

# A Modeller's Guide to the A6M2 "Zero"



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# PURPOSE OF THIS GUIDE



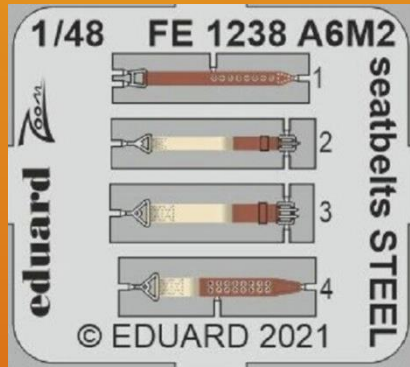
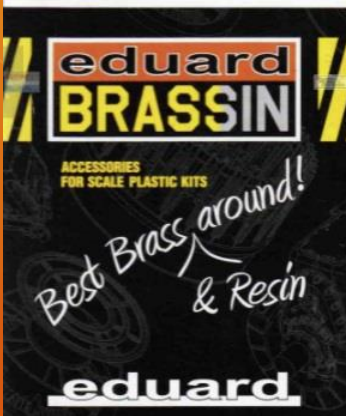
This “guide” is a quick resource designed to provide key information to scale modellers on creating an accurate model of the **A6M2**, especially given Eduard’s brand new 1/48 A6M2 released in late 2021! With the wide breadth of information on the “Zero”, this guide will only focus on this specific variant.

# Quick Review – Eduard 1/48 A6M2



- ✓ Now the most **accurate** 1/48 A6M2 on the market!
- ✓ The only suggestions are as follows:
  - a) add to cockpit: wiring/hydraulics, rudder cables, and seat bungee cord
  - b) some optional after-market replacement parts (next page)...

# Wanna spend more money? Optional After-Market:



or



**A6M2 Stencils** are offered by Eduard on their website, BUT ARE **INCLUDED IN THE EDUARD KIT!**

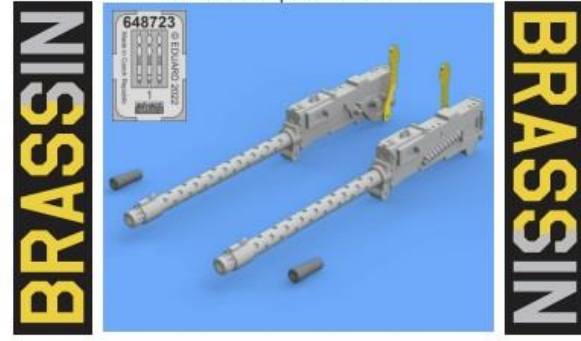
# WAIT THERE'S MORE! Optional After-Market:

**Eduard**

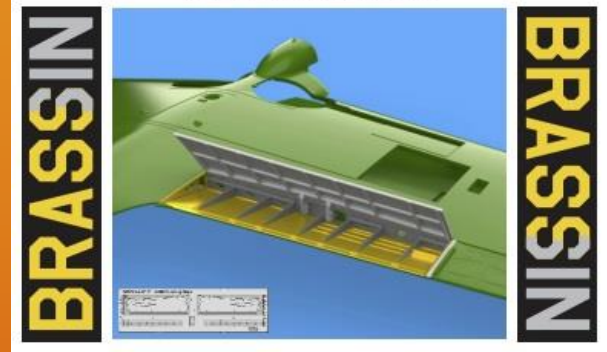
**A6M undercarriage legs BRONZE 1/48**



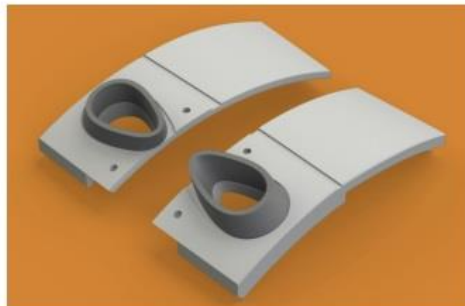
**648 723 A6M2 cannon barrels & cockpit guns 1/48**  
for Eduard kit - pro stavebnici Eduard



**648 724 A6M2 landing flaps 1/48**  
for Eduard kit - pro stavebnici Eduard



**648 722 A6M2 exhaust 1/48**  
for Eduard kit - pro stavebnici Eduard



**eduard**

**648693 A6M2 wheels 1/48 Eduard**

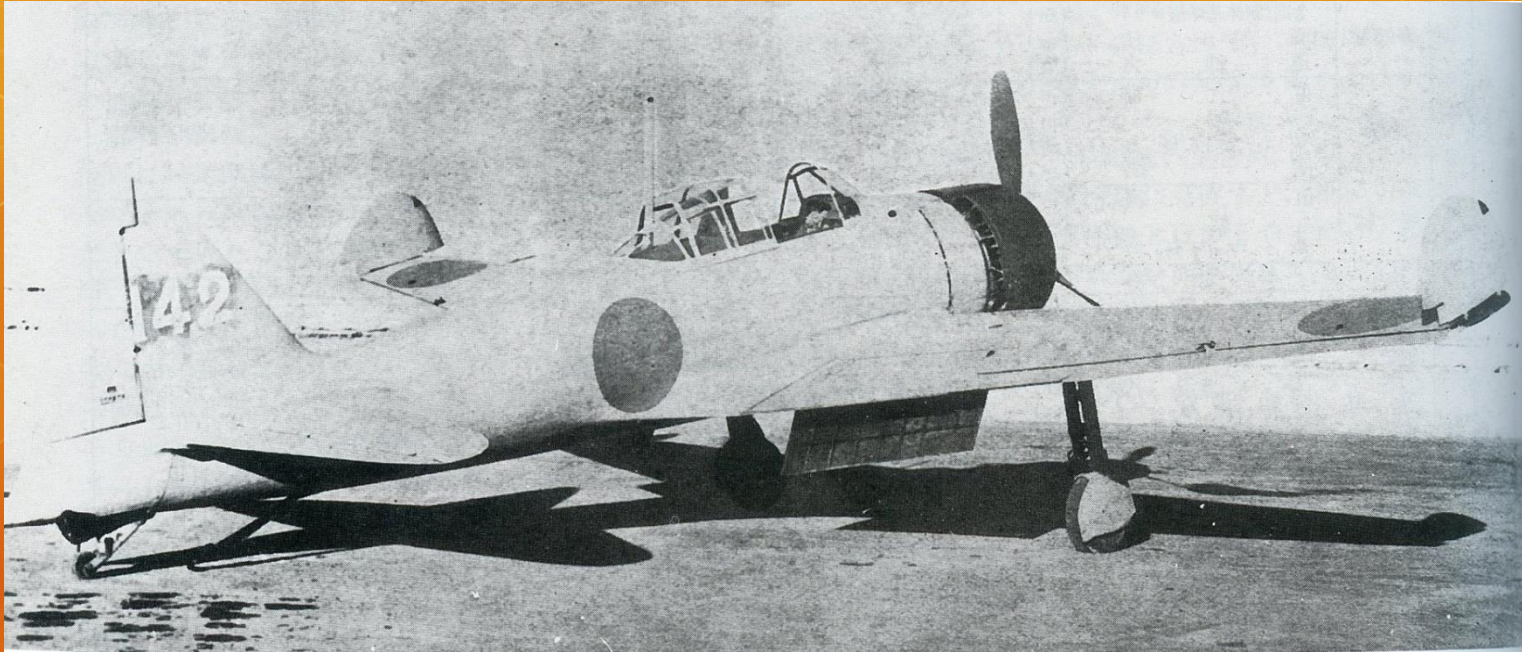
Brassin set - the undercarriage wheels for A6M2 in 1/48 scale. The set consists of the main wheels and a tail wheel. Easy to assemble, replaces plastic parts.  
Recommended kit: Eduard

