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AAF MANUAL 51-127-4

# PILOT TRAINING MANUAL

# FOR THE THUNDERBOLT

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# P-47



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HEADQUARTERS, ARMY AIR FORCES



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**PILOT  
TRAINING  
MANUAL  
FOR THE  
THUNDERBOLT**

**P-47N**

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**BY COMMAND OF GENERAL ARNOLD**



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# Introduction

**This Manual is the text for your training as a P-47N pilot and airplane commander.**

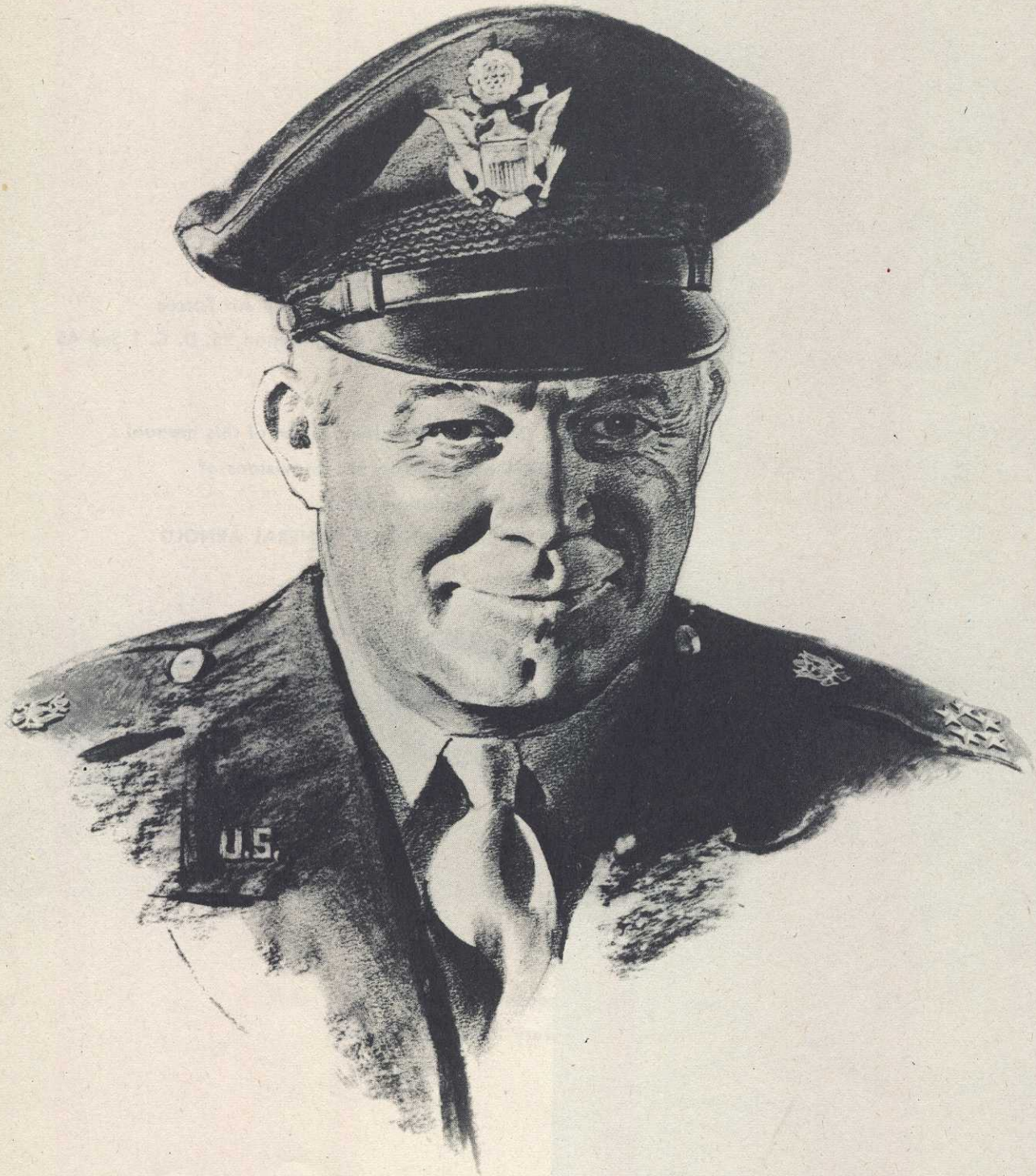
**The Air Forces' most experienced training and supervisory personnel have collaborated to make it a complete exposition of what your pilot duties are, how each duty will be performed, and why it must be performed in the manner described.**

**The techniques and procedures described in this book are standard and mandatory. In this respect the manual serves the dual purpose of a training checklist and a working handbook. Use it to make sure that you learn everything described herein. Use it to study and review the essential facts concerning everything taught. Such additional self-study and review will not only advance your training, but will alleviate the burden of your already overburdened instructors.**

