

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

4A29
Revision 3

KWAD
(Mitchell)
(Bay Aviation)
(Oakland Airmotive)
(Pine Air Limited)

Super V

October 23, 1978

TYPE CERTIFICATE DATA SHEET NO. 4A29

This data sheet which is a part of type certificate No. 4A29 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 KWAD Company
 4530 Jetridge Drive NW
 Atlanta, Georgia 30327

I. - Model Super-V, 4 PCLM (Normal Category), Approved June 17, 1960

Engines	2	Lycoming O-360-A1A or O-360-A1C
Fuel	91/96 min.	grade aviation gasoline
Engine Limits	For all operations,	2700 rpm at 26.8 in.Hg. (170 hp.)
Propeller and Propeller Limits	2	Hartzell full-feathering propellers HC-92ZK/8447-12A Diameter: Not over 72 inches, not under 70 inches Pitch setting at 30 inch station: Low 12.3°, high 24.7°
Airspeed Limits (TIAS)	Never exceed	240 mph (208 knots)
	Maximum structural cruise	190 mph (165 knots)
	Maneuvering	152 mph (132 knots)
	Flaps extended	126 mph (110 knots)
	Landing gear extended	125 mph (109 knots)

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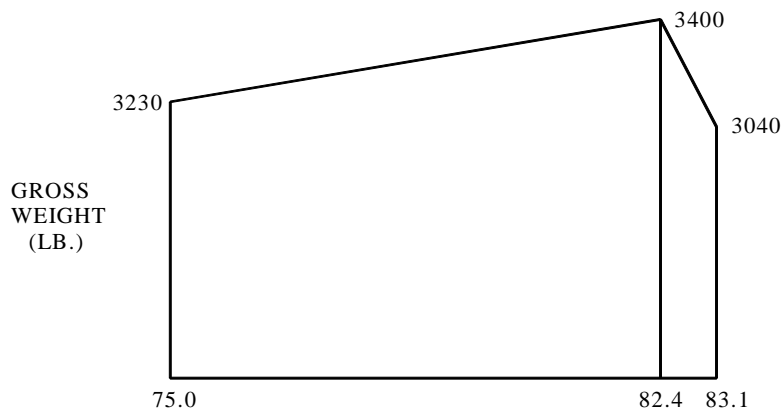
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C. G. Range
(landing gear extended)

The approved weight and C.G. locations for Lycoming O-360-A1A engine installation are shown below:

<u>Gross Weight (lb.)</u>	<u>Fwd. Limit (in.)</u>	<u>Aft Limit (in.)</u>
3040	75.0	83.1
3230	75.0	82.7
3400	82.4	82.4

Straight line variation between points shown.

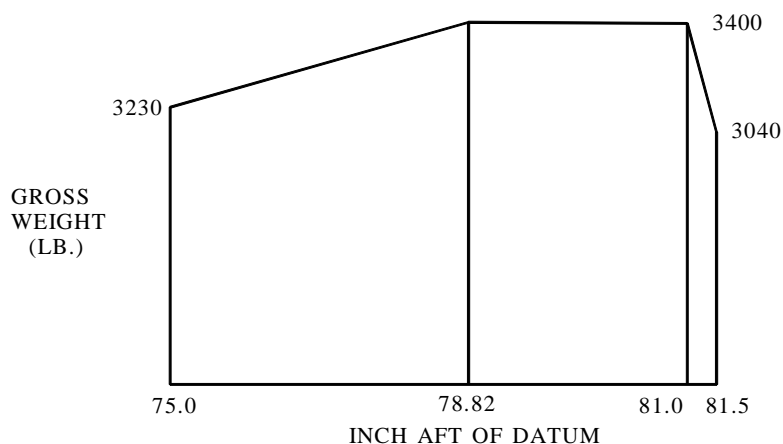


C. G. Range

The approved weight and C.G. locations for Lycoming O-360-A1C engine installation (landing gear extended cont'd) are shown below:

<u>Gross Weight (lb.)</u>	<u>Fwd. Limit (in.)</u>	<u>Aft Limit (in.)</u>
3040	75.0	18.5
3230	75.0	81.25
3400	78.82	81.0

Straight line variation between points shown.