Set contains:  
- resin: 3 parts  
- decals: no  
- photo-etched details: no  
- painting mask: yes

[Product page](#)



# A6M2 Development & Early Operations



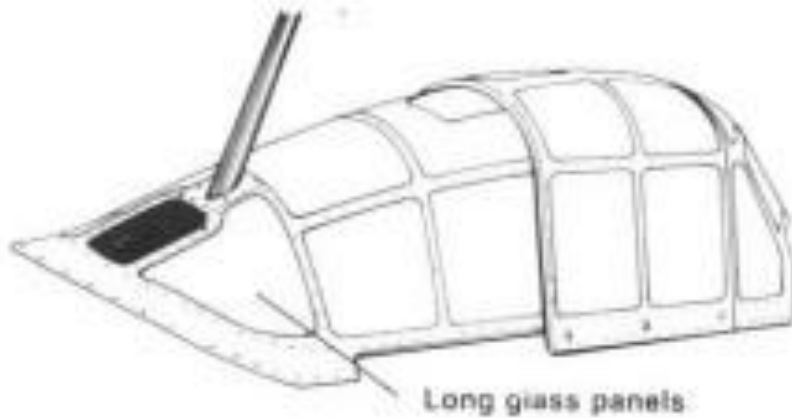
Famous Airplanes of the World #55 (Nov.1995)

A6M2 Mark 1 Type 1 (i.e. later referred to as Model 11). Illustrates extreme rear of cockpit canopy with larger glass transparency. Up to aircraft No. 46.

# A6M2 Development & Early Operations

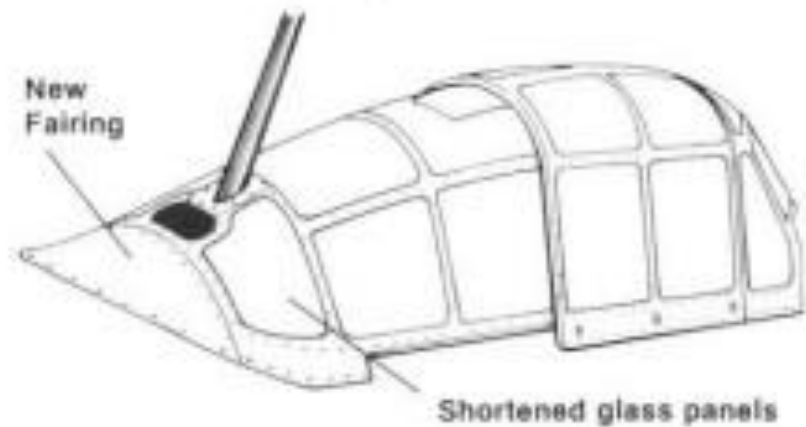
## Early

(to production No. 46)



## Late

(from production No. 47)



Squadron Signal #59 - A6M Zero in Action

# A6M2 Development & Early Operations



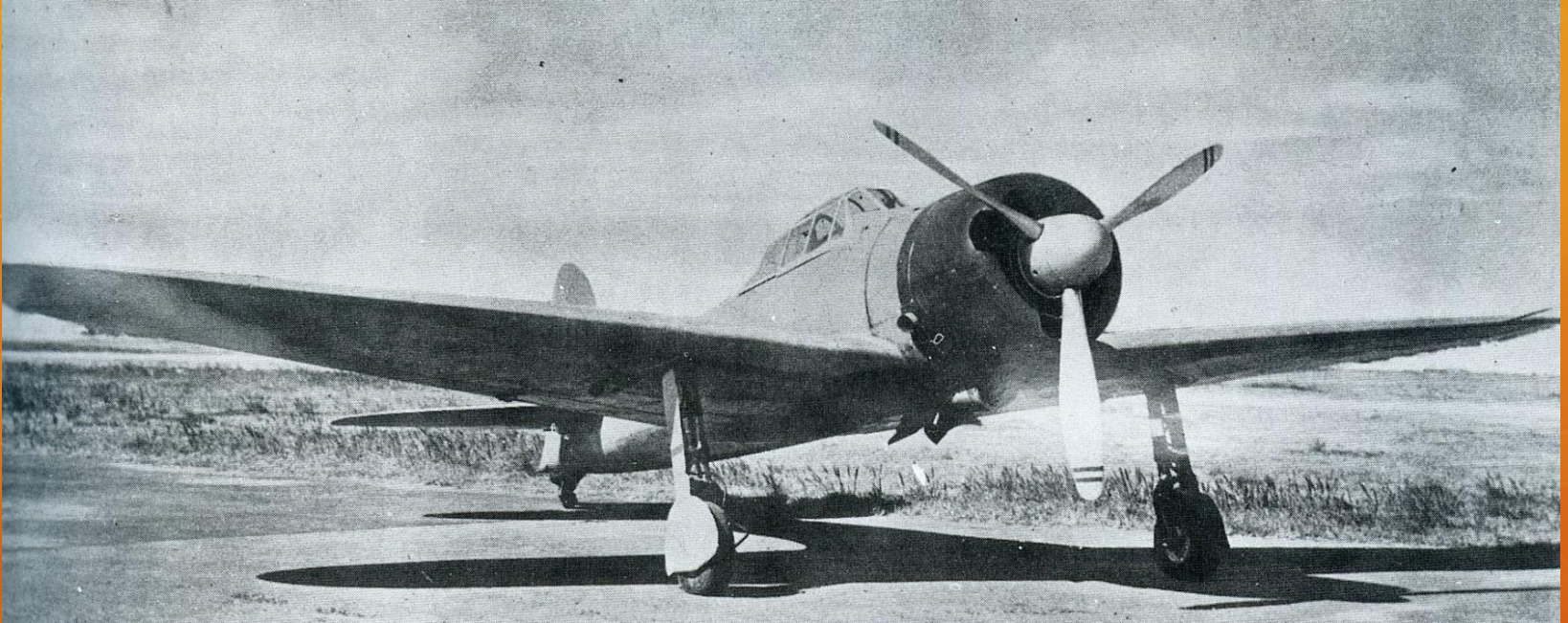
Famous Airplanes of the World #55 (Nov.1995)



A6M2 Model 21 early production (note external mass balance on aileron. Kasumigaura Kokutai カ - 103. c. 1943. Anti-glare panel on upper decking of cowling and forward fuselage only. Overall light gray/green. Wing leading edge deep orange/yellow IFF stripe.