**This training manual does not replace the Technical Orders for the airplane, which will always be your primary source of information concerning the P-47N so long as you fly it. This is essentially the textbook of the P-47N. Used properly, it will enable you to utilize the pertinent Technical Orders to even greater advantage.**



COMMANDING GENERAL, ARMY AIR FORCES



# P-47 N

THUNDERBOLT



This manual deals with the P-47N, a very long range fighter-bomber developed to blast the Japs in the Pacific. Since its birth U. S. bases have crept much closer to the Japanese Islands, so the chances are that few 2000-mile fighter missions will be required.

Nevertheless, the strategic value of such an airplane is enormous. Wherever N's are based, the Japs are in danger of escorted bomber strikes or fighter sweeps over a radius of 1000 miles or more. This takes in quite a lot of territory, even in the broad reaches of the Pacific, and provides a constant headache for the diminishing Japanese air force. The airplane's value as a fighter-bomber is enhanced by the large internal fuel capacity.

At first glance, the N appears to be merely a P-47D with squared wing tips. With comparable loading, the flight characteristics are similar and much of the equipment is the same, but

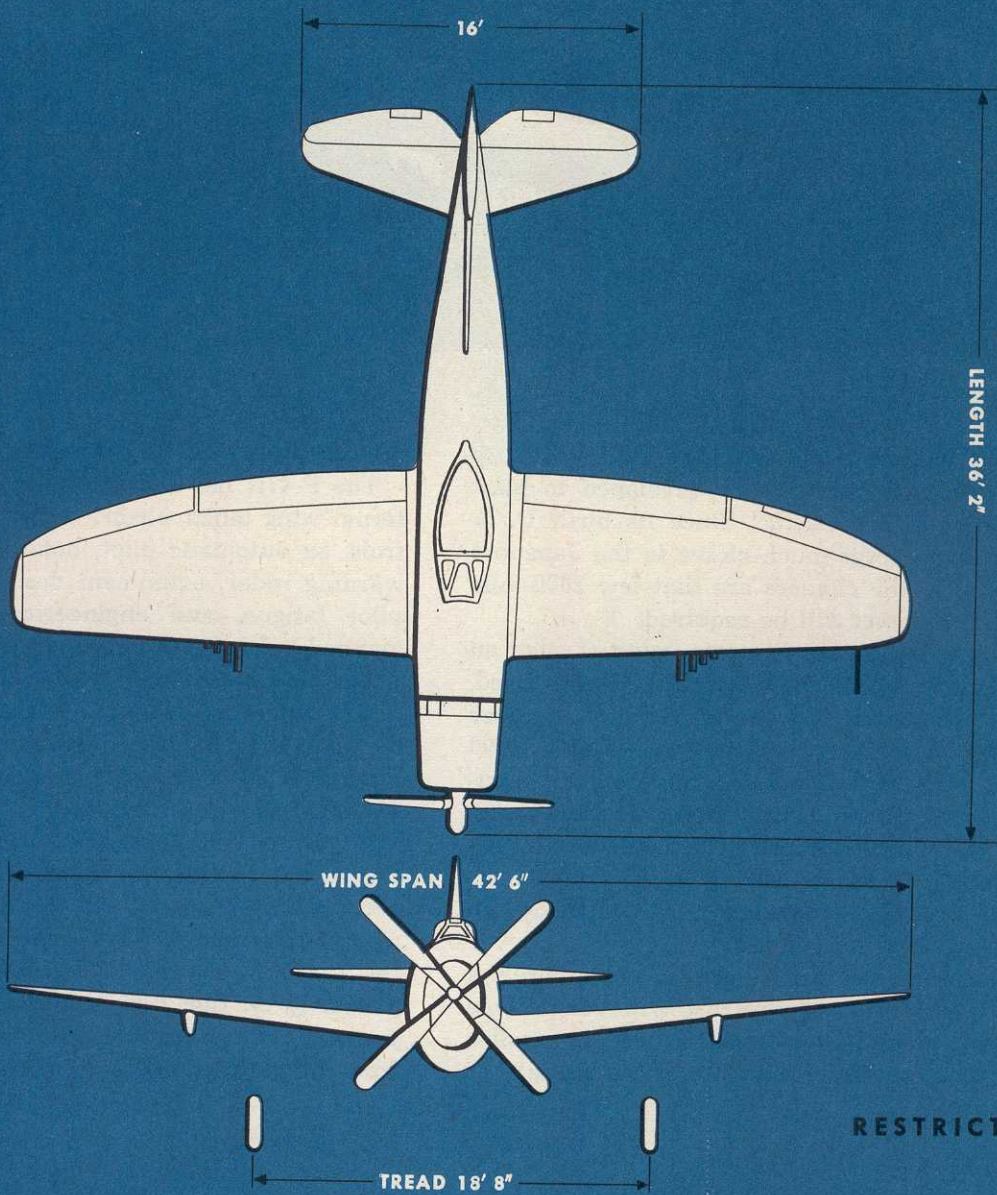
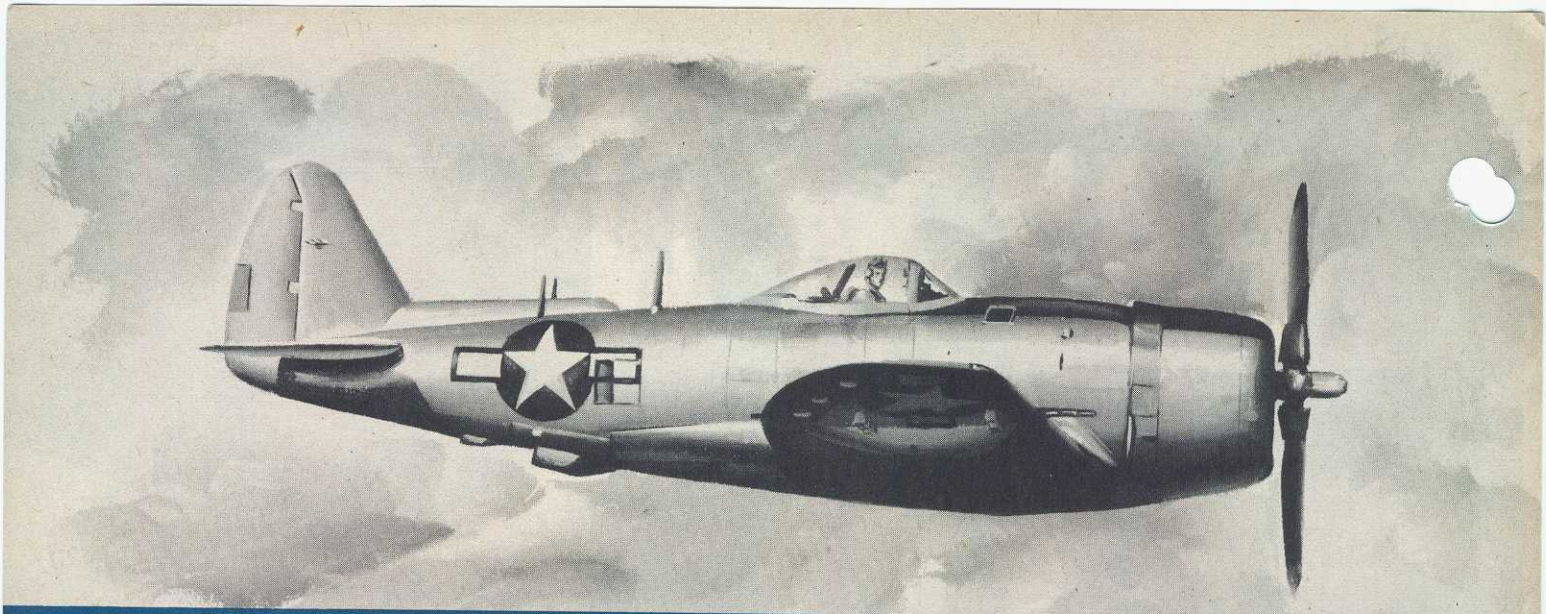
actually the P-47N is a different airplane.

The P-47N has a more powerful engine, internal wing tanks, electrification of many controls, an automatic pilot, homing radio, a tail warning radar, equipment designed to reduce pilot fatigue, and engineering changes demanded by the greater weight.

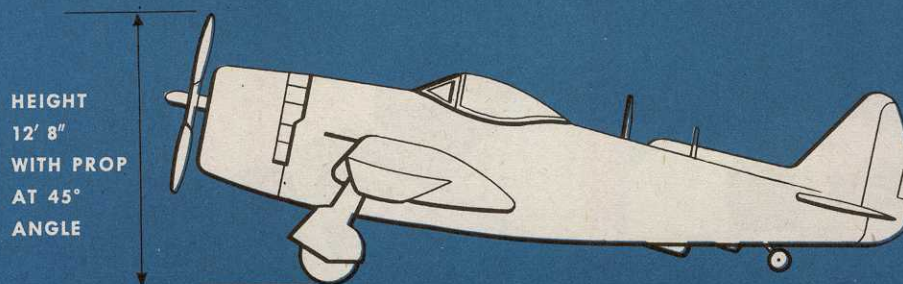
The N is not difficult to fly, but study is required to get the most out of the plane. It was designed for missions requiring maximum performance. The pilot—you—must also be capable of that type of performance.

