

RESTRICTED  
SECURITY INFORMATION

INDEX OF  
TWIN WASP (R-2180)  
DESIGNATED ENGINES

TWIN WASP (R-2180)		R-2180 (TWIN WASP)			*TWIN WASP VERSION
P & WA	PAGE NO.	AIR FORCE	NAVY	PAGE NO.	
E1	E17	- 11		E17	E2
E2	E17				
E3	E17				
E4	E17				
2SE11-G	E17				
E12	E17				
E13	E17				

TWIN HORNET & R-2180  
DESIGNATED ENGINES

TWIN HORNET (R-2180)		R-2180 (TWIN HORNET)			*TWIN HORNET VERSION
P & WA	PAGE NO.	AIR FORCE	NAVY	PAGE NO.	
SA-G	E18	- 1		E18	SA-G
SA1-G	E18		X-2	E18	SA-G
S1A-G	E18	- 5		E18	SA1-G
S1A1-G	E18		- 6	E18	SA1-G
SA2-G	E18	- 7		E18	SA1-G
SA4-G	E18	- 9		E18	SA1-G

\*Similar to Military counterpart in certain respects.

PRATT & WHITNEY AIRCRAFT ENGINES  
MODEL DESIGNATIONS and CHARACTERISTICS

RESTRICTED  
SECURITY INFORMATION

ENGINE MODEL	Type P & W A Air Force Navy	Twin Wasp (R-2160) E1	Twin Wasp (R-2160) E2	Twin Wasp (R-2160) E3	Twin Wasp (R-2160) E4
SPECIFICATION	Number	6051	6053	6056	6059
RATINGS	Take Off	1600/2600/2500 (wet) 1650/2600/3000 (dry)	1650/2600/3000	1300/2400/4000	1300/2600/6000
	Military				
	Normal	1300/2600/6000 (1400/2700/6200 max. continuous)	1300/2600/6000	1300/2400/4000	1300/2600/6000
	Max. Cont.				
	Cruise				
FUEL	Grade	100/130	100/130	100/130	100/130
CURVES	Spec. Oper.	T-978 Inst. 7375	T-1066	T-1140	T-1156
WEIGHT, DRY	Pounds	1870	1650	1796	1798
PROP. SHAFT	Ratio	.4375, .5625	D.D.	D.D.	D.D.
	Spline	51	51	51	51
CYLINDERS	Comp. Ratio	6.7:1	6.7:1	6.7:1	6.7:1
IMPELLER	Ratio	7:1	7:1	7:1	7:1
CARBURETOR	Model	Stromberg AR-48C1	Stromberg AR-48F1	AR-48D1 (hor.) AR-48F1 (vert.)	AR-48D1 (hor.) AR-48F1 (vert.)
MAGNETOS	Model	S 14LN-15 (L.T.)	S 14LN-15 (L.T.)	S 14LN-15 (L.T.)	S 14LN-15 (L.T.)
INST. DWG.	Number	93701	127001	127001	127001
DIMENSIONS	Diameter	54.00	54.00	54.00	54.00
	Length	76.20	76.20	76.20	76.20
A.T.C.	Number	257			Military
AIRPLANE	Installations	Svenske Aeroplan Aktiebolaget Model 90A-2 Model 90B-2			
NOTES		*Fire Seal and Eng. Vib. Isolator Assy. 59# add. wt.	None manufactured. For Vertical helicopter installation.	None manufactured. For Vertical or Horizontal helicopter installation.	Similar E3 except ratings. For Vertical or Horizontal helicopter installation. None manufactured.

ENGINE MODEL	Type P & W A Air Force Navy	Twin Wasp (R-2160) E2E11-C	Twin Wasp (R-2160) E12	Twin Wasp (R-2160) E13	Twin Wasp (R-2160) E14
SPECIFICATION	Number	6049	6050	6057	6058
RATINGS	Take Off	1675/2600 (wet) 1700/2600 (dry)	1600/2600/1600 (wet) 1650/2600/3000 (dry)	1600/2600/2500 (wet) 1650/2600/3000 (dry)	1600/2600/2500 (wet) 1650/2600/3000 (dry)
	Military	1700/2600/3000 1300/2600/6000			
	Normal	1300/2600/6000 1200/2600/16500 1400/2600/6000 (stand)	1300/2600/6000 1150/2600/17500	1300/2600/6000 1150/2600/14000	1300/2600/6000 1150/2600/14000
	Max. Cont.	1250/2600/15500 (cont.)	1250/2600/15500 (cont.)	1300/2600/11300 (cont.)	
	Cruise				
FUEL	Grade	100/130	100/130	100/130	100/130
CURVES	Spec. Oper.	T-967	T-997 Inst. 7355	T-1156	T-1256 Inst. 1471
WEIGHT, DRY	Pounds	1825	1900	1915	1915
PROP. SHAFT	Ratio	.4375, .5625	.4375, .5625	.4375, .5625	D.D.
	Spline	50	51	51	51
CYLINDERS	Comp. Ratio	7:1	6.7:1	6.7:1	6.7:1
IMPELLER	Ratio	7:1	7:1, 9.5:1	7:1, 9.5:1	7:1
CARBURETOR	Model		Stromberg AR-48C1	Stromberg AR-48C1	Stromberg AR-48C1
MAGNETOS	Model		SP14LN-15 (L.T.)	SP14LN-15 (L.T.)	SP14LN-15 (L.T.)
INST. DWG.	Number	93701	93701	93701	14891
DIMENSIONS	Diameter	54.00	54.00	54.00	54.00
	Length	76.20	75.60	75.60	76.20
A.T.C.	Number				
AIRPLANE	Installations	Pawrocki 6-12			
NOTES		None manufactured.	*Fire Seal and Eng. Vib. Isolator Assy. 59# add. wt. None manufactured.	*Was offered on proposal A and substitute for E12 in Sub 90. *Fire Seal and Eng. Vib. Isolator Assy. 59# add. wt. None manufactured.	*Additional Weight Engine Mount with Fire Seal Damper Lever Vib. Isolator Assy. 47.5# Exhaust Pipe 4.5# Nose Mount 1.0# Ign. Ground Lead 0.2# Horizontal Helicopter Installation. None manufactured.

ENGINE MODEL	Type P & W A Air Force Navy	Twin Hornet IR-21601 SA-G	Twin Hornet IR-21601 SA1-G	Twin Hornet IR-21601 S1A-G	Twin Hornet IR-21601 S1A1-G	Twin Hornet IR-21601 SA2-G	Twin Hornet IR-21601 SA4-G
SPECIFICATION	Number	PW-6003	PW-6003A	PW-6027A	PW-6027C	PW-6028	PW-6039
RATINGS	Take Off	1200/2500	1800/2500	1400/2500	1400/2500	1400/2500	1500/2600
	Military						
Max. Cont.	Normal	1000/2350/9000	1000/2350/9500	1150/2350/7000	1150/2350/8000	1150/2350/17500	1150/2350/8000
	Cruise						
FUEL	Grade	87	87	*100	*100	100	100
CURVES	Spec. Oper.	T-274	T-274	T-275	T-275	T-323	T-458
	Oper.						
WEIGHT, DRY	Pounds	1565	1635	1675	1635 - 1647	1810	1740 - 1752
PROP. SHAFT	Ratio	2:1	2:1	2:1	2:1, 16:9	2:1	2:1, 16:9
	Spline	50	50	50	50	50	50
CYLINDERS	Comp. Ratio	6.5:1	6.66:1	6.66:1	6.66:1	6:1	6.66:1
IMPELLER	Ratio	7.15:1	7.15:1	7.56:1	7.56:1	5.8:1, 8.48:1	7.15:1, 8.47:1
CARBURETOR	Model	Stromberg	Stromberg	Stromberg	Stromberg	Stromberg	PD12L
MAGNETOS	Model	Scintilla	Scintilla	Scintilla	Scintilla	Scintilla	SP14L3
INST. DWG.	Number	R-21162	R-27659	R-21162	R-27659	R-27421	
DIMENSIONS	Diameter	51.63	51.63	51.63	51.63	51.63	51.63
	Length	62.63	64.00	62.63	64.00	74.00	66.13
A.T.C.	Number			196	196		
AIRPLANE	Installations			**Douglas DC-4			
NOTES			None manufactured.	*Certificated for 95 fuel. **Sold to Japan.	*Certificated for 95 fuel. Single piece master rod. Single piece plain bearings. Dual impeller drive. Downdraft carburetion.	None manufactured. Two-stage.	None manufactured.

ENGINE MODEL	Type P & W A Air Force Navy	R-2180 (Twin Hornet) -1	R-2180 (Twin Hornet) X-2	R-2180 (Twin Hornet) -5	R-2180 (Twin Hornet) .6	R-2180 (Twin Hornet) -7	R-2180 (Twin Hornet) -9
SPECIFICATION	Number	6007				6045	
RATINGS	Take Off	1200/2500	1200/2500	1400/2500		1400/2500	1400/2500
	Military	1000/2350/3700	1000/2500	1100/2350/7300			
Max. Cont.	Normal	1000/2350/9000	1000/2350/9000	1150/2350/7000		1150/2350/7000	1150/2350/6000
	Cruise						
FUEL	Grade	100	100	100		100	100
CURVES	Spec. Oper.	T-235			T-82	T-523	
	Oper.	T-306			T-93		
WEIGHT, DRY	Pounds						
PROP. SHAFT	Ratio	2:1	2:1	2:1		16:9	2:1
	Spline	50	50	50		50	50
CYLINDERS	Comp. Ratio	6.6:1	6.6:1	6.6:1		6.70:1	6.60:1
IMPELLER	Ratio	6:1	8:1	7.56:1		7.56:1	7.56:1
CARBURETOR	Model			PD12B6		PD12B4	
MAGNETOS	Model						
INST. DWG.	Number	H-22354		R-27214			
DIMENSIONS	Diameter						
	Length						
A.T.C.	Number						
AIRPLANE	Installations	Boeing P-44 North American XB-21				Stearman (Boeing) XA-21	North American B-21
NOTES						*Sold as Twin Hornet S1A-G.	*Sold as Twin Hornet S1A-G.