

FEDERAL AVIATION AGENCY

A-813
Revision 4
PIAGGIO
P.136-L
P.136-L1
P.136-L2

November 8, 1961

AIRCRAFT SPECIFICATION NO. A-813

Type Certificate Holder Piaggio & C.
Genoa, Liguria, Italy

I - Model Piaggio P.136-L, 5 PCAmM (Utility Category)

Engines	2 Lycoming GO-435-C2B	
Fuel	Minimum grade 80/87 or 91/98 (with carburetor setting 10-3391-1)	
Engine limits	Maximum continuous	3000 rpm (240 bhp)
	Maximum takeoff	3400 rpm (260 bhp)
	Economy cruise	2600 rpm (160 bhp)
Propellers	Type:	P.1033/G3-S - 3-bladed (metal)
	Pitch:	Variable (constant speed control)
	Diameter:	82-11/16 in. (m.2.10)
Airspeed limits	Never exceed speed	249 mph (216 knots) True Ind.
	Max. structural cruising speed	165 mph (144 knots) True Ind.
	Maneuvering speed	163 mph (142 knots) True Ind.
	Max. gear & flap lowering speed	126 mph (109 knots) True Ind.
	Max. speed for 1/2 flap	150 mph (130 knots) True Ind.
	Min. control speed - the min. speed at which the airplane is controllable in flight, with sudden failure of one engine, with takeoff power on the other engine.	90 mph (78 knots) True Ind.
C.G. range	Forward:	(+164) (m. 4.15)
	Rear:	(+176) (m. 4.46)
Maximum weight	5950 lbs. (2700 Kg.)	
No. seats	2 (+75) (m. 1.90) 3 (+110) (m. 2.80)	
Maximum baggage	See balance charts issued with each individual aircraft.	
Fuel capacity	190 U.S. gal. (720 liters) (Two tanks 95 U.S. gal. each) (+173) (m. 4.40)	
Oil capacity	Capacity of the sump 12 quarts each motor (+201) (m. 5.12)	

Page No.	1	2	3	4	5
Rev. No.	4	4	4	4	4

I - Model Piaggio P.136-L (cont'd)

Control surface movements	Elevator	Up	$27^{\circ} \pm 1^{\circ}$	Down	$17^{\circ} \pm 1^{\circ}$
	Elevator trim tab	Up	$14^{\circ} \pm 0.30'$	Down	$18^{\circ} \pm 0.30'$
	Rudder	Right	$25^{\circ} \pm 1^{\circ}$	Left	$25^{\circ} \pm 1^{\circ}$
	Rudder trim tab	Right	$16^{\circ} \pm 0.30'$	Left	$16^{\circ} \pm 0.30'$
	Aileron	Up	$24^{\circ} \pm 1^{\circ}$	Down	$20^{\circ} \pm 1^{\circ}$
	Flaps			Down	$45^{\circ} \pm 1^{\circ}$
	Stabilizer	Fixed			
Serial Nos. eligible	The Registro Aeronautico Italiano (RAI) Certificate of Airworthiness for Export issued as noted under "Certification basis" must be submitted for each individual aircraft for which application for certification is made.				
Required equipment	1. Piaggio P.136-L Airplane Flight Manual.				

II - Model Piaggio P.136-L1, 5 PCAmM (Utility Category)

Engines	2 Lycoming GO-480-B, GO-480-B1B or GO-480-B1D				
Fuel	Minimum grade 80/87				
Engine limits	Maximum continuous	3000 rpm (260 bhp)			
	Maximum takeoff	3400 rpm (270 bhp)			
	Economy cruise	2600 rpm (165 bhp)			
Propellers	Type:	Hartzell HC-83x20-2CL/L8433			
	Pitch:	Variable (constant speed control) and feathering			
	Diameter:	84 in. (No cutoff permitted for repairs)			
	Placard required:	"Avoid continuous operation on ground or on water between 1300 and 1650 rpm and between 2100 and 2500 rpm."			
Airspeed limits	Never exceed speed	222 mph (194 knots)	True Ind.		
	Max. structural cruising speed	164 mph (143 knots)	True Ind.		
	Maneuvering speed	157 mph (137 knots)	True Ind.		
	Max. gear & flap lowering speed	126 mph (109 knots)	True Ind.		
	Max. speed for 1/2 flap	150 mph (130 knots)	True Ind.		
	Min. control speed - the min. speed at which the airplane is controllable in flight, with sudden failure of one engine, with takeoff power on the other engine.	90 mph (78 knots)	True Ind.		
C.G. range	Forward:	(+164) (m. 4.15)			
	Rear:	(+176) (m. 4.46)			
Maximum weight	6000 lbs. (2720 Kg.)				
No. seats	2 (+75) (m. 1.90)				
	3 (+114) (m. 2.90)				
Maximum baggage	See balance charts issued with each individual aircraft.				
Fuel capacity	190 U.S. gal. (720 liters)				
	(Two tanks 95 U.S. gal. each) (+173) (m. 4.40)				
Oil capacity	Capacity of the sump 12 quarts each motor (+201) (m. 5.12)				

