

**APPENDIX 1 OF 3:**  
**COMPARISON OF PRINCIPAL FIGHTER-BOMBERS**  
**(Low Level Loads & Capability)**

**LUFTWAFFE**



**Focke Wulfe Fw 190A-8 Fighter** – Radial engine of 1730 HP (some boosted to 2100 HP). Two 13mm machine guns in nose (400 rpg), two 20mm cannon in wing roots (250 rpg), two 20mm cannon in outer wings (125 rpg), one 550 lb. bomb or 300L drop tank on centerline rack. Speed on deck clean = 350 mph, with bomb = 325 mph. Combat radius with bomb = 120 miles, endurance = 45 to 55 minutes (drop tank would add 20 minutes or so but replaced bomb). Damage absorption - Fair. Dogfight agility - Poor.

**Focke Wulfe Fw 190F-8 Fighter-Bomber** – Radial engine of 1730 HP (some boosted to 2100 HP). Two 13mm machine guns in nose (400 rpg), two 20mm cannon in wing roots (250 rpg), four 110 lb. bombs under wings, one 1,100 lb. or 550 lb. bomb or 300L drop tank on centerline rack. Speed on deck clean = 346 mph, with one 550 lb. bomb = 326 mph, with full bomb load = around 310 mph. Combat radius with full bomb load = 110 miles, endurance = 45 to 55 minutes (drop tank would add 20 minutes or so but replaced centerline bomb). Damage absorption - Good (extra armor). Dogfight agility - Poor.



**Messerschmitt Bf 109G-6 Fighter** – Liquid cooled engine of 1475 HP (some boosted to 1800 HP). Two 13mm machine guns in nose (300 rpg), and one 20mm cannon (150 rds) or one 30mm cannon (60 rds) firing through spinner, one 550 lb. or 300L drop tank on centerline rack. “Gun-boat” variants had two 20mm cannons added in pods under wings (120 rpg). Speed on deck clean = 344 mph (322mph for Gun-boat), with one 550 lb. bomb = 325 mph. Combat radius with full bomb load = 110 miles, endurance = 45 to 50 minutes (drop tank would add 20 minutes or so but replaces centerline bomb). Damage absorption – Poor. Dogfight agility – Fair (Gun-boat – Poor).

**ALLIED 9TH TACTICAL AIR FORCE**



**Republic P-47D-23 Thunderbolt Fighter-Bomber** – Radial engine of 2300 HP. Eight 0.50 caliber machine guns in wings (425 rpg). Typical load was three 500 lb. bombs (one on centerline rack, two under wing). Sometimes carried six M-10 rockets in two triple bazooka tube launchers plus two 500 lb. bombs under wings. Maximum bomb load = two 1,000 lb. bombs under wings and one 500 lb. on centerline rack. Late 1944 P-47D-35 could carry ten HVAR 5 inch rockets under wings instead of bombs. Could carry up to three drop tanks of various sizes in lieu of bombs. Speed on deck clean = 350 mph, with typical bomb load = 300 mph. Combat radius with typical air-to-ground load = 150 miles, endurance = 1 hour 10 minutes. Damage absorption – Very good. Dogfight agility – Poor.



**Lockheed P-38J-15 Lightning Fighter-Bomber** – Two liquid cooled engines of 1600 HP each. Four 0.50 caliber machine guns (500 rpg) and one 20mm cannon (150 rds) in nose, two 1,000 lb. bombs under wings (could be over-loaded to carry two 1600 or 2000 lb. bombs instead). Could carry two drop tanks of up to 300 gallons in place of bombs. Speed on deck clean = 350 mph, with bombs = 320 mph. Combat radius with two bombs = 290 miles, endurance = over two hours. Damage absorption – Very good. Dogfight agility – Poor.



**North American P-51D-10 Mustang Fighter** – One liquid cooled engine of 1695 HP. Six 0.50 caliber guns in wings (400 rds per inner gun and 270 rds per outer two guns in each wing). In air-to-ground mission, typically carried two 500 lb. bombs under wings. Rarely carried six M-10 rockets in two triple bazooka tube launchers. Could be overloaded to carry two 1,000 lb. bombs under wings. Could carry drop tanks in place of bombs. Later models fitted to carry six HVAR 5 inch rockets under wings. Speed on deck clean = 366 mph, with typical bomb load = 330 mph. Combat radius with two 500 lb. bombs = 260 miles, endurance = over two hours. Damage absorption – Fair. Dogfight agility – Good.