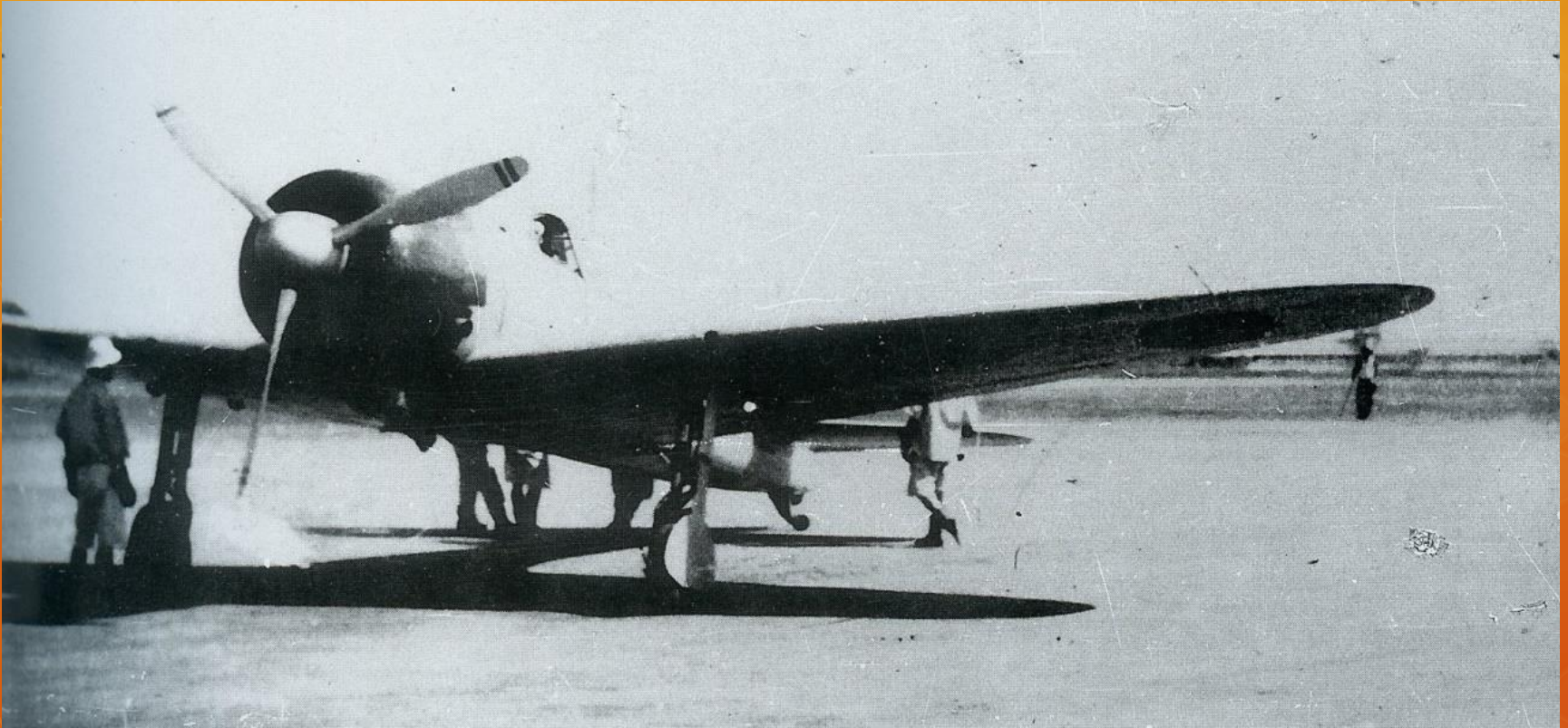


# A6M2 Development & Early Operations



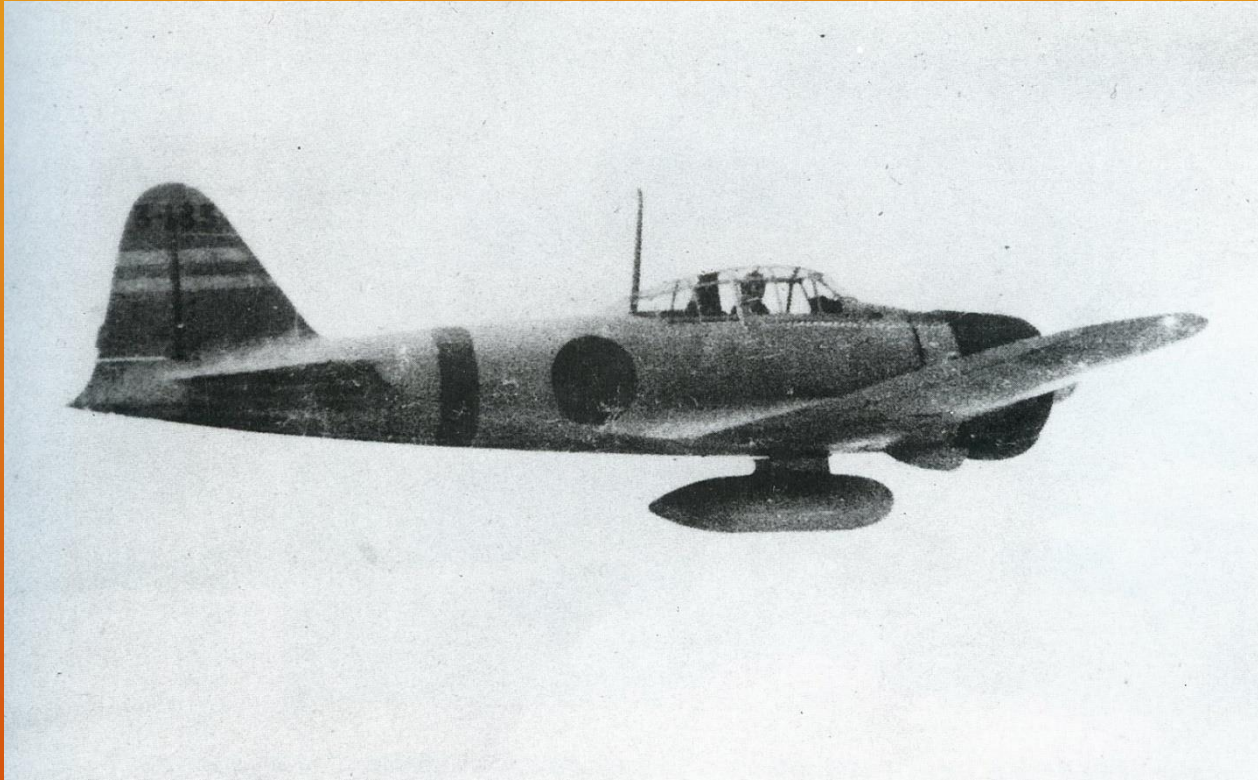
Good illustration of exhaust outlet pipe along cowl flaps at rear of engine cowling placed slightly higher, opening above upper surface of wing. Up to aircraft No. 36. Thereafter, exhaust outlet moved to bottom of cowl flaps below wing lower surface.

# A6M2 Development & Early Operations



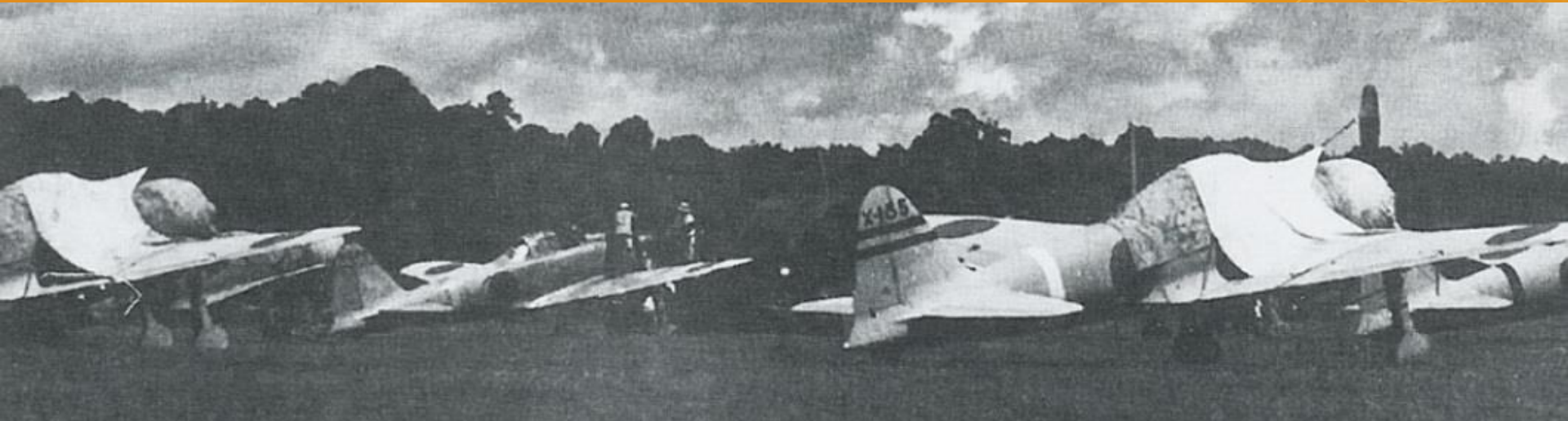
Opening along wing leading edge for 20 mm cannon is square in shape. Later changed to circular. Sept. 28, 1940 south China.

