



Northrop P-61  
Figure 2 - Principal Dimensions

**Section I**

**DESCRIPTION, DIMENSIONS, AND LEADING PARTICULARS**

**1. DESCRIPTION.**

**a. GENERAL.**—The P-61 model airplane is an all metal, twin engine, midwing, night interceptor pursuit monoplane, with two tail booms and retractable tricycle landing gear. The crew is fully enclosed in a crew nacelle, located on the wing between the two engine nacelles. Early P-61A airplanes have heavy armament and carry a three-man crew consisting of a pilot, gunner, and radio operator-gunner. Late P-61A airplanes and P-61B airplanes have a two-man crew, a pilot and a radio operator. The primary tactical function of these airplanes is the interception and destruction of hostile aircraft in flight during periods of darkness or under conditions of poor visibility.

**2. DIMENSIONS.** (See figure 2.)

Aircraft in level flight position unless otherwise specified:

<b>GENERAL</b>	P-61A	P-61B
Span .....	66'	66'
Length (overall) .....	48'11.2"	49'7.2"
Height .....	14'3"	14'3"
Height (propeller hub) .....	7"	7"
Clearance (propeller tip) .....	11"	11"
Height (wing tip to ground).....	9'2"	9'2"
<b>WINGS</b>		
Airfoil Section—Root .....	Zap 15% Section	
Airfoil Section—Tip .....	Zap 13% Section	
Chord at Root.....	144"	
Chord at Tip Attachment (Wing Sta. 376.50) .....	80"	
Incidence (at root).....	1° 30'	
Dihedral (wing ref. plane)		
Outer wing .....	2°	
Inner wing.....	4°	
Dihedral (top face of front beam)		
Outer wing .....	0° 26'	
Inner Wing .....	4°	
Angle of attack (at root).....	1° 30'	
<b>HORIZONTAL STABILIZER</b>		
Span .....	200"	
Maximum chord .....	63.7"	
Incidence (fixed) .....	0° 45'	
Dihedral .....	0°	
<b>CREW NACELLE</b>		
Width (maximum) .....	49.1"	
Height (maximum) .....	91.2"	
Length .....	P-61A 33'2"	P-61B 33'10"
<b>AREAS</b>		
Wing (total) .....	662.36 sq ft	
Wings (less ailerons).....	651.38 sq ft	
Ailerons .....	10.98 sq ft	
Spoilers (total, fully raised).....	11.45 sq ft	
Flaps (total) .....	124.61 sq ft	
Horizontal stabilizer (including elevator) .....	122.54 sq ft	

Elevator (including tabs).....	43.38 sq ft
Elevator trim tab .....	2.26 sq ft
Elevator spring tabs (total, AAF 42-5510 and subs).....	2.10 sq ft
Aileron trim tab (P-61A only, total) .....	1.27 sq ft
Fins (total) .....	80.20 sq ft
Rudders (total, including tabs)....	39.04 sq ft
Rudder trim tabs (total).....	2.00 sq ft

**3. SETTINGS AND RANGES OF MOVEMENT OF CONTROL SURFACES.**

<b>STABILIZER</b> .....	1° 30'	1.67"
<b>FIN (offset)</b> .....	0° 0'	0° 0'
<b>AILERONS</b>		
Up .....	22°	5.67"
Down .....	22°	5.67"
<b>ELEVATOR (AAF 42-5485 to   AAF 42-5509, incl.)</b>		
Up .....	28°	12.3"
Down .....	12°	5.22"
<b>ELEVATOR (AAF 42-5510 and subs)</b>		
Up .....	29°	12.8"
Down .....	17° 30'	7.8"
<b>RUDDERS</b>		
Right .....	25°	11.40"
Left .....	25°	11.40"
<b>WING FLAPS</b> .....	60°	
<b>SPOILERS</b>		
Up .....	65°	12.5"
Down .....	28°	(inbd. end)
<b>TRIM TABS</b>		
Elevator		
Up .....	20°	1.7"
Down .....	20°	1.7"
Rudder		
Right .....	15°	1.28"
Left .....	15°	1.28"
Aileron (P-61A only)		
Up (left aileron only).....	25°	1.89"
Down (left aileron only).....	25°	1.89"
<b>ELEVATOR SPRING TABS</b>		
Up .....	15°	1.3"
Down .....	15°	1.3"
<b>MAIN LANDING GEAR</b>		
Type: Hydraulically retractable		
Tread: 17' 0.69"		
Shock Struts		
Type: Combination air-oil		
Maker and Part No.		
Left: Bendix No. 66301		
Right: Bendix No. 66300		
Fluid required		
Trade name identification: Univis 40 or Aero		
Mobilfluid HF		
AAF Specification No. 3580, Grade M		
British equivalent:		
Approximate maximum air pressure 600 psi		
Wheels		
Type: Goodyear No. 530005M		