**APPENDIX 2 OF 3:**

**9TH TACTICAL AIR FORCE ORDER OF BATTLE, JUNE 1944**

*Each fighter squadron typically fielded 16 aircraft,  
and each bomber squadron about 12.*

**9TH TACTICAL AIR COMMAND:**

**70th Fighter Wing**

- 48th Fighter Group (P-47 Thunderbolt):  
492nd, 493rd, 494th Fighter Squadrons.
- 367th Fighter Group (P-38 Lightning):  
392nd, 393rd, 394th Fighter Squadrons.
- 371st Fighter Group (P-47 Thunderbolt):  
404th, 405th, 406th Fighter Squadrons.
- 474th Fighter Group (P-38 Lightning):  
428th, 429th, 430th Fighter Squadrons.

**71st Fighter Wing**

- 366th Fighter Group (P-47 Thunderbolt):  
389th, 390th, 391st Fighter Squadrons.
- 368th Fighter Group (P-47 Thunderbolt):  
395th, 396th, 397th Fighter Squadrons.
- 370th Fighter Group (P-38 Lightning):  
401st, 402nd, 385th Fighter Squadrons.

**84th Fighter Wing**

- 50th Fighter Group (P-47 Thunderbolt):  
10th, 81st, 313th Fighter Squadrons.
- 365th Fighter Group (P-47 Thunderbolt):  
386th, 387th, 388th Fighter Squadrons.
- 404th Fighter Group (P-47 Thunderbolt):  
508th, 507th, 506th Fighter Squadrons.
- 405th Fighter Group (P-47 Thunderbolt):  
509th, 510th, 511th Fighter Squadrons.

**67th TAC Recon Group (Mixed photo recon)**

- 107th TAC Recon Squadron (P-51 Mustang)
- 109th TAC Recon Squadron (P-51 Mustang)
- 30th Photo Recon Squadron (P-38F-5 Lightning)
- 33rd Photo Recon Squadron (P-38F-5 Lightning)

**19TH TACTICAL AIR COMMAND:**

**100th Fighter Wing**

- 354th Fighter Group (P-51 Mustang):  
353rd, 355th, 356th Fighter Squadrons.
- 358th Fighter Group (P-47 Thunderbolt):  
365th, 366th, 367th Fighter Squadrons.
- 362nd Fighter Group (P-47 Thunderbolt):  
377th, 378th, 379th Fighter Squadrons.
- 363rd Fighter Group (P-51 Mustang):  
380th, 381st, 382nd Fighter Squadrons.

**303rd Fighter Wing**

- 36th Fighter Group (P-47 Thunderbolt):  
22nd, 23rd, 53rd Fighter Squadrons.
- 373rd Fighter Group (P-47 Thunderbolt):  
410th, 411th, 412th Fighter Squadrons.
- 406th Fighter Group (P-47 Thunderbolt):  
512th, 513th, 514th Fighter Squadrons.

**10th Photo-Recon Group**

- 12th TAC Recon Squadron (P-51 Mustang)
- 15th TAC Recon Squadron (P-51 Mustang)
- 31st Photo Recon Squadron (P-38F-5 Lightning)
- 34th Photo Recon Squadron (P-38F-5 Lightning)

**9TH BOMBER COMMAND:**

**97th Bomber Wing**

- 409th Bomber Group (A-20 Havoc):  
640th, 641st, 642nd, 643rd Light Bomber Squadrons.
- 410th Bomber Group (A-20 Havoc):  
644th, 645th, 646th, 647th Light Bomber Squadrons.
- 416th Bomber Group (A-20 Havoc):  
668th, 669th, 670th, 671st Light Bomber Squadrons.

**98th Bomber Wing**

- 1st Pathfinder Squadron (B-26 Marauder).
- 323rd Bomber Group (B-26 Marauder):  
454th, 455th, 456th, 457th Medium Bomber Squadrons.
- 387th Bomber Group (B-26 Marauder):  
556th, 557th, 558th, 559th Medium Bomber Squadrons.
- 394th Bomber Group (B-26 Marauder):  
584th, 585th, 586th, 587th Medium Bomber Squadrons.
- 394th Bomber Group (B-26 Marauder):  
596th, 597th, 598th, 599th Medium Bomber Squadrons.

**99th Bomber Wing**

- 322nd Bomber Group (B-26 Marauder):  
449th, 450th, 451st, 452nd Medium Bomber Squadrons.
- 344th Bomber Group (B-26 Marauder):  
494th, 495th, 496th, 497th Medium Bomber Squadrons.
- 386th Bomber Group (B-26 Marauder):  
352nd, 353rd, 354th, 355th Medium Bomber Squadrons.
- 391st Bomber Group (B-26 Marauder):  
572nd, 573rd, 574th, 575th Medium Bomber Squadrons.