# A6M2 Development & Early Operations



12th Kokutai A6M2 Model 11 in China. c. Summer - Fall 1941. 3-183. Note difference in shade of overall finish forward of fuselage hinomaru (darker) and aft (lighter). **Theories:** 1) lack of paint stocks; and 2) partial tarp cover results in bleaching of exposed areas. *Jury is still out!*

# A6M2 Development & Early Operations



Tarp-covered Zeros of 3<sup>rd</sup> Kokutai 1942 (top) and  
14<sup>th</sup> Kokutai Saigon (right)  
Result of the two-tone colour perhaps?

Posts from  
Ronnie Olsthoorn & Voytek (Woody) Kubacki

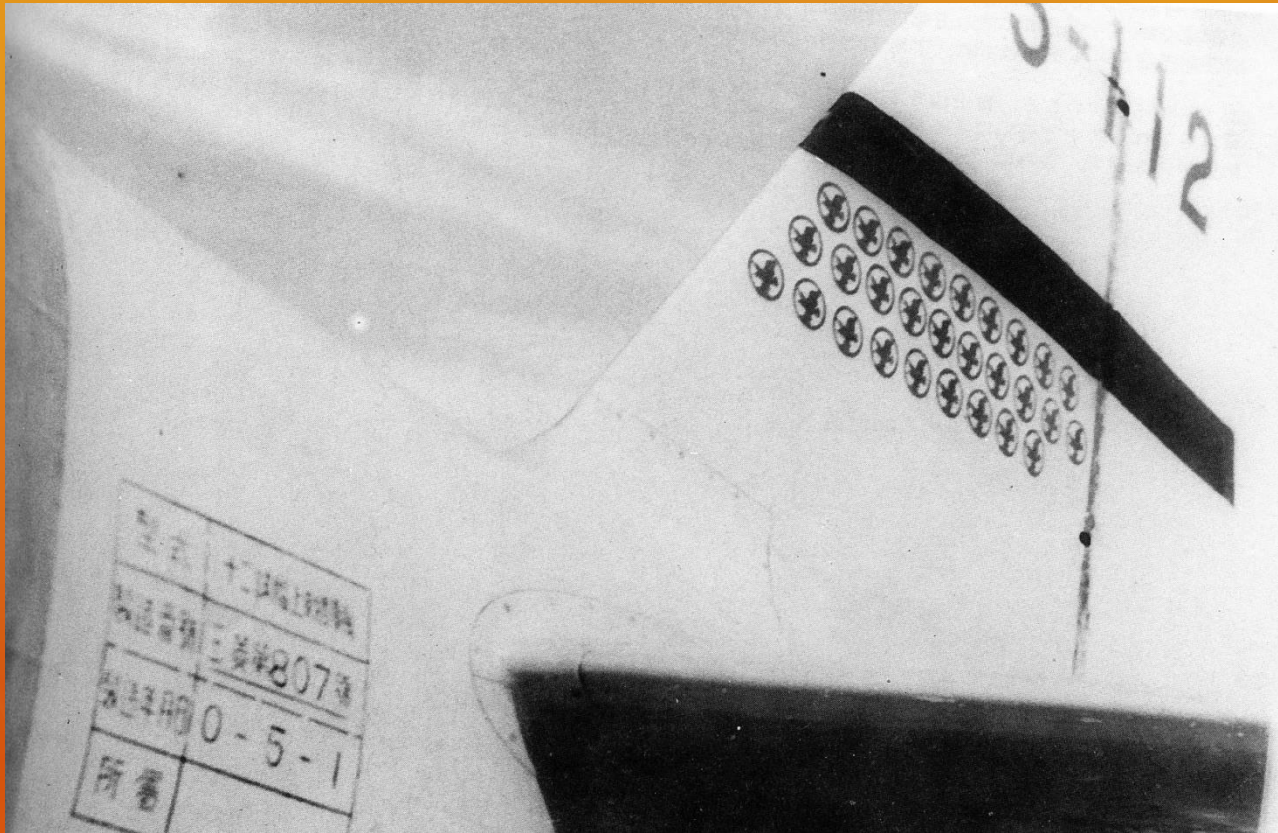


# A6M2 Development & Early Operations



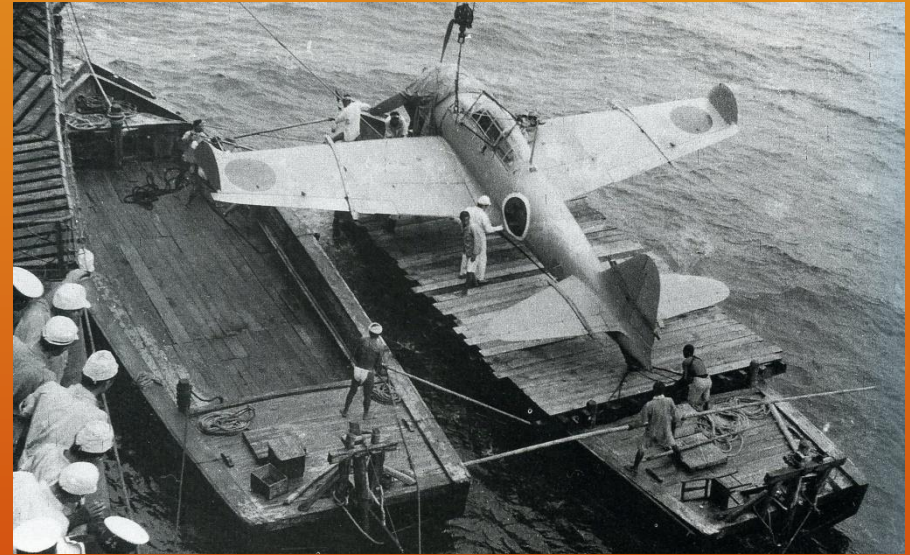
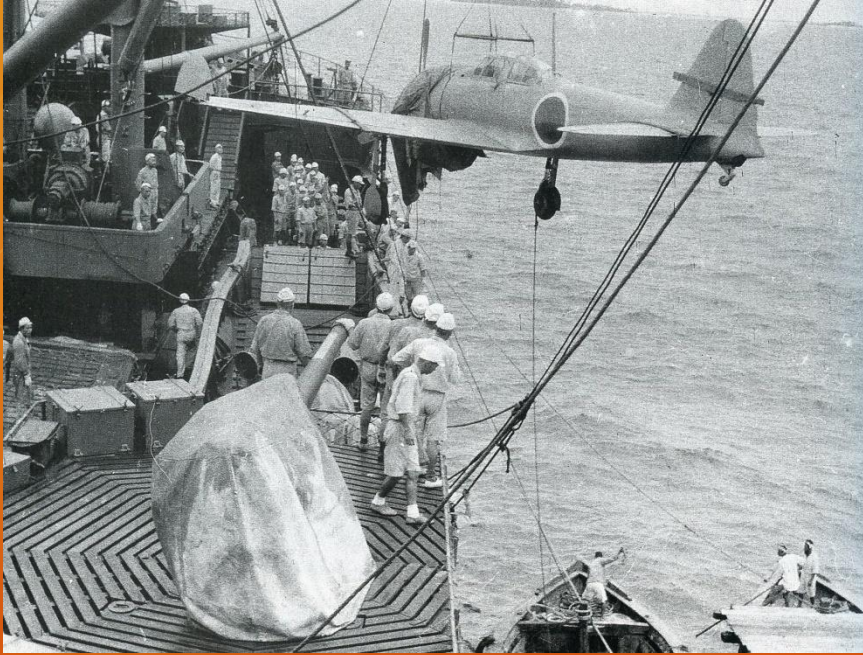
12th Kokutai China. May 26, 1941.