The N is still undergoing development. As bugs or possibilities for improvement show up, subsequent series will be modified. However, most major changes have been incorporated in the P-47N-5. Therefore this manual is based primarily on that series. Master the N-5 and you will have no trouble with any N that comes from the production line or modification center.

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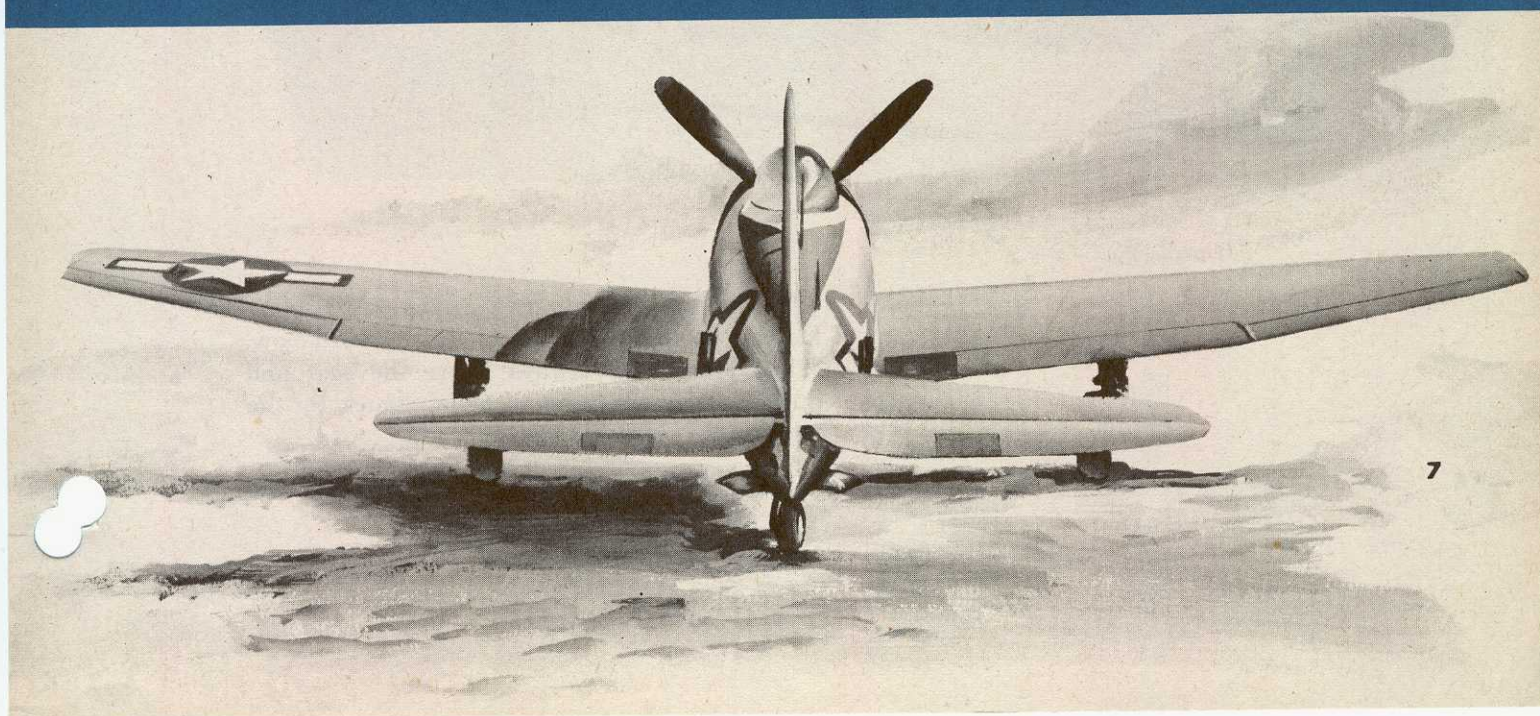