**9TH TROOP CARRIER COMMAND:**

**50th Troop Carrier Wing**

- 439th Troop Carrier Group (C-47 Skytrain):  
91st, 92nd, 93rd, 94th Transport Squadrons.
- 440th Troop Carrier Group (C-47 Skytrain):  
95th, 96th, 97th, 98th Transport Squadrons.
- 441st Troop Carrier Group (C-47 Skytrain):  
99th, 100th, 301st, 302nd Transport Squadrons.
- 442nd Troop Carrier Group (C-47 Skytrain):  
303rd, 304th, 305th, 306th Transport Squadrons.

**52nd Troop Carrier Wing**

- 61st Troop Carrier Group (C-47 Skytrain):  
14th, 15th, 53rd, 54th Transport Squadrons.
- 313th Troop Carrier Group (C-47 Skytrain):  
29th, 47th, 48th, 49th Transport Squadrons.
- 314th Troop Carrier Group (C-47 Skytrain):  
32nd, 50th, 61st, 62nd Transport Squadrons.
- 315th Troop Carrier Group (C-47 Skytrain):  
34th, 43rd, 309th, 310th Transport Squadrons.
- 316th Troop Carrier Group (C-47 Skytrain):  
36th, 37th, 44th, 45th Transport Squadrons.
- 349th Troop Carrier Group (C-47 Skytrain):  
23rd, 312th, 313th, 314th Transport Squadrons.

**53rd Troop Carrier Wing**

- 434th Troop Carrier Group (C-47 Skytrain):  
71st, 72nd, 73rd, 74th Transport Squadrons.
- 435th Troop Carrier Group (C-47 Skytrain):  
75th, 76th, 77th, 78th Transport Squadrons.
- 436th Troop Carrier Group (C-47 Skytrain):  
79th, 80th, 81st, 82nd Transport Squadrons.
- 437th Troop Carrier Group (C-47 Skytrain):  
83rd, 84th, 85th, 86th Transport Squadrons.
- 438th Troop Carrier Group (C-47 Skytrain):  
87th, 88th, 89th, 90th Transport Squadrons.

**APPENDIX 3 OF 3:  
LUFTFLOTTE 3, FIGHTER & BOMBER ORDER OF BATTLE,  
JUNE 1944 (AIRCRAFT ON HAND / SERVICEABLE)**

**Jagdgeschwader 2**

HQ Fighter Schwarm (Fw 190A)	( 3 / 0)
I. Gruppe / JG 2 (Fw 190A):	
1./I, 2./I, 3./I Fighter Staffels	( 19 / 14)
II. Gruppe / JG 2 (Bf 109G):	
4./II, 5./II, 6./II. Fighter Staffels	( 13 / 11)
III. Gruppe / JG 2 (Fw 190A):	
7./III, 8./III, 9./III Fighter Staffels	( 29 / 19)

**Jagdgeschwader 26**

HQ Fighter Schwarm (Fw 190A)*	( 2 / 2)*
I. Gruppe / JG 26 (Fw 190A):	
1./I, 2./I, 3./I Fighter Staffels	( 33 / 23)
II. Gruppe / JG 26 (Fw 190A):	
4./II, 5./II, 6./II. Fighter Staffels	( 32 / 25)
III. Gruppe / JG 26 (Bf 109G):	
7./III, 8./III, 9./III Fighter Staffels	( 37 / 21)

*\* These are the two fighters that strafed Sword Beach in the actual first response (and the movie).*

**Zerstörergeschwader 1**

I. Gruppe / ZG 1 (Ju 88C)	
1./I, 2./I, 3./I Heavy Fighter Staffels	( 30 / 25)
III. Gruppe / ZG 1 (Ju 88C)	
7./III, 8./III, 9./III Heavy Fighter Staffels	( 23 / 12)

**Schlachtgeschwader 4**

III. Gruppe / SG 4 (Fw 190F)	
7./III, 8./III, 9./III Fighter-bomber Staffels	( 40 / 36)

**Schnellkampfgeschwader 10**

I. Gruppe / SKG 10 (Fw 190G)	
1./I, 2./I, 3./I Fighter-bomber Staffels	( 33 / 19)

**Nachtjagdgeschwader 4**

HQ Night-fighter Schwarm (Bf 110G)	( 2 / 0)
I. Gruppe / NJG 4 (Bf 110G)	
1./I, 2./I, 3./I Night-fighter Staffels	( 16 / 7)
II. Gruppe / NJG 4 (Bf 110, Do217, Ju88)	
4./II, 5./II, 6./II. Night-fighter Staffels	( 20 / 12)
III. Gruppe / NJG 4 (Bf 110, Do217)	
7./III, 8./III, 9./III Night-fighter Staffels	( 19 / 10)

**Nachtjagdgeschwader 5**

I. Gruppe / NJG 5 (Bf 110G)	
1./I, 2./I, 3./I Night-Fighter Staffels	( 15 / 9)
III. Gruppe / NJG 5 (Bf 110G)	
7./III, 8./III, 9./III Night-fighter Staffels	( 18 / 8)

**Nachtjagdgeschwader 6**

II. Gruppe / NJG 6 (Bf 110G)	
4./II, 5./II, 6./II. Night-fighter Staffels	( 13 / 11)

**Kampfgeschwader 2**

HQ Bomber	( 0 / 0)
I. Gruppe / KG 2 (Ju 188)	
1./I, 2./I, 3./I Bomber Staffels	( 12 / 9)
II. Gruppe / KG 2 (Ju 188)	
4./II, 5./II, 6./II. Bomber Staffels	( 5 / 0)
III. Gruppe / KG 2 (Do 217M)	
7./III, 8./III, 9./III Bomber Staffels	( 7 / 1)
IV. Gruppe / KG 2 (Ju 188, Do 217)	
10./IV, 11./IV, 12./IV Bomber Staffels	( 31 / 15)

**Kampfgeschwader 6**

HQ Bomber (Ju 188)	( 1 / 1)
I. Gruppe / KG 6 (Ju 188)	
1./I, 2./I, 3./I Bomber Staffels	( 22 / 15)
II. Gruppe / KG 6 (Ju 88A)	
4./II, 5./II, 6./II. Bomber Staffels	( 3 / 2)
III. Gruppe / KG 6 (Ju 188)	
7./III, 8./III, 9./III Bomber Staffels	( 25 / 5)
IV. Gruppe / KG 6 (Ju 88A)	
10./IV, 11./IV, 12./IV Bomber Staffels	( 33 / 18)

**Kampfgeschwader 26**

II. Gruppe / KG 26 (Ju 88A)	
4./II, 5./II, 6./II. Bomber Staffels	( 37 / 27)
III. Gruppe / KG 26 (Ju 88A)	
7./III, 8./III, 9./III Bomber Staffels	( 35 / 14)

**Kampfgeschwader 30**

I. Gruppe / KG 30 (Ju 88A)	
1./I, 2./I, 3./I Bomber Staffels	( 2 / 1)

**Kampfgeschwader 40**

HQ Bomber	( 0 / 0)
I. Gruppe / KG 40 (He 177)	
1./I, 2./I, 3./I Bomber Staffels	( 20 / 11)
II. Gruppe / KG 40 (He 177)	
4./II, 5./II, 6./II. Bomber Staffels	( 30 / 26)
III. Gruppe / KG 40 (Fw 200)	
7./III, 8./III, 9./III Bomber Staffels	( 29 / 1)
IV. Gruppe / KG 40 (He 177, Fw 200)	
10./IV, 11./IV, 12./IV Bomber Staffels	( 17 / 7)

**Kampfgeschwader 51**

II. Gruppe / KG 51 (Me 410A)	
4./II, 5./II, 6./II. Bomber Staffels	( 24 / 17)

**Kampfgeschwader 54**

HQ Bomber (Ju 88)	( 1 / 1)
I. Gruppe / KG 54 (Ju 88A)	
1./I, 2./I, 3./I Bomber Staffels	( 11 / 5)
III. Gruppe / KG 54 (Ju 88A)	
7./III, 8./III, 9./III Bomber Staffels	( 14 / 8)

**Kampfgeschwader 66**

I. Gruppe / KG 66 (Ju 88S, Ju 188)	
1./I, 2./I, 3./I Pathfinder Staffels	( 20 / 11)

**Kampfgeschwader 76**

6./II Staffel KG 76 (Ju 88A)	( 12 / 3)
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**Kampfgeschwader 77**

I. Gruppe / KG 77 (Ju 88A)	
1./I, 2./I, 3./I Bomber Staffels	( 28 / 17)
II. Gruppe / KG 77 (Ju 88A)	
4./II, 5./II, 6./II. Bomber Staffels	( 25 / 8)

**Kampfgeschwader 100**

III. Gruppe / KG 100 (Do 217M)	
7./III, 8./III, 9./III Bomber Staffels	( 31 / 13)

These appendices supplement J.D. Webster's article *Thor's Hammer: The Ninth Tactical Air Force on D-Day in Against the Odds' Campaign Study No. 3 (Bradley's D-Day)* 2011.