lbs. (+119)		
Fuel capacity	24 gals. (+10.5) one fuselage tank		
Oil capacity	3 gals. (-5.5)		
Control surface movements	Wing Flaps		down 28.5°
	Elevator trim tab	up 27.5°	down 31°
	Elevator	up 35°	down 26°
	Ailerons	up 34°	down 21.5°
	Rudder	right 26°	left 27°
Serial Nos. eligible	1001 and up and all AAF numbers. Use manufacturer's number when available.		
Required equipment	Items 101, 102, 103, 104.		

SPECIFICATIONS PERTINENT TO ALL MODELS

Certification basis	Type Certificate No. 749 (CAR 4a)
Production basis	None. Each aircraft of model ST-3KR manufactured after July 21, 1943, for civil certification, must, prior to original certification, satisfactorily pass: (a) An inspection for workmanship, materials and conformity <u>before</u> any covering, metal priming or final finish is applied. All woodwork may be varnished. (b) A final inspection of the completed aircraft. (c) A check of the flight characteristics.
Export eligibility	Eligible for export to all countries except as follows subject to the provisions of ASR 312 (MOP 2-4 contains the same information): Canada - Landplane eligible - Skiplane not eligible.

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

Propellers and Propeller Accessories

1.	Propeller - Sensenich 90H-89, 90H-90, 90HSP-89 or 90HSP-90, including hub	46 lbs. (-38)
2.	Propeller - Sensenich 90HA-86, 90HA-89, 90HA-90, 90HASP-90, 90HASP-90M, 42K12335, 42K12335M, or 43K26215, including hub	53 lbs. (-38)
101.	Propeller - Sensenich 88KSP-84, including hub (For R-5 Series 2 engine)	36 lbs. (-38)

Engines and Engine Accessories - Fuel and Oil System

104.	Carburetor air heater (Ryan Dwgs. E-1283 and E-1333)	
105.	Kinner R-56 engine (Propeller Item 1 or 2 and lead ballast as required must be used with this engine)	+37 lbs. (-24)
201.	Starter, direct drive, hand	8 lbs. (-8)
202.	Kinner R-55 engine (Propeller Item 1 or 2 and lead ballast as required must be used with this engine)	+21 lbs. (-24)
203.	Alternate engine mount	+6 lbs. (-14)

Landing Gear and Floats

102.	7.00-6 wheels (Shinn 6C5YFB) with brakes and 4-ply tires	30 lbs. (+19)
103.	Steerable tail wheel and tire (8 in. smooth contour)	4 lbs. (+200)

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

When weight and balance computations indicate that the forward C.G. limit is exceeded, lead ballast of sufficient weight to meet this limit shall be installed (+195). Ryan Drawing No. M-1114 shows an acceptable method of installing two individual three (3) lb. weights. Each weight may be lengthened and increased to a maximum of 10 lbs. provided the weight is adequately attached by 3/16 inch bolts to the bulkhead web and to the fuselage skin. When total ballast in excess of 16 lbs. is installed, the rear C.G. limit must be restricted to (+37) (17.35% MAC).

NOTE 2. Placard front cockpit: "Solo flying from rear seat only."

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