 II - Model Piaggio P.136-L1 (cont'd)

Control surface movements	Elevator	Up	$27^{\circ} \pm 1^{\circ}$	Down	$17^{\circ} \pm 1^{\circ}$
	Elevator trim tab	Up	$14^{\circ} \pm 0.30'$	Down	$18^{\circ} \pm 0.30'$
	Rudder	Right	$25^{\circ} \pm 1^{\circ}$	Left	$25^{\circ} \pm 1^{\circ}$
	Rudder trim tab	Right	$16^{\circ} \pm 0.30'$	Left	$16^{\circ} \pm 0.30'$
	Aileron	Up	$24^{\circ} \pm 1^{\circ}$	Down	$20^{\circ} \pm 1^{\circ}$
	Flaps			Down	$45^{\circ} \pm 1^{\circ}$
	Stabilizer	Fixed			
Serial Nos. eligible	The Registro Aeronautico Italiano (RAI) Certificate of Airworthiness for Export issued as noted under "Certification basis" must be submitted for each individual aircraft for which application for certification is made.				
Required equipment	1. Piaggio P.136-L1 Airplane Flight Manual.				

 III - Model Piaggio P.136-L2, 5 PCAmM (Normal Category) Approved March 7, 1957.

(Same as Model P.136-L1 except for increased gross weight, engine installation, addition of dorsal fin, redesigned oil system since engine has dry sump instead of wet sump).

Engines	2 Lycoming GSO-A1A6				
Fuel	Minimum grade 100/130				
Engine limits	(Straight line manifold pressure variation with altitudes shown)				
		<u>HP</u>	<u>RPM</u>	<u>MP</u>	<u>ALT</u>
	Takeoff	340	3400	48.0	S.L.
	Takeoff	340	3400	44.5	8000
	Maximum continuous	320	3200	45.0	S.L.
	Maximum continuous	320	3200	43.0	7500
Propellers	Type:	Hartzell HC-83x20-2CL/L9333C - 3 bladed (metal)			
	Pitch:	Variable (constant speed control and feathering)			
	Diameter:	Max. 88 in., Min. allowable for repairs 87 in.			
		No further reduction permitted.			
Airspeed limits	Never exceed speed	212 mph (184 knots) True Ind			
	Max. structural cruising speed	167 mph (145 knots) True Ind			
	Maneuvering speed	154 mph (134 knots) True Ind			
	Max. flap lowering speed	129 mph (112 knots) True Ind			
	Max. gear extension and extended speed	161 mph (140 knots) True Ind			
	Max. speed for 1/2 flap	150 mph (130 knots) True Ind			
	Min. control speed - the min.	90 mph (78 knots) True Ind			
	speed at which the airplane is controllable in flight, with sudden failure of one engine, with takeoff power on the other engine.				
C.G. range	Forward:	(+164) (m. 4.15)			
	Rear:	(+176) (m. 4.46)			
Maximum weight	Landplane	6614 lbs.			
	Seaplane	6393 lbs.			
No. seats	2	(+75) (m. 1.90)			
	3	(+114) (m. 2.90)			
Maximum baggage	See balance charts issued with each individual aircraft.				

 III - Model Piaggio P.136-L2 (cont'd).

Fuel capacity	190 U.S. gal. (720 liters) (Two tanks 95 U.S. gal. each) (+173) (m. 4.40)		
Oil capacity	8 gal. total (4 gal. each tank) (+189) (m.4.8)		
Control surface movements	Elevator	Up $27^{\circ} \pm 1^{\circ}$	Down $18^{\circ} \pm 1^{\circ}$
	Elevator trim tab	Up $14^{\circ} \pm 1^{\circ}$	Down $18^{\circ} \pm 1^{\circ}$
	Rudder	Right $30^{\circ} \pm 1^{\circ}$	Left $30^{\circ} \pm 1^{\circ}$
	Rudder trim tab	Right $20^{\circ} \pm 1^{\circ}$	Left $20^{\circ} \pm 1^{\circ}$
	Aileron	Up $24^{\circ} \pm 1^{\circ}$	Down $19^{\circ} \pm 1^{\circ}$
	Flaps		Down $45^{\circ} \pm 1^{\circ}$
	Stabilizer	Fixed	
Serial Nos. eligible	The Registro Aeronautico Italiano (RAI) Certificate of Airworthiness for Export issued as noted under "Certification basis" must be submitted for each individual aircraft for which application for certification is made.		
Required equipment	1. Piaggio P.136-L2 Airplane Flight Manual.		

Specifications Pertinent to All Models

Datum	Nose of aircraft
Leveling means	Datum pads on frame No. 20 and datum pegs at the baggage door frame.
Certification basis	<p>CAR 10. Type Certificate No. 813 issued August 15, 1955.</p> <p>Each aircraft and any replacement parts manufactured in Italy must be designated as "import" and clearly labeled as such in accordance with CAR 10.30.</p> <p>A. U.S. Airworthiness Certificate may be issued on the basis of a Certificate of Airworthiness for Export signed by a representative of the Registro Aeronautico Italiano (RAI) containing the following statement:</p> <p>(Models P.136-L and P.136-L1) "The airplane covered by this certificate has been examined and found to comply with U.S. Civil Air Regulation - Part 3, published November 1, 1949 and conforms to TC 813." or (Model P.136.L2) "The airplane covered by this certificate has been examined and found to comply with U.S. Civil Air Regulation - Part 3, dated November 1, 1949, including Amendments 3-1 through 3-12, and conforms to TC 813."</p>

NOTE 1. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of air carrier operators having an approved weight control system).

NOTE 2. The following placards must be displayed in front and in clear view of pilot:

A. For Model P.136-L:

- (1) "This airplane must be operated as an utility category airplane in compliance with the operating limitations specified in the Piaggio P.136-L Airplane Flight Manual."
- (2) "Utility Category (5950 lbs.) Acrobatic maneuvers including spins not approved."

B. For Model P.136-L1:

- (1) "This airplane must be operated as an utility category airplane in compliance with the operating limitations specified in the Piaggio P.136-L1 Airplane Flight Manual."
- (2) "Utility Category (6000 lbs.) Acrobatic maneuvers including spins not approved."

C. For Model P.136-L2:

- (1) "This airplane must be operated as a normal category airplane in compliance with the operating limitations specified in the Piaggio P.136-L2 Airplane Flight Manual."
- (2) "Normal Category (6614 lbs.) Acrobatic maneuvers including spins not approved."

- NOTE 3. These aircraft must be serviced and maintained in conformance with instructions contained in the publication listed below:
- A. Model P.136-L
 - (1) Piaggio P.136-L Maintenance and Repair Manual.
 - (2) Lycoming GO-435-C2B Operation, Maintenance and Overhaul Manual.
 - (3) Piaggio three-bladed Operation, Maintenance and Overhaul Manual.
 - B. Model P.136-L1
 - (1) Piaggio P.136-L1 Maintenance and Repair Manual.
 - (2) Lycoming GO-480-B Operation, Maintenance and Overhaul Manual.
 - (3) Hartzell Propeller Operation, Maintenance and Overhaul Manual.
 - C. Model P.136-L2
 - (1) Piaggio P.136-L2 Maintenance and Repair Manual.
 - (2) Lycoming GO-480-A1A6 Operation, Maintenance and Overhaul Manual.
 - (3) Hartzell Propeller Operation, Maintenance and Overhaul Manual.

.....END.....