# A6M2 Development & Early Operations



Kill markings on 12th Kokutai a/c. 3 -112 c/n 807. c. 1941. Lt. Suzuki Minoru.

# A6M2 Development & Early Operations



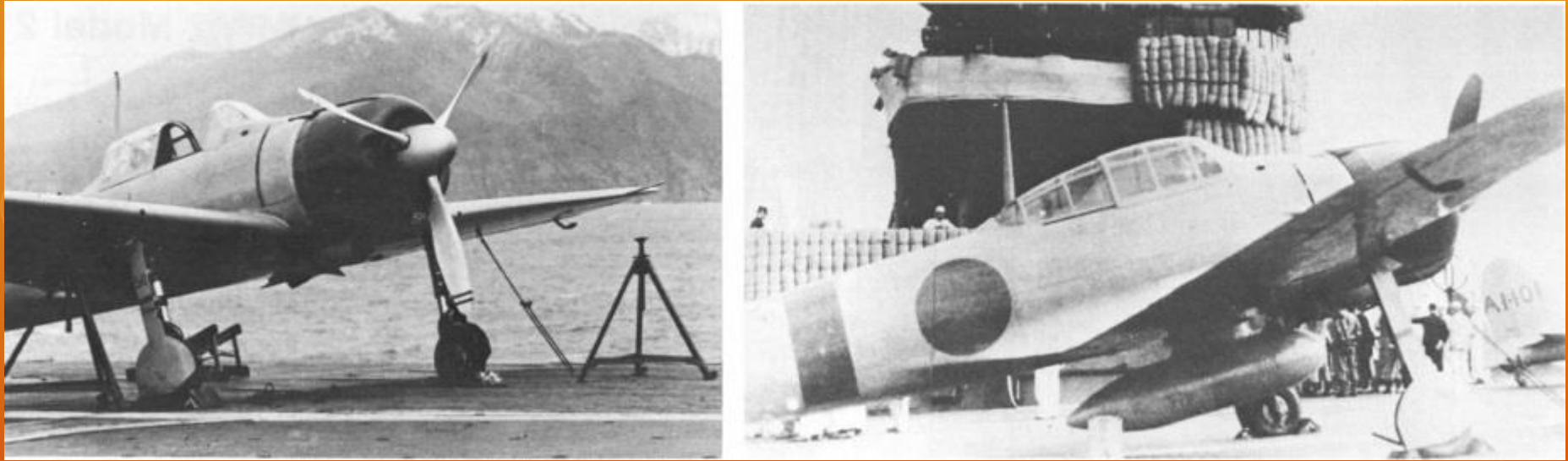
Good illustration of folding wingtips on A6M2 Model 21 (Model 11 did not have them).

# A6M2 Development & Early Operations

- ❑ installation of loop antenna direction finder behind cockpit on Model 21
- ❑ change of shape of cockpit air intake on leading edge of starboard wing sometime during early production run of Model 21
- ❑ reported installation of long barrel 20 mm Type 99 cannon on some late production A6M2



# Pearl Harbor through Early Guadalcanal



Squadron Signal #59 – A6M Zero

CV Akagi. AI - 156 and AI - 105. A6M2 Model 21 early production. December 1941. Participated in Pearl Harbor attack. Note external mass balances on ailerons. A/c nos. 127 to 326 had these external mass balances. Of the Zeros that took part in Pearl Harbor attack, some had them, some did not.

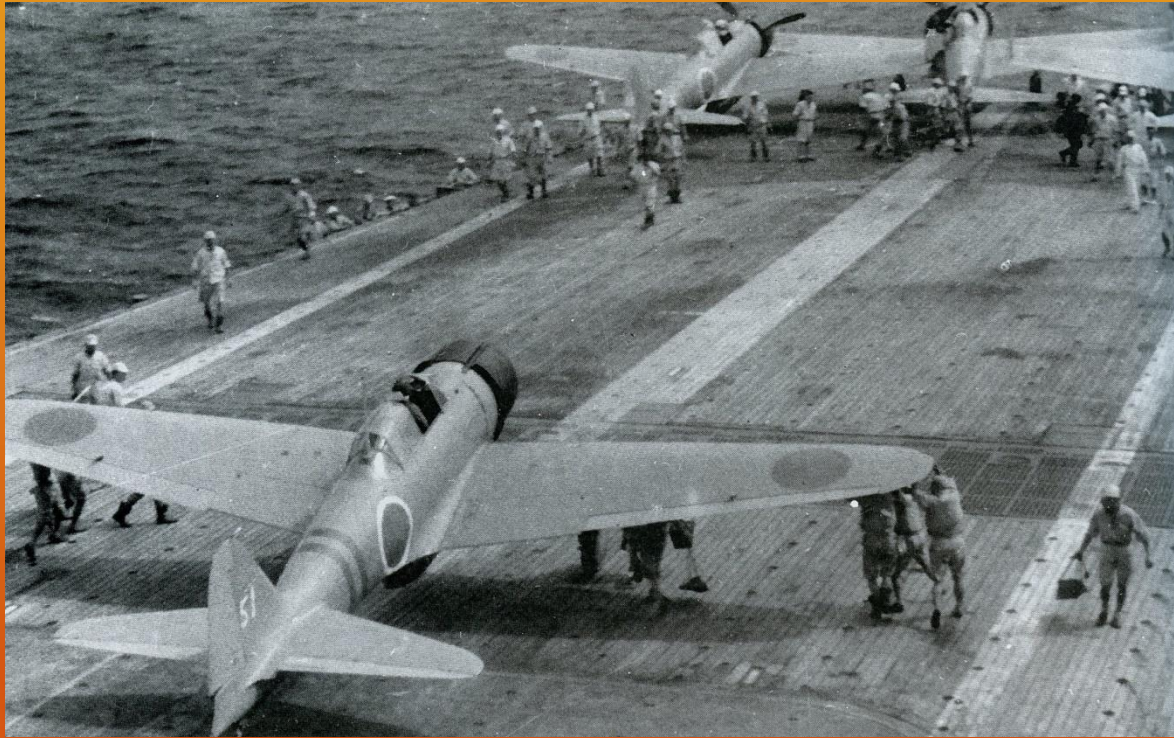
# Pearl Harbor through Early Guadalcanal



Famous Airplanes of the World #55 (Nov.1995)

