

WEIGHT & BALANCE

SCOOTER SPECIFICATIONS

Wing Span 26 ft.
Length 15 ft. 8 in.
Height (pylon) 7 ft.
Total Wing Area 115 sq. ft.
Aileron area 12.5 sq. ft.
Stab. Area 10.8 sq. ft.
Elev. Area 7.7 sq. ft.
Rudder Area 5.6 sq. ft.
VW-Corvair Eng. 50 hp
Max. Loads

3.8 G positive
2.5 G Negative

Empty CG. 29% MAC 14.5" aft/LE
Loaded CG. 26% 12.5" aft/LE

CG. Loaded Limits

Fwd limit 20% 10" aft/LE
Aft limit 32% 16" aft/LE

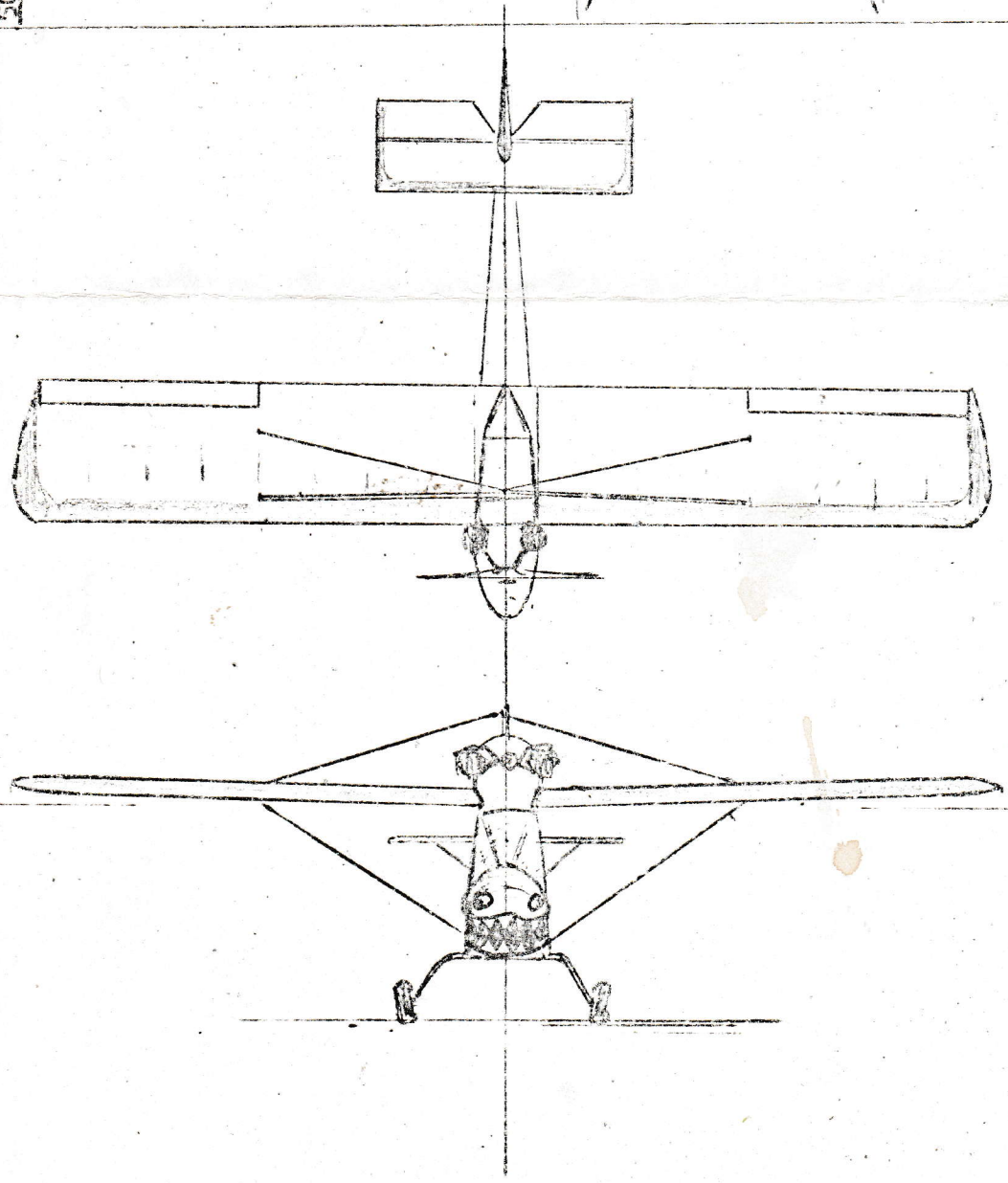
PERFORMANCE (36 h.p. engine)

