



The Devastator would approach the enemy ships with the torpedo hanging down at 10-degrees, thus increasing overall drag and reducing airspeed.



The Kate's torpedo hung only 2-degrees nose down. Also, it was lighter than the TBD but this was at the expense of armor plate and lack of self-sealing fuel tanks.

DEVASTATOR

VERSUS KATE

AT THE START OF WWII, THE DOUGLAS TBD AND NAKAJIMA B5N WERE THE MAIN TORPEDO-BOMBERS OF AMERICA AND JAPAN. WHAT MADE ONE AN APPARENT FAILURE AND THE OTHER A SUCCESS?

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A Devastator releasing its torpedo. As can be seen, the pilot had to keep the plane in perfectly level flight.

The US Navy's Douglas TBD Devastator has been derided as an outdated torpedo/attack-bomber during its early World War Two history — lambasted for being slow and underpowered. Yet, the Imperial Japanese Navy's (IJN) Nakajima B5N Kate was esteemed as both a torpedo/attack- and horizontal-bomber during the same time period.

How much better was the Kate than the Devastator?

Well... not that much. What? Let's explain.

Both these designs had their first flights in 1937 and each had a crew of three in tandem — pilot, bombardier, and radio operator/rear gunner. The TBD was the world's first carrier aircraft with powered folding wings (the Kate's wings were manually folded by the deck crew), both aircraft

had fully enclosed cockpits (novel for the time), as well as retractable landing gear and all-metal monocoque construction. These aircraft had almost identical lengths and wingspans with nearly the same wing area — though the Kate was 600-pounds lighter and had 100 more horsepower. Cruising speed was greatly different with the Devastator lumbering at 128-mph relative to the Kate's 161-mph.

Devastators had more drag-inducing frontal area than the Kate. This was to allow the TBD's bombardier to take a prone position under the pilot to aim with the Norden bombsight during a conventional bombing mission. The Kate's bombardier did not have to leave his seat to use the aircraft's bomb sight. Kate aircrews could get to the fight more quickly but their aircraft were much less protected by armor than the Devastator. However, the speed differential meant very little to intercepting fighters or anti-aircraft



As the war progressed, Japan's Kates would have to penetrate a vastly improved American anti-aircraft system as well as overwhelming numbers of CAP fighters.