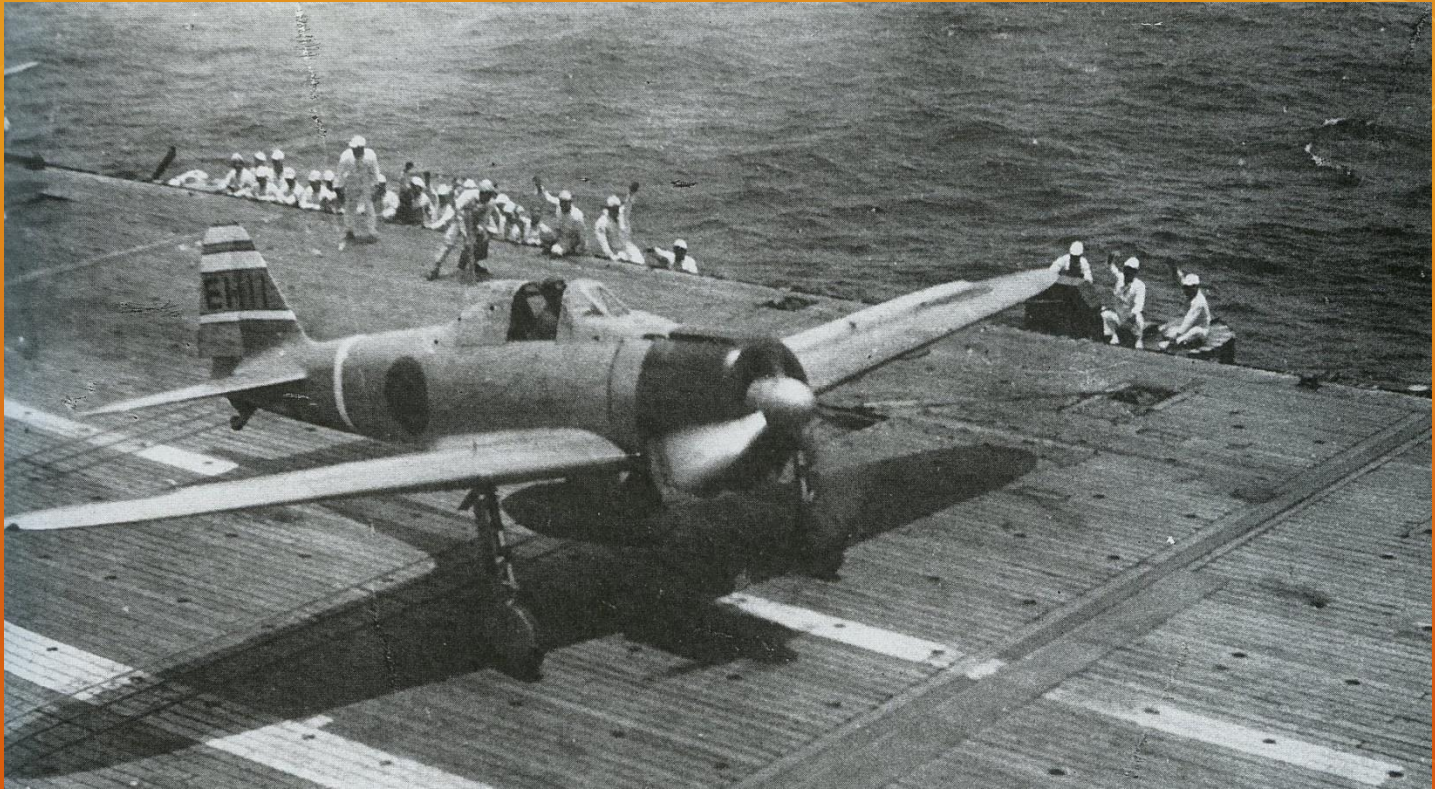
Kill markings. 3rd Kokutai X - 183. A6M2 Mark 1 Type 2 (later Model 21) c/n 5404. Kendari, Celebes c. March 1942. Flight Petty Officer 2/c Hashiguchi Yoshiro.

# Pearl Harbor through Early Guadalcanal



CV Junyo A6M2 Model 21. August 1942. Note white surround to fuselage hinomaru despite overall light grey/green finish, characteristic of Nakajima A6M2 from around this period onward.

# Pearl Harbor through Early Guadalcanal



CV Shokaku. A6M2 Model 21. EI - 111. c. Battle of Santa Cruz October 1942 Lt. Shingo Hideki.

# Spring 1943



Adm. Yamamoto Isoroku sees off A6M2 Model 21 from Rabaul during Operation I-Go prob. April 7, 1943. Field applied green upper surface camouflage.

# Spring 1943

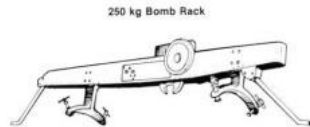


A6M2 Model 21 of 582 Kokutai at Buin/Kahili, Bougainville. Operation I-Go. April 7, 1943. Solid green upper surface camouflage finish.

# Late War

## A6M Fighter/Bomber

The very idea of hanging a big, heavy, cumbersome bomb on the Zero was an anathema to the Japanese Navy Air Force. It was only the desperation of the last years of the war that forced the Fighter/Bomber concept on the Japanese. To meet this demand for a Fighter/Bomber, a 250 kg. Bomb rack was designed and retrofitted to service aircraft.



A6M5 Fighter Bomber

Believed to be a photo of the first Kamikaze Special Attack of the 201st Kokutai taking off from Mabaracat Air Base in the Philippines on 25 October 1944. Equipped with bomb laden A6M2s and A6M5s, this first Kamikaze unit, "Shinkishima-Tai" was led by Lt Yukio Seki, believed to be flying 02-888. The two Zeros at the far right are carrying drop tanks and are probably escorts for the Kamikazes. This early mission was purely voluntary. Later, pilots were ordered to carry out Kamikaze missions.



A6M2 Model 21: 02 - 888. October 25, 1944. 201 Kokutai. Shikishima Special Attack Unit, Kamikaze Special Attack Corps. This is historic takeoff for first successful official kamikaze sortie. Mabalacat East A/F, Luzon, Philippines. Also good diagram of centerline bomb rack for 250 kg bomb.

# Late War



**Long-barreled Type 99 Mark 2 cannon on A6M2?** There are no known records documenting such armament installation by Nakajima (Mitsubishi had stopped producing A6M2s in June 1942 when it switched to A6M3 on production line). Thus, it is fairly certain that installation of this weapon on the A6M2 was a field modification. Whether the plane in photo was a one-off, or how many may have been so modified is unknown. Plane belonged to 381 Kokutai which ended the war based at Singapore.



# Functional Markings 1

- Airframe Data Plate:** Black stencil on rear port-side b/ 11<sup>th</sup> and 12<sup>th</sup> fuselage frames (Note: Oct '42, Manufacturer's date removed from plate and left blank). (Ryan Toews). There were MANY variations and changes over time. Here are the **four** types of Data Plates for the A6M2 variant. **See Ryan Toews Research of Data Plates at:** [https://j-aircraft.com/research/ryan/zero\\_fuselage\\_identification\\_ste.htm](https://j-aircraft.com/research/ryan/zero_fuselage_identification_ste.htm)

型式	零式一號艦上戦闘機
製造番号	三菱第 _____ 號
製造年月日	
所屬	

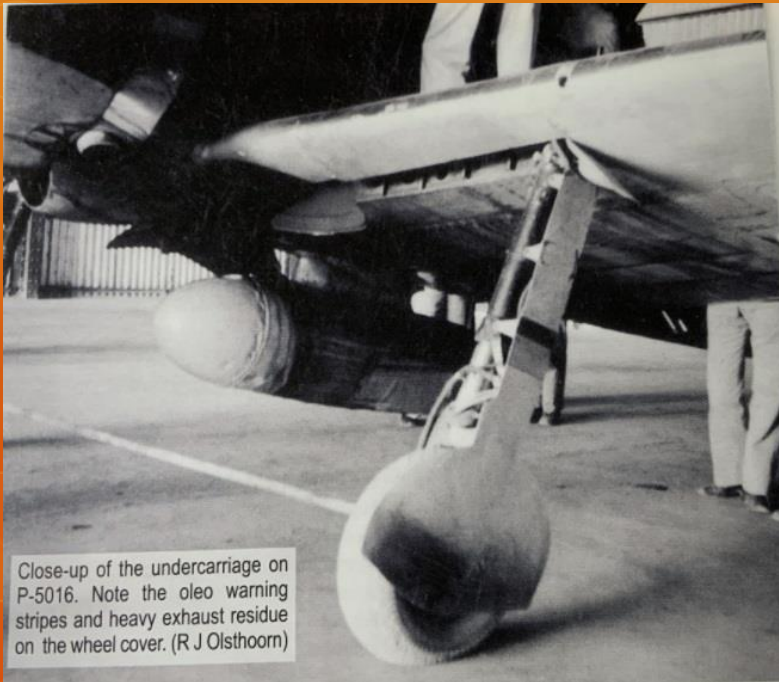
型式	零式一號艦上戦闘機 二型
製造番号	三菱第 _____ 號
製造年月日	
所屬	

型式	零式一號艦上戦闘機一型
製造番号	中島第 _____ 號
製造年月日	
所屬	

型式	零式艦上戦闘機二型
製造番号	中島第 _____ 號
製造年月日	
所屬	

# Functional Markings 2

**Warning Stencils:** Red stenciling. Note absence of outer red flap warning line as new research suggests this was more common.