Empty Weight C.G. Range

None

Datum

83.1 in. fwd. of the jack pads on the front spars.

Leveling Means

Longitudinal: Leveling lugs are in the door jamb of the baggage door right hand side of the aircraft.

Lateral: Top face of main spar in fuselage

Maximum Weight

3400 lb.

Number of Seats

4 (2 at +85, 2 at +117)

<u>Maximum Baggage</u>	Fwd. compartment: 150 lb. (+30) Aft compartment: 120 lb. (+140)																												
<u>Fuel Capacity</u>	100 U.S. gallons (two 20 gallon wing tanks 19.5 usable fuel in each tank at (+75) and two 30 gallon tanks 29.9 usable fuel in each tank at (+77.1) (See NOTE 1 for unusable fuel)																												
<u>Oil Capacity</u>	8 quarts per engine. (6 quarts usable See NOTE 1 for unusable oil)																												
<u>Control Surface Movements</u>	<table><tr><td>Wing flaps</td><td></td><td>20°</td><td>Down</td></tr><tr><td>Aileron Tab</td><td></td><td>Fixed</td><td></td></tr><tr><td>Aileron</td><td>20°</td><td>Up</td><td>20° Down</td></tr><tr><td>Elevator Tab</td><td>10°</td><td>Up</td><td>30° Down</td></tr><tr><td>"V" Tail Elevator Action</td><td>20°</td><td>Up</td><td>20° Down</td></tr><tr><td>"V" Tail Rudder Action</td><td>21°</td><td>Up</td><td>21° Down</td></tr><tr><td>"V" Tail Maximum combination rudder elevator action</td><td>35 °</td><td>Up</td><td>35° Down</td></tr></table>	Wing flaps		20°	Down	Aileron Tab		Fixed		Aileron	20°	Up	20° Down	Elevator Tab	10°	Up	30° Down	"V" Tail Elevator Action	20°	Up	20° Down	"V" Tail Rudder Action	21°	Up	21° Down	"V" Tail Maximum combination rudder elevator action	35 °	Up	35° Down
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<u>Serial Numbers Eligible</u>	SV-102 and up, modified by Oakland Airmotive Company or Bay Aviation Services Company, plus the original Beech Serial No. Beech Serial Nos. eligible D-1 through D-2680 and D-15001. Example: SV-102D-2200																												
<u>Certification Basis</u>	CAR 3 of May 15, 1956 and Amendments 3-1 through 3-4. Type Certificate No. 4A29, issued June 17, 1960. Reissued to Pine Air Limited September 21, 1962. Date of Application for Type Certificate September 11, 1959.																												
<u>Equipment</u>	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required:</p> <p>(1) Approved equipment as shown in Oakland Airmotive Report No. 12. (2) FAA approved Airplane Flight Manual. (3) Stall warning indicator, Oakland Airmotive Dwg. No. 403.</p>																												
NOTE 1.	<p>(a) 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.</p> <p>(b) The certificated empty weight and the corresponding center-of-gravity locations must include unusable fuel of 6 lb. (+75) and unusable oil of 7.5 lb. at (+37).</p>																												
NOTE 2.	The following placard must be displayed in front of and in clear view of the pilot: "OPERATE IN NORMAL CATEGORY IN COMPLIANCE WITH THE APPROVED AIRPLANE FLIGHT MANUAL."																												
NOTE 3.	The landing gear door system must be modified in accordance with the applicable drawings as listed in Beech Installation Bulletins: (a) 35-604 (Model 35) (b) 35-603 (Models A35 and B35)																												
NOTE 4.	The Model Super-V aircraft is a conversion of the standard Beech models 35, A35 or B35, and is limited to these specific models. (See Serial Nos. eligible.) When a Beech model is being converted to a model Super-V, it must be determined that the inter-relationship between the Super-V conversion and all previously approved modifications will introduce no adverse effect upon the airworthiness of the airplane.																												
NOTE 5.	Wing tip modifications in accordance with Oakland Airmotive Company Dwg. No. 711328 are considered optional.																												

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