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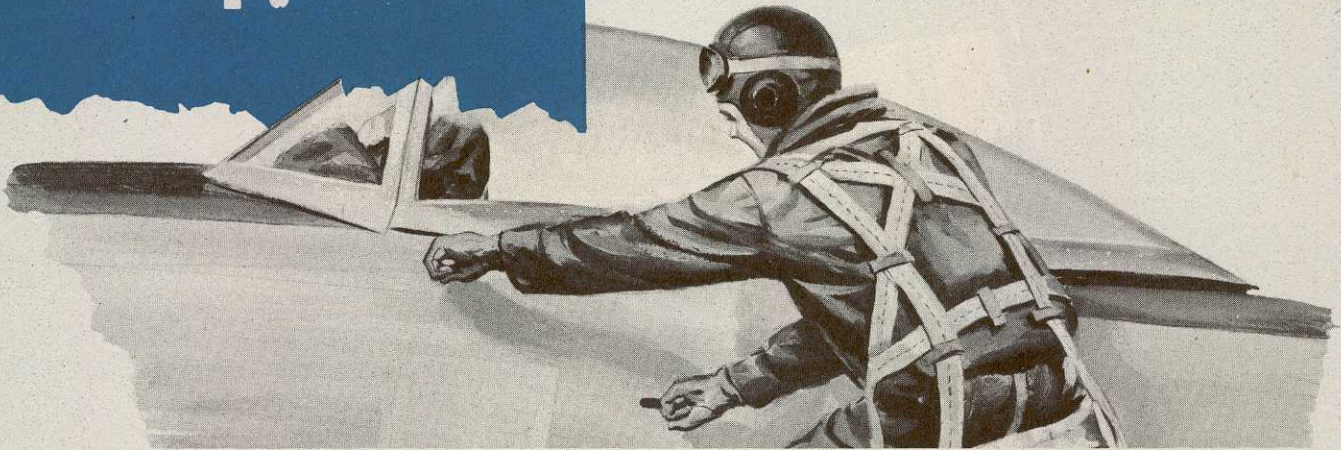
- WING AREA:** 322.2 sq. ft., giving a wing loading of approx. 43 lbs. sq. ft. with normal gross weight 13,854 lbs.
- WEIGHT:** Empty—10,998 lbs. Useful load varies from 2,824 to 10,199.9 lbs.
- FUEL CAPACITY:** Internal load: approx. 550 gals.  
External load: approx. 440 gals.  
Total max. load: approx. 990 gals.
- RADIUS OF ACTION:** More than 1000 miles.
- ENGINE:** 18-cylinder, twin-row, Pratt and Whitney "C series," developing 2100 rated hp., and 2800 hp. with water injection.
- STALLING SPEED\* (POWER OFF):** Flaps and landing gear up: Approx. 115 IAS.  
With landing gear extended, flaps retracted: Approx. 117 IAS.  
With both gear and flaps extended: Approx. 100 IAS.

\*Without external load, or with drop tanks attached but empty.





# Canopy



You operate the canopy either electrically or manually.

Electric operation is managed by a toggle switch above the propeller control box. When you release the toggle, the canopy remains fixed in the last position.

To operate manually, pull inward on the knobs at the leading edges and slide the canopy to the desired position.

To open the canopy from the outside, pull open the flush mounted lever just below canopy rails on the left side.



To jettison the canopy pull the "T" handle, located on the right side of the forward bow. When jettisoning always lower the seat and duck your head, to avoid being struck by the bow.