# Interior Details 1



# Interior Details 2

1. **NOTE: Colours must be interpreted with the following in mind: a) manufacture's differences; b) field application variations; c) weathering, and d) ageing! There is no single correct colour, but rather an acceptable "range" being the best approach!**
2. **A6M2 cockpit:** "Medium Field Green" in the range of FS34127 or FS34089 (this includes the instrument panel):
  - a) Different manufactures used different shades of this green, so the overall effect was often a "patch-work" effect of various "greens"
  - b) Dials - typically black with white lettering/numerals.
  - c) Small Japanese language placards were found beside some instruments and knobs
  - d) Radio, circuit, and switch boxes were typically black (but some in the same cockpit colour)
3. **Aotake:** - a protective tinted clear coat used on internal surfaces (but not in cockpit area itself). Many tones but mostly described as tinted green-blue. Aotake coating was not in cockpit area and only on remaining internal areas (e.g. inside fuselage). Aotake turns greener when exposed to light, and bluer when not. (Robert Mikesh)
4. **Windscreen Coaming & Deck under the canopy:** Flat Bluish-Black with exception of rearmost frame, which was airframe colour (Taizou Nakamura)
5. **Gunsight** – semi-gloss Black
6. **Gun bays** - Aotake
7. **Flap Interiors** - Aotake
8. **Wheel wells:** Mitsubishi (airframe colour) / Nakajima (Aotake)
9. **Main Wheel Door Interior Face:** Airframe colour
10. **Small Inner Wheel Well Door Interior:** Mitsubishi (Airframe colour) / Nakajima (Aotake)
11. **Tail Wheel Well:** Aotake



# Interior Details 3

**Note pilot seat variations! (Left – A6M2 / Right A6M5)**



Kenji Miyazaki, & Taizou Nakamura. Painting, What Color? Imperial Japanese Navy Airplane (Mitsubishi A6M Zero Backyard)

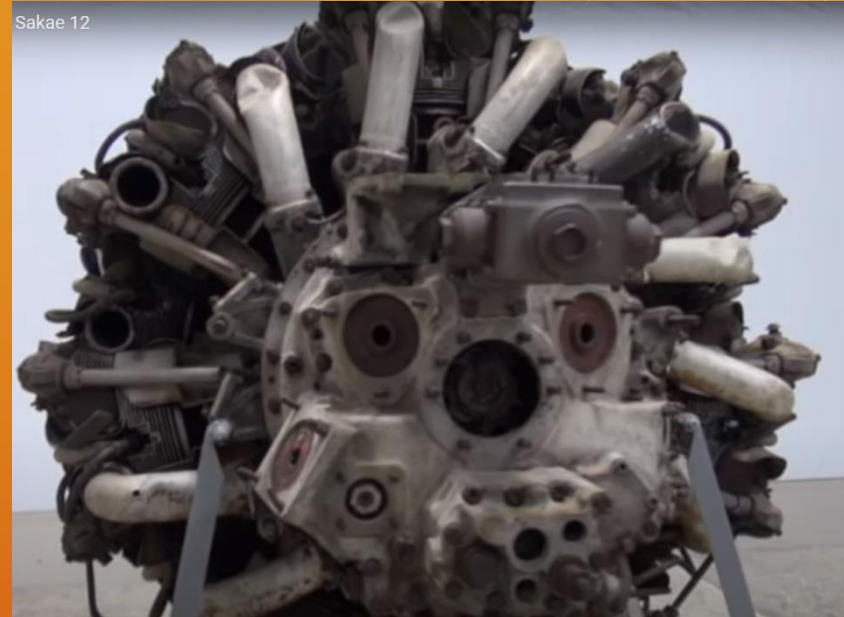


Harvey Low Collection

# Interior Details 3



Flying Heritage Collection's Sakae 12



Sakae 12

Flying Heritage Collection



# Exterior Details 1



**Mitsubishi A6M2 Zero**

DAYTON, Ohio – Mitsubishi A6M2 Zero in the World War II Gallery at the National Museum of the United States Air Force. (U.S. Air Force photo)

# Exterior Details 2



Kenji Miyazaki, & Taizou Nakamura. [Painting, What Color? Imperial Japanese Navy Airplane \(Mitsubishi A6M Zero Backyard\)](#)

**NOTE:** Illustration is of A6M5 but some A6M2 also had this scheme. The demarcation between UPPER and LOWER colours differed by manufacturer:

- ❖ Mitsubishi built (TOP)
- ❖ Nakajima built (BOTTOM)



# Exterior Details 3

1. First, no one has ever stood in at the Mitsubishi or Nakajima plant to see an original factory painted Zero, nor has a veteran attested fully to such colours! Aim for a range of colours instead of a single FS!
2. **Amber Grey** (referred to as “Ameiro” and “J3”) similar to FS16350 (close to RAL7034) [Millman] applied between January ‘42 to November ‘42.
  - a) slightly yellowish brown or tan tint, and also an olive tone like RLM02 or FS24201
  - b) some think that a protective varnish had a Brown tint
  - c) standard for shipboard and land-based Zeros up to Spring ‘43
  - d) Speculation - Nakajima Amber Grey was more darker Tan/Brown than Mitsubishi
  - e) NO Nakajima-built A6M2’s at Pearl Harbor!
3. Camouflage over Amber Grey: Dark Green blotches (random and different for each aircraft by hand, airbrush, cloth etc.!). Hinomaru white surround on some but not others.
4. Move to topside flat Dark Green in ‘43
5. Weathering – Factory applied finish (both airframe and cowling) was semi-glossy but exposure to tropical climate lost its luster, with amber-grey fading to dull gray and in extreme circumstances almost white-grey. Those examples stored away from light, become darker and browner over time. (Millman) This could account for the various “shades”. Also note exhaust stains were often found on lower gear doors as a result of their position directly behind exhausts!















# Exterior Details 4



5. **Primer:** Red-Oxide Primer similar to FS30109 (not applied to cowling). Severe flaking could show this primer underneath.
6. **Hinomaru:** Bright Red - faded when exposed to sun, darker when aged over time not exposed to elements
7. **Hinomaru White Surround:** Applied when over a darker colour, but by August '43, some were painted out with Dark Green or Black (Claringbold)
8. **Wing ID Stripes:** August '42 - Yellow on camo ac, but Yellow (sometimes Red) on non-camo, but delayed. Width varied!
9. **Fabric Components:** Dope applied to ailerons, rudder, and elevators were a slightly more neutral Gray similar to FS36307
10. **Antenna:** Airframe colour with Black tip (NOTE: Due to poor radios and tropical conditions, many did not have radios and thus radio antennae!)
11. **Prop Spinner:** painted Aluminum (later Dark Red-Brown), over Red Oxide Primer
12. **Propeller blades:** polished NMF, with rear faces in very Dark Maroon/Brown
13. **Propeller Blade Tips:** two thin Red 30mm warning stripes (after August '43 – one 50mm stripe – Yellow when over Red-Brown coloured prop blades)
14. **Drop Tanks:** overall airframe colour or the under surface colour in the case of later camouflaged aircraft. In some cases, they were painted aluminum or left NMF
15. **Cowling:** Gloss Blueish-Black (speculation that some Mitsubishi-built was even a bit more blueish)
16. **Wheel Hubs:** painted Aluminum
17. **Gear struts:** Gloss black with very bright silver oleos
18. **Tail wheel assembly:** airframe colour
19. **Tail Hook:** gloss black hook with Aotake shaft
20. **Retracting Yoke:** (on inner gear door): gloss Black
21. **Torque Links:** painted Aluminum

