

**MODELS:** General Dynamics (Consolidated Vultee) PBV-5 (Army OA-10) and PBV-5A

**T.C. NUMBER:** (Army OA-10A) 2-548

**I - Specifications Pertinent to All Models:**

Certification basis      Airworthiness Certificate only (CAR 04a)

**II - Deleted - December 21, 1956**

Single aircraft Model 28-4 no longer available for civil certification.

**III - Models PBV-5 (Army OA-10), 4 PCFBM, and PBV-5A (Army OA-10A), 4 PCAMM Engines**

2 P&W Twin Wasps SIC3-G or R-1830-92 with spline coupled type 16:9 reduction gear and one 3-1/2 dynamic damper.

Fuel (See NOTE d)      91 or 100 grade aviation gas

Engine limits      Maximum continuous,  
(See NOTE 8)      (S.L.) 41.5 in. Hg., 2550 rpm (1050 hp)  
(7500 ft.) 39.5 in. Hg., 2550 rpm (1050 hp)

Take-off (two minutes),  
48.0 in. Hg., 2700 rpm (1200 hp) or  
47.0 in. Hg., 2750 rpm (1200 hp)

Propellers      Hamilton Standard hubs 23350, blades 6153-12.  
For interchangeable blade models see Prop. Spec.  
No. 603 (NOTE 6). Diameter: Maximum 12'3/8",  
minimum allowable for repairs 11'9-1/4". No  
further reduction permitted. Low pitch setting:  
17 degrees at 42" station. See NOTE 2(b) for  
required placard.

Airspeed limits      Level flight or climb - 170 mph (148 knots)

(T.I.A.S.) (See NOTE 4)      Glide or dive - 199 mph (173 knots)

C.G. range      (+242.2) (+22.9 percent MAC) to (+251.5) (28.5  
percent MAC

Datum      3" aft of bow

MAC      165.3 in. L.E. MAC Sta. 204.4

Leveling means      Longitudinal inclinometer at Flight Eng. station  
(right side) and deck line.

Maximum weight      27,000 lbs. (take-off and landing) (See NOTE 3)

No. passengers      None. Certificated for cargo operation only.

Occupancy of aircraft limited to personnel  
essential to flight.

Baggage      Maximum capacity of compartments: Sta. 2-4,  
3740 lbs.; Sta. 4-5, 2810 lbs. (PBV-5),  
936 lbs. (PBV-5A); Sta. 5-6, 4100 lbs.;  
Sta. 6-7, 3240 lbs.

Fuel capacity      1750 gallons (2 tanks in CS at 875 gallons)

Oil capacity      110 gallons (2 tanks, one in each nacelle at  
55 gallons)

Control surface      Rudder right 23 degrees, left 23 degrees, elevator  
movements      up 29-3/4 degrees, down 19 degrees; aileron up  
21 degrees, down 22 degrees; rudder trim tab  
13-1/2 degrees, left 12 degrees; elevator trim  
tab up 5-3/4 degrees, down 10-1/4 degrees;  
aileron trim tab up 16 degrees, down 16 degrees.

Serial Nos. eligible      PBV-5: 91, 92, 93, 94, 163 and all Army and  
Navy serial numbers.

PBV-5A: 87, 110, 111 and all Army and Navy  
serial numbers.

**EQUIPMENT:**

Equipment and weight thereof as noted in approved copy of pertinent report and loading schedule which must accompany certificate and form part thereof.

NOTE 1. Eligible for export to all countries subject to the provisions of MOP 2-4.

NOTE 2. The following placards shall be placed on the instrument panel in full view of the pilot:

- (a) "This airplane shall be operated in accordance with the CAA Approved Operating Manual for Consolidated PBV-5 (PBV-5A) which shall be carried in the pilot's compartment at all times."
- (b) "Avoid continuous operation between 1700 and 1850 rpm."

NOTE 3. Maximum weight may be increased 162 lbs. when complete de-icer is installed.

NOTE 4. The airspeed indicator installation error must not exceed +4.5 knots at a true indicated airspeed of 148 knots.

