

Engine Models and Applications:

Because of the vast number of Merlin derivatives which were generated, the following table is necessarily incomplete, but includes representative models from the major series.

From Graham White's *Allied Aircraft Piston Engines of World War II*

Dash	Application	hp/rpm/altitude	Comments
I	Battle I	1030/3000/16,250	Original Ramp head engine, 2 piece head/cylinder bank
II & III	Spitfire I Defiant I Sea/Hurricane I Battle I	1440/3000/5500	One piece head/cylinder bank
VIII	Fulmar I	1035/3000/7750	Navy engine w/Coffman (combustion cartridge) starter
X	Halifax I Wellington II Whitley V/VII	1130/3000/5250 1010/3000/17,750	First Merlin with two speed supercharger
XII	Spitfire II	1150/3000/14,900	Coffman Starter
XX	Beaufighter II Defiant II Halifax I/V Hurricane II/IV Lancaster I/III	1480/3000/6000 1480/3000/12,250	First engine with improved Hooker designed supercharger; 2-speed
21	Mosquito I/II/IV Mosquito VI	1480/3000/6000 1480/3000/12,250	Same as XX but reverse flow cooling
22	Lancaster I/III York I	1480/3000/6000 1480/3000/12,250	
23	Mosquito I/II/IV Mosquito XII/XIII	1480/3000/6000 1480/3000/12,250	Reverse flow cooling
24	Lancaster I/III York I	1640/3000/2000 1500/3000/9500	Fitted with RAE anti-G carburetor (Shilling orifice)
25	Mosquito VI/XIX	1640/3000/2000 1500/3000/9500	Same as 24 with reverse flow cooling
28	Lancaster I/III	1300/3000/SL	First Packard built Merlin. Separate head/bank assembly
V-1650-1	Kittyhawk II P-40F	1260/3000/8750	
29	Canadian Hurricane Kittyhawk II P-40F	1300/3000/SL 1260/3000/8750	Packard built
V-1650-1			
30	Barracuda I Fulmar II	1300/3000/SL 1260/3000/8750	Navy engine w/Coffman starter, single-stage single-speed supercharger

31 V-1650-1	Canadian Mosquito XX Australian Mosquito 40 P-40F/L	1300/3000/SL 1260/3000/8750	Packard built, reverse-flow cooling
32	Baracuda II Seafire II	1645/3000/2500	Single-stage, single-speed, Coffman starter
33 V-1650-1	Canadian Mosquito XX Australian Mosquito 40	1480/3000/6000 1480/3000/12,250	Packard built, same as -23
38 V-1650-1	Lancaster I/III	1480/3000/6000 1480/3000/12,250	Packard built, same as -22
45	Spitfire V/PR IV Spitfire VII Seafire II	1480/3000/6000 1480/3000/12,250	
45M	Spitfire LF V	1585/3000/2750	Reduced impeller diameter for better low level performance
46	Spitfire V/PR IV Seafire I	1415/3000/14,000	
47	Spitfire VI	1415/3000/14,000	
50	Spitfire V	1470/3000/9250	
50M	Spitfire LF V	1585/3000/2750	Reduced impeller diameter for better low level performance
55	Spitfire V Seafire III	1470/3000/9250	Modified Merlin-50
55M	Spitfire LF V Seafire LF II	1585/3000/2750	Reduced impeller diameter for better performance
60	Wellington VI		First of 60 series two-speed, two-stage supercharger; old one-piece head/bank assembly
61	Spitfire VII/VIII Spitfire PR XI	1565/3000/12,250 1390/3000/23,500	Improved altitude performance w/2-stage blower
62	Wellington VI		
63	Spitfire VII/VIII Spitfire IX/PR XI	1280/3000/SL 1710/3000/8500 1505/3000/21,000	Improved two-piece head/bank assembly, strengthened quill shaft
64	Spitfire VII	1280/3000/SL 1710/3000/8500 1505/3000/21,000	Mk VII (-63) with provisions for a cabin supercharger
66	Spitfire LF VIII Spitfire LF IX	1280/3000/SL 1710/3000/8500 1505/3000/21,000	

68 V-1650-3	Mustang III, P-51B P-51C	1670/3000/SL 1700/3000/6400 1490/3000/19,400	Packard built, first Packard two-speed two-stage engines
69 V-1650-7	Mustang III/IV P-51C/D/F/K	1670/3000/SL 1700/3000/6400 1490/3000/19,400	Packard built
70	Spitfire HF VIII Spitfire HF IX Spitfire PR XI Spitfire HF VII	1240/3000/SL 1710/3000/11,000 1475/3000/23,500	Similar to -66 with different blower ratios
71	Spitfire HF VII	1240/3000/SL 1710/3000/11,000 1475/3000/23,500	HF VII (-70) fitted with cabin supercharger
72	Mosquito PR IX/B Mosquito IX/XVI, 30 Welkin I	1280/3000/SL 1710/3000/8500 1505/3000/21,000	Reverse flow cooling
73	Mosquito XVI Welkin I	1280/3000/SL 1710/3000/8500 1505/3000/21,000	Reverse flow cooling and cabin supercharger
85	Lancaster VI Lincoln I	1635/3000/SL	Lancaster VI was prototype for Lincoln
224	Lancaster I/III	1640/3000/2000 1500/3000/9500	Packard built, same as -24
225	Canadian Mosquito 25/26	1640/3000/2000 1500/3000/9500	Packard built, same as -25
266	Spitfire LF XVI	1280/3000/SL 1710/3000/8500 1505/3000/21,000	Packard built, same as -66
V-1650-5	Intended for P-39	1400/3000/SL 1490/3000/13,750 1210/3000/25,800	Similar to -3 except equipped with extension shaft and Allison remote reduction gear assembly for high altitude Merlin-powered P-39
V-1650-9	P-51D/H/K/C	1380/3000/SL 1500/3000/16,100 1230/3000/21,400	End-to-End crank lubrication. Fitted with ADI and Simmonds speed and boost control. Also built by Continental.
V-1650-11	P-51L P-82B	1380/3000/SL 1500/3000/16,100 1240/3000/30,700	Similar to -9 except speed density pump replaced carburetor for improved altitude performance
V-1650-13		1380/3000/SL 1490/3000/13,750 1210/3000/25,800	V-1650-3 with Simmonds SA-5 boost control

V-1650-17		1490/3000/SL	V-1650-7 with Simmonds SA-5 boost
		1490/3000/13,750	control
		1210/3000/25,800	
V-1650-19		1700/3000/SL	V-1650-9 with Simmonds SA-5 boost
		1430/3000/25,000	control
V-1650-21	P(F)-82B	1380/3000/SL	Similar to -9 except Aeroproducts
		1495/3000/1530	propeller and left-hand rotation
		1230/3000/28,700	
V-1650-23	XP-82/P-82/B	1520/3000/SL	Similar to -11 except fitted with PD
		1600/3000/24,000	(Bendix Injection) carburetor in place of SD (speed density) carburetor
V-1650-25	P-82B/XP-82	1490/3000/SL	Similar to -21 except fitted with PD
		1470/3000/23,000	carburetor instead of SD unit