# Some Model Color NEWEST IJN SETS as of 2022



# Some Model Color Paint Comparisons

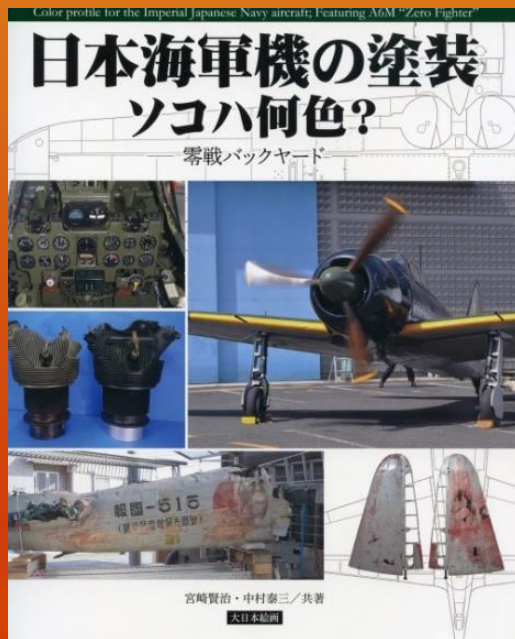
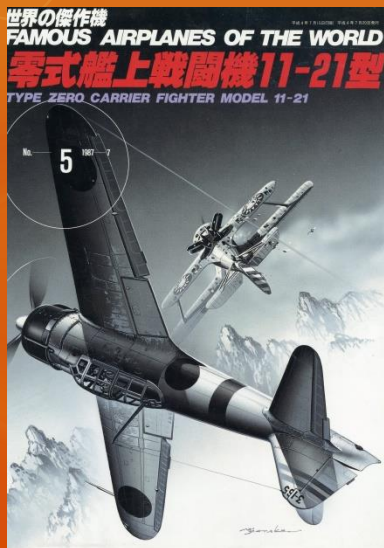
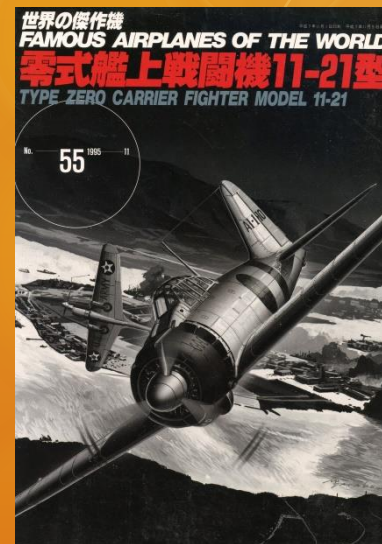
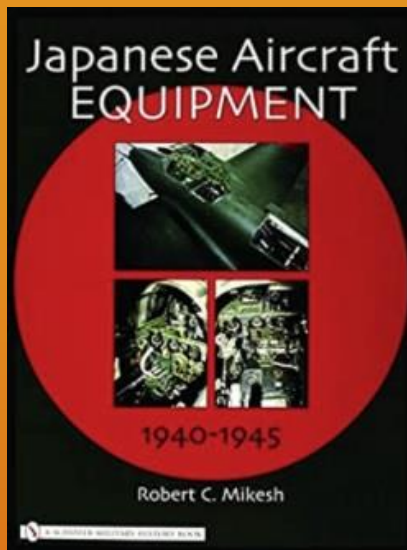
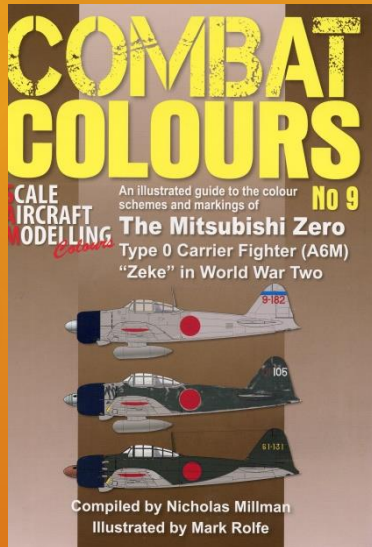
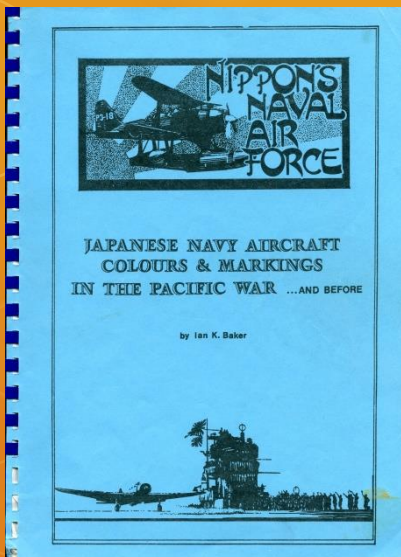
<u>AREA</u>	<u>HOBBY CO.</u>	<u>TYPE</u>	<u>SKU</u>	<u>NAME</u>	<u>AIRBRUSHED</u>	<u>HAND-APPLIED</u>
Interior Aotake	Mr Hobby Acrycion	Acrylic Pure	N63	Metallic Blue-Green		
Interior Aotake	Mr Hobby Aqueous	Acrylic Synthetic Lacquer	H63	Metallic Blue-Green		
Interior Aotake	Tamiya	Acrylic Synthetic Lacquer	X-13	Metallic Blue		
Interior Cockpit	AK	Acrylic Synthetic Lacquer	RC306	IJN M3 Mitsubishi Interior Green		
Interior Cockpit	AK	Acrylic Synthetic Lacquer	RC307	IJN M3 Nakajima Interior Green		
Interior Cockpit	AK Air	Acrylic Pure	AK11896	IJN M3 Mitsubishi Interior Green		
Interior Cockpit	AK Air	Acrylic Pure	AK11897	IJN M3 Nakajima Interior Green		

<u>AREA</u>	<u>HOBBY CO.</u>	<u>TYPE</u>	<u>SKU</u>	<u>NAME</u>	<u>AIRBRUSHED</u>	<u>HAND-APPLIED</u>
Exterior	AK	Acrylic Synthetic Lacquer	RC303	IJN J3 Amber Grey		
Exterior	AK	Acrylic Synthetic Lacquer	RC302	IJN J3 Hai-Iro Grey		
Exterior	Tamiya	Acrylic Synthetic Lacquer	XF-12	J.N. Grey		
Exterior	AK	Acrylic Synthetic Lacquer	RC304	IJN D1 Deep Green Black		

<u>AREA</u>	<u>HOBBY CO.</u>	<u>TYPE</u>	<u>SKU</u>	<u>NAME</u>	<u>AIRBRUSHED</u>	<u>HAND-APPLIED</u>
Exterior	AK	Acrylic Synthetic Lacquer	RC305	IJN D2 Green Black		
Exterior	Tamiya	Acrylic Synthetic Lacquer	XF-11	J.N. Green		
Exterior	Mr Hobby Acrycion	Acrylic Pure	N61	IJN Gray (Mitsubishi)		
Exterior	Mr Hobby Aqueous	Acrylic Synthetic Lacquer	H61	IJN Aircraft		

# Useful References

1. Aero Details #7. Mitsubishi A6M Zero Fighter. Dai Nippon Kaiga, 1993.
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9. J-Aircraft ([www.J-Aircraft.com](http://www.J-Aircraft.com))
10. Facebook – Zero Fighter Historical Society







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