Red Line Speed 95 mph
Top Speed 80 mph
Cruise speed 65-70 mph
Stall Speed 34 mph
Climb 325 fpm
Weight Empty 390 lbs
Weight Loaded 625 lbs

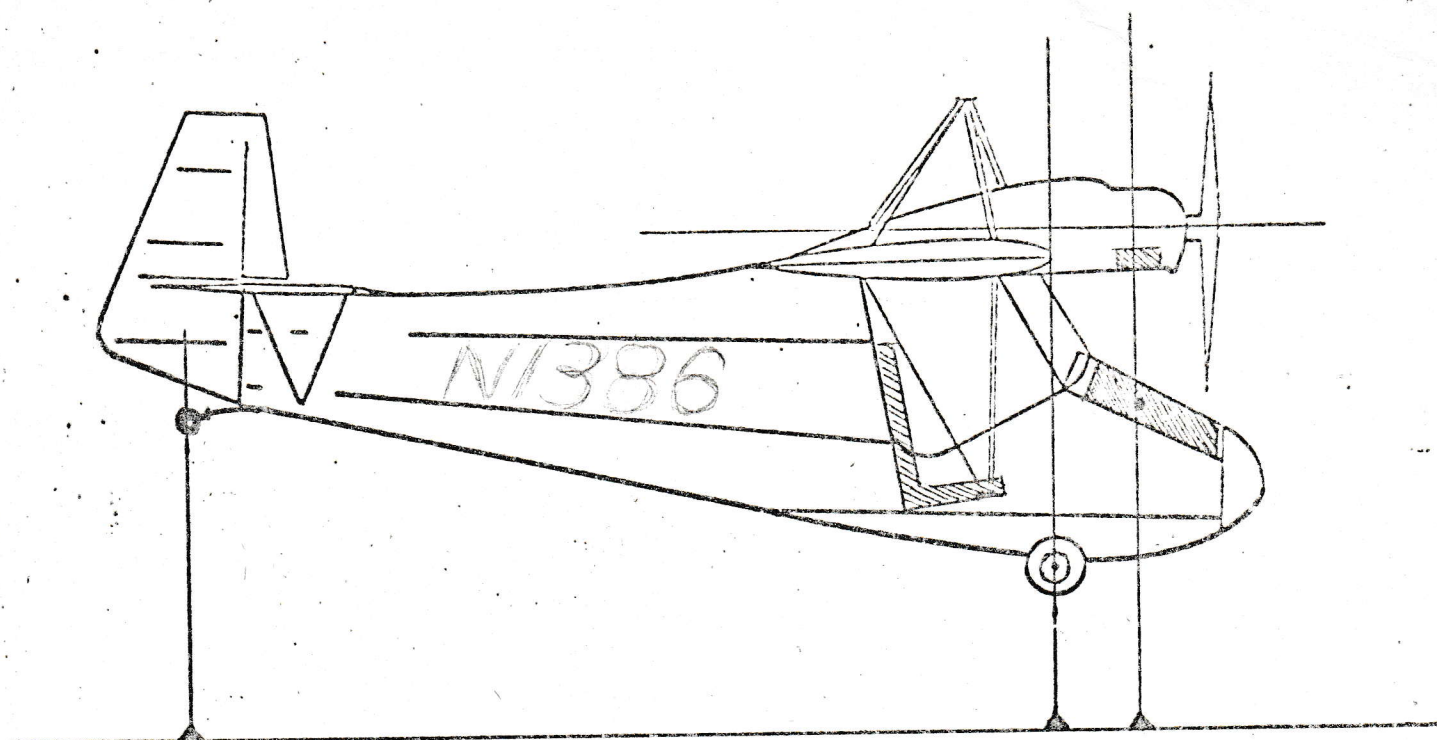
ESTIMATED PERFORMANCE

Corvair-VW (50 hp engine)

Red Line Speed 95 mph
Top Speed 90 mph (Esr)
Cruise Speed 75-80 mph (Esr)
Stall Speed 35 mph
Climb 500 fpm (Esr)
Weight Empty 451 lbs
Weight Loaded 687 lbs



Art. Poyals
Feb 27, 1971



SCOOTER- Ichiban Skoota (N1386) WEIGHT AND BALANCE DATA

STATIONS

DISTANCE FROM DATUM

Baggage
Gas
Landing Gear
Oil
Pilot
Tail Wheel

NONE
-15
0
-13
+20
+141

DATUM

Leading edge of the wing.

LEVEL

Cabin Floor

C.G. LIMITS

Rear limit is 32% or 16" aft of datum.
Forward limit is 20% or 10" aft of datum.
Empty C.G. is 29% or 14.5" aft of datum.

LOAD FACTOR

Positive 3.8G, Negative 2.5G at 625 pounds.
Positive 3.4G, Negative 2.1G at 692 pounds

WEIGHT AND BALANCE REPORT

SCOOTER, ICHIBAN SKOOTA SERIAL NO. FS-16 REGISTRATION N 1306

Datum: Leading edge of wing

Levelling: Top longeron

1. Weight Limits:

design empty weight 390 lbs.
actual empty weight 451 lbs.
maximum gross wgt. 687 lbs.

2. C.G. Limits: (from leading edge datum)

forward limit: 10" AFT (20% of chord). Rear limit: 16" AFT (32%)

3. Empty weight: (first subtract weight of oil if any)

Weighing point	scale reading	tare	Net weight
right	203	0	203
left	206	0	206
rear	42	0	42
Empty weight (W)	451	0	451 lbs.

4. Empty weight CG location:

$$CG_e = D \div \frac{RL}{W}$$

D = distance datum to front weighing points.

L = distance front to rear weighing points.

$$CG_e = 0 + \frac{5922}{451}$$

R = rear scale net weight.

W = total net weight.

$$CG_e = 13.1"$$

5. Equipment list: Aircraft weighed with the following:

Item	Type	Weight	Arm	Moment
Radio	NONE			
Battery				
Wheel Fairings				
Spinner				

6. Check of most forward CG extreme, CG_F: (forward limit: 10.0")

	Weight	Arm	Moment
Aircraft empty	451	+13.1	+5908
Full oil	6	-13.0	-78
Full fuel, main tank	50	-15.0	-750
Pilot	125	+20.0	+2500
TOTAL:	692		

$$CG_F = \frac{\text{Total moments}}{\text{Total weight}} = \frac{8680}{692} = 12.5" \text{ inches}$$

10" 2 1/4"

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7. Check of most rearward CG extreme, CG₂: (rear limit: 16")

	Weight	Arm	Moment
Aircraft empty	451	+ 13.1	+ 5908
Oil	6	- 13.0	- 78
Pilot (&chute)	185	+ 20.0	+ 3 00
Passenger	-	-	-
Baggage, max.	-	-	-
Minimum fuel	6	- 15.0	- 90

$$CG_2 = \frac{\text{Total moments}}{\text{Total weight}} = \frac{9440}{640} = 14.6" \text{ inches.}$$

8. Maximum loading:

Pilot & passenger (with chutes)	185	lbs.
Baggage, maximum	0	lbs.
Fuel, maximum <u>8.3</u> gals.	50	lbs.
TOTAL:	235	lbs.

9. Cockpit placards: Required only if weight limitations are necessary.

Aircraft weighed by: Antoni Bingelis
 Date of weighing : 11 MAY 1973
 Report prepared by : Antoni Bingelis
 Date : 21 May 1973