



Photograph Provided By: AIREVIEW

(Contents)

1st Section	Actual Aircraft Specifications / Engine / Cockpit / Machine Guns	3
2nd Section	Assembly Information	5
3rd Section	Assembly Explanation	
	3 - 1 Engine	6
	3 - 2 Cockpit	11
	3 - 3 Main Structure / Machine Guns	14
	3 - 4 Equipping the Engine	19
	3 - 5 Body Panels	24
	3 - 6 Landing Devices	27
	3 - 7 Wings & Final Outfitting	30
4th Section	Coloring	34
5th Section	Parts List	38

(End)

1-1. Actual Aircraft Specifications

1 J7W1 Imperial Japanese Navy Interceptor Shinden

In May of 1944, as the enemy's long-distance bomber attacks grew more intense by the day, the Japanese Navy felt the need increasing for the deployment of a new, stronger short-range interceptor craft. And so at last there was an official declaration to Kyushu Aircraft from the Japanese Navy for the development of a prototype craft for just that purpose. It was in that instant that the legend of the 'Shinden' was born, whose uniqueness would surpass all else in the history of Japanese aircraft from then on.

At the top of that request, the following was inscribed. "A superior high-speed land based fighter aircraft capable of mastering the shooting down of the enemy's bombers." It was the full scope lingering in this brief sentence that cause such great pressure and distress for Kyushu Aircraft's development team.

And then, one young Navy Engineering Officer offered a novel idea in response to that request. "A single-engined monoplane with forward airfoils." This was not just new or novel - it was an aircraft shape that had never been seen before.

It was an unprecedented creation, with the main wings on the rear of the body, equipped with a 6 blade propeller for the propulsion engine, and with a maximum speed of 400kt (750km/h) at an altitude of 8,700 meters.

It boasted a climbing power capable of reaching an altitude of 8,000 meters in under 10 minutes, 30 seconds, and a service ceiling of over 12,000 meters. For its firepower, 30mm machine guns were concentrated in a 4-way configuration on the nose, allowing maximum destructive force. In short, it was a plan to recover from the current state of the war in one breath, using the superior speed for a attack-and-retreat tactic against the enemy's impregnable large-scale bombers.

At that time, it was surely a craft that rose above even the most ambitious of ideas.

But the moment was already too late, and its development was unable to proceed without delays. It become more and more difficult to source materials and components. Add to that the shortage of skilled workmen, and the resultant succession of failures in the development of the engine, the time and labor involved with the equipping and maintenance of the machine guns, and faced with the continuing pressure of heavy bombing by formations of B-29s, at last the end of the war came about.

If only the Shinden had been able to fight... As the last and strongest fighter craft that the Japanese Navy thought to deliver to the world as its final trump card, the Shinden continues to give us such imaginings and suppositions.

The following is a chronicle of the details relating to the manufacture and development. We would be delighted if it helps fuel your imaginings of the incredibly unique fighter aircraft called the 'Shinden'.

Development Progress of Test Production 'Shinden'

Development Unofficially Announced: Feb, 1944
Development Officially Announced: May, 1944

Basic Research Started: Jul, 1943 Completed: Jan, 1944

First Wind Tunnel Tests and Actual Size Glider Tests carried out at the Navy's First Technical Depot.

Project Started: Feb, 1944

Wooden Form Inspection: First: Jul, 1944 Second: Sep, 1944

Design Drafting: Started: May, 1944 Completed: Nov, 1944

In November, 1944 and February, 1945, a German technician from Henschel & Son visited because of this craft. After considering his opinions and with mass production considered to be the main objective, drafting of modified designs was begun, however these were only about 80% complete when the war ended.

Various Testing Wind Tunnel Tests: Oct, 1944

Engine Cooling Tests: (by partial testing apparatus based on designs) May, 1945

Firing Tests: (by partial testing apparatus based on designs) Aug, 1945

Strength Tests: Started: Mar, 1945 Completed: Aug, 1945

Manufacture Started: Oct, 1944

The strength test apparatus and crafts one and two were started almost at the same time with virtually no space between them.

Structural Inspection: First: May, 1945 Second: Apr, 1945

Transport of 1st craft to airfield: (Mushiroda Airfield, Fukuoka) Jun, 1945

Inspection of Completed Craft: Jul, 1945

Although the craft was transported to the airfield on June 15th, several flaws were found in the fuselage and engine, which required roughly a month to fix, meaning the final inspection was carried out after that.

Test Flight: Aug, 1945

August 3rd: First Test Flight
August 6th: Second Test Flight
August 8th: Third Test Flight

Specifications

Style: Land Based Aircraft / Year of Production: 1945
Crew: One
Number Produced: Two

Produced By: Kyushu Aircraft KK, Fukuoka City, Fukuoka
Engine: Ha.43-42 Type (MK9D Modified)
Mitsubishi Industries 18-Cylinder radial air cooled propulsion,
2,030HP liftoff output
Propeller: Sumitomo VDM constant speed (propulsion) 6 blade propeller

Aircraft Performance

Maximum Speed: 405 Knots (750km/h) /Altitude: 8,700m 240 Knots (444km/h)
Altitude: 3,000m Cruising Speed /Ascending Speed: 750m per minute
Cruising Altitude: 12,000m

Aircraft Dimensions

Wingspan: 11.11m / Total Height: 3.92m
Total Length: 9.66m / Wing Area: 20.5m2

Weight

Empty Weight: 3,645kg / Loaded Weight: 4,928kg

Armament

Guns: Type 5 30mm fixed machine guns x 4 (60 bullets each)
7.9mm fixed guns for training x 2 camera gun x 1
Bombs: 60kg (#6) x 4 or 30kg (#3) x 4