NOTE 5. 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, except in the case of air carrier operators having an approved weight control system. Prior to original certification, each airplane must be weighed to determine its weight and balance, unless a satisfactory Army or Navy weight and balance report is available.

NOTE 6. Prior to certification, as a civil aircraft the following must be accomplished:

- (a) Each airplane must satisfactorily pass an inspection for conformity, possible hidden damage, and for workmanship and materials used in making any repairs and/or alterations.
- (b) Install also outside air temperature indicator, covers for cables and conduits in forward cargo compartment, stowage for bulkhead No. 6 water-tight door, 2 sea anchors with stowage provisions, and life raft with stowage provisions.
- (c) The firewall either must be completely replaced by, or covered or backed up by, one of the following materials:
  - (1) Stainless steel - .015 in. thick.
  - (2) Nickel-chromium-iron-alloy - .015 in. thick.
  - (3) Low carbon steel - .018 in. thick (aluminum coated or otherwise protected against corrosion).
  - (4) Monel metal - .018 in. thick.
  - (5) Terneplate - .018 in. thick.
- (d) Means must be installed to provide, without continuous manual operation, vision through the windshield adequate for executing takeoffs and landings on water with spray striking the windshield.
- (e) Guards must be installed to prevent the inadvertent operation of switches on control column and on forward side of bulkhead aft of pilot's compartment.
- (f) The supports for the servo control fluid lines forward of the servo must be replaced with supports having adequate strength and rigidity.
- (g) Positive means of communication between the pilot, copilot, and flying engineer must be installed.
- (h) Fuel dump valves must be removed or made positively inoperative.
- (i) Instruments must be marked for approved operation limits.
- (j) Airplane must be modified in accordance with either:
  - (1) Install a carburetor alcohol de-icing system with a capacity of not less than 5 gallons per engine. The capacity of the alcohol pumps should be sufficient to provide a flow of 10 gallons per hour to both engines simultaneously; or
  - (2) Modify the carburetor air preheat system to provide a heat rise of 100 degrees F. when operation at 75 percent power at an outside air temperature of 30 degrees F.
- (l) All cargo compartments must be placarded for permissible loads specified in C.A.A. Approved Operating Manual.
- (m) Identification plate must be marked to indicate date of conversion to certificated status.
- (n) All fuel tank filler caps or adjacent surface must be marked to indicate the minimum octane fuel and the tank capacity.
- (o) The oil tank filler caps must be marked "oil" and indicate the tank capacity.
- (p) Approval number "5E-4" should be added to R-1330-92 engine identification plates in lieu of Type Certificate No.
- (q) If an exhaust heat type wing and tail de-icer system is installed, this system must be inspected giving special attention to its engine section and to the combustion heater in the tail of the airplane.
- (r) The airplane heating system must be inspected.
- (s) The carbon monoxide concentration in the pilot and crew compartments must be checked to ascertain that it does not exceed one part in 20,000 (or 0.005 percent).
- (t) All circuit protectors must be made accessible in flight.
- (u) The A.E.L. fuel unit drain outlets must be moved to a position remote from the auxiliary power plant exhaust outlet.
- (v) Any G-9 or equivalent 400 gallons per hour engine-driven fuel pumps must be installed.
- (w) All armament, including rear gun blisters, must be removed. Front gun turret may be retained on the airplane but revolving mechanism must be removed or rendered inoperative, and the openings between the nose and the turret must be faired over.

NOTE 7. The following alterations are satisfactory and should be handled in the usual manner on Alteration and Repair Forms:

- (1) Install cargo platforms and tie-down rings. See CONVAC Drawings 28FF100 (1 and 2), 28FF200 (1 and 2), 28FF300 (1 and 2), 28FF400, and 28FF501.
- (2) Install large water-tight door for, and enlarge cut-out in, bulkhead No. 6. See CONVAC Drawings 28FF502 and 28B5360.

(3) Install hull cargo door. See CONVAC Drawing 28R5223-A.

NOTE 8. 100 minimum grade fuel must be used unless the carburetors have been suitably modified for operation with 91 minimum grade fuel.