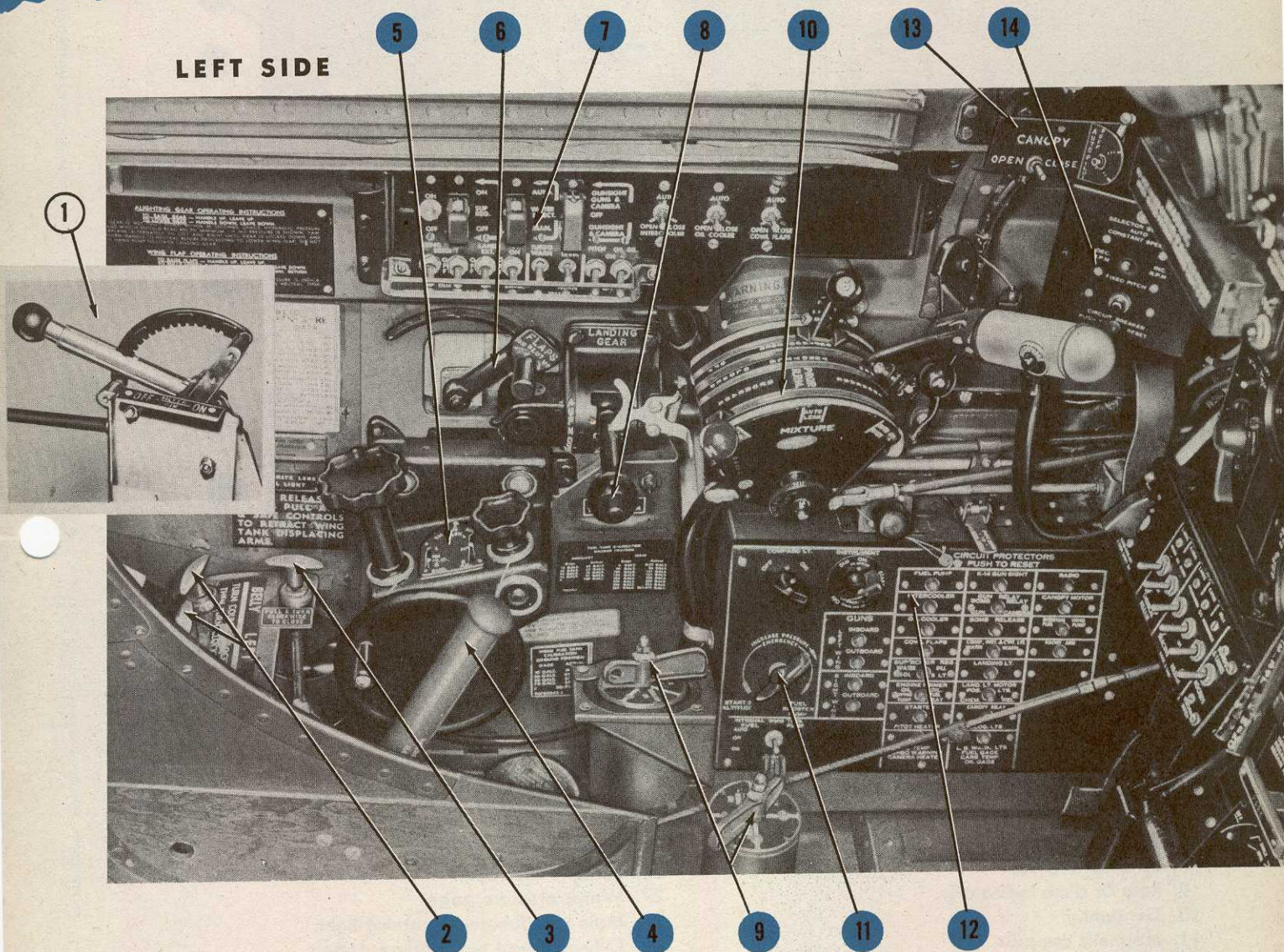
# The Cockpit

## OF THE P-47N-5

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Different series may vary slightly in the type and arrangement of equipment. However, the changes are minor. Where reference is made to a control or gage in the succeeding pages, if it is considered necessary, the number of the item will be given to enable you to check its position in the cockpit.

### LEFT SIDE



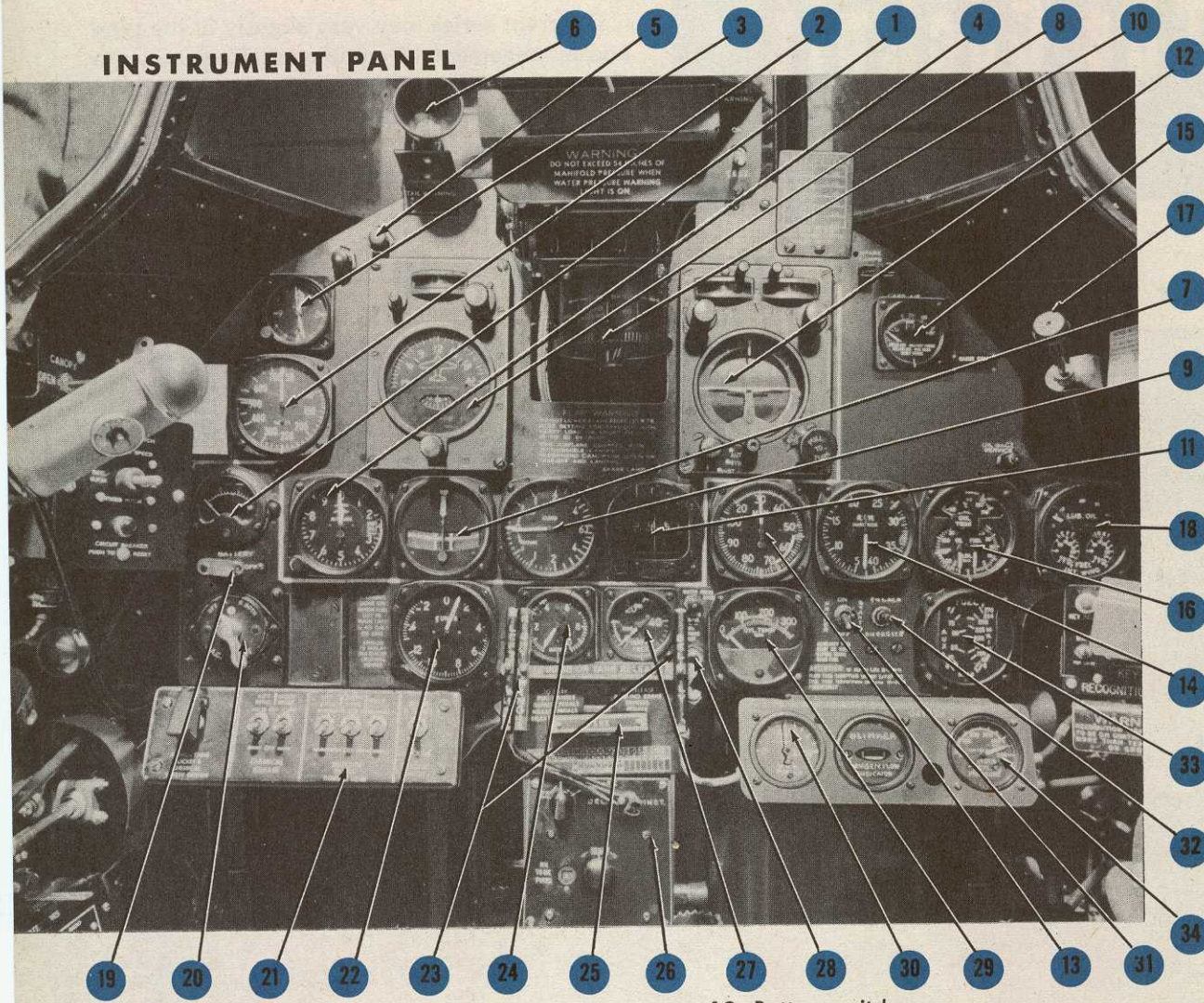
1. Air filter control.
2. Bomb arming handles.
3. Gunbay heat control.
4. Manual hydraulic pump.
5. Trim tab control unit.
6. Flap control.
7. Main switch panel.

8. Landing gear control.
9. Fuel selector cocks.
10. Throttle quadrant.
11. Fuel booster pump rheostat.
12. Circuit protectors panel.
13. Propeller selector panel.
14. Autopilot ON-OFF control.

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# INSTRUMENT PANEL

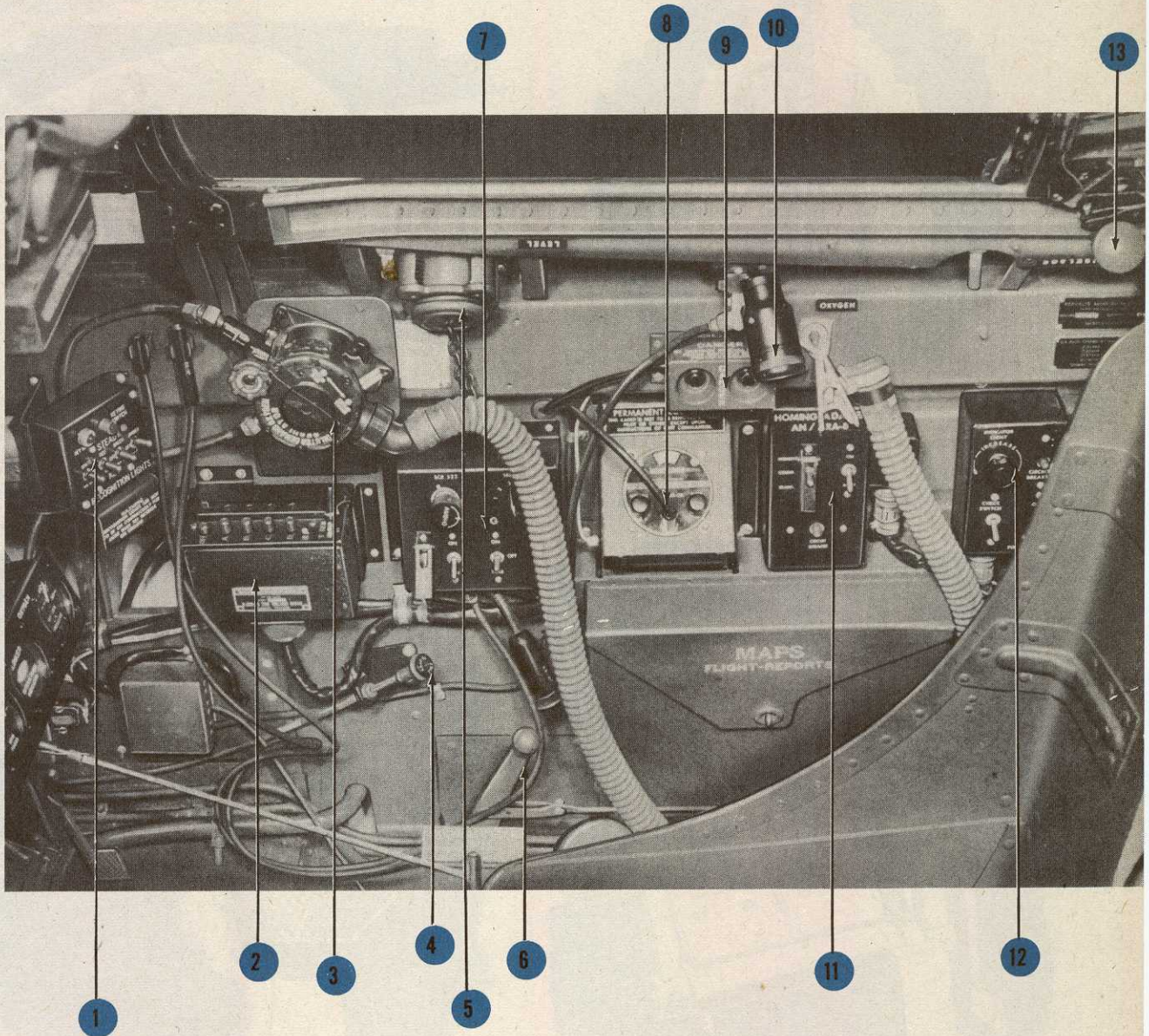


- 1. Ammeter.
- 2. Airspeed indicator.
- 3. Clock.
- 4. Altimeter.
- 5. Landing gear warning lights.
- 6. Tail warning light.
- 7. Bank and turn indicator.
- 8. Directional gyro.
- 9. Rate of climb indicator.
- 10. Gunsight.
- 11. Magnetic compass.
- 12. Artificial horizon.
- 13. Manifold pressure gage.
- 14. Tachometer.
- 15. Carburetor air temperature gage.
- 16. Fuel and oil pressure and oil temperature gage.
- 17. Defroster control.
- 18. Internal wing fuel and oil quantity gages.

- 19. Battery switch.
- 20. Ignition switch.
- 21. Armament switch panel.
- 22. Accelerometer.
- 23. Manual bomb releases.
- 24. Suction gage.
- 25. Parking brake.
- 26. Rocket switch box.
- 27. Water pressure gage.
- 28. Main tank fuel level warning light.
- 29. Cylinder-head temperature gage.
- 30. Hydraulic pressure gage.
- 31. Primer.
- 32. Starter.
- 33. Main and auxiliary tank fuel gages.
- 34. Oxygen pressure gage.  
(Earlier series contain a turbo tachometer and warning light.)

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RIGHT SIDE



- 1. Recognition lights.
- 2. VHF radio.
- 3. Oxygen regulator.
- 4. Cockpit ventilator control.
- 5. Flare gun adapter.
- 6. Tailwheel lock.
- 7. IFF.

- 8. Detrola radio.
- 9. Secret equipment detonator.
- 10. Fluorescent light.
- 11. VHF homing adapter.
- 12. Tail warning switch box.
- 13. Manual canopy handle.

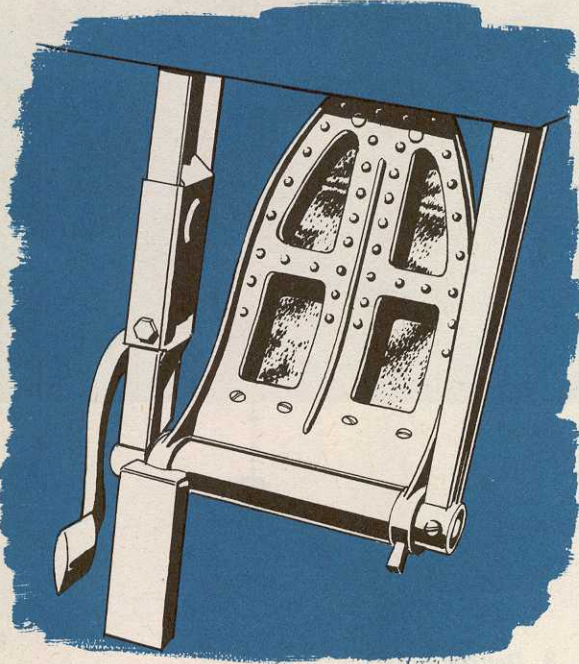
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**Flight Controls**



The flight controls are the conventional rudder-pedal and stick type.

Adjust the pedals for length by pushing aside



a lever at the base of each. Always get the pedals evened up, or during takeoff you'll throw your plane off course when you instinctively line up your feet.

From the N-5 on, the pedals have a unique

feature. You can let them fall back to stretch your legs during long flights. The pedals have special latches for this purpose.



The stick has a pistol grip, with a trigger for the guns, and a button on top used for firing rockets, releasing bombs or dropping gas tanks.

You lock the controls by attaching a strap,



fastened to the bottom of the seat, to a knob at the base of the stick. The rudder pedals are included in the system by means of a rod extending from the stick lock. The strap won't reach unless the seat is